DOCUMENT RESUME

ED 111 086 EA 007 458

TITLE	Progress of Education in the United States of America: 1972-73 and 1973-74.
INSTITUTION	Institute of International Studies (DHEW/OE), Washington, D.C.
SPONS AGENCY	International Bureau of Education, Geneva (Switzerland).
REPORT NO	DHEW-OE-76-19104
PUB DATE	75
NOTE	81p.; Report for the 35th International Conference on Education, (United Nations Educational, Scientific, and Cultural Organization, International Bureau of Education); A related document is ED 083 756
AVAILABLE FROM	Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402 (Stock No. 017-080-01469-6, $1.50)
EDRS PRICE	MF-$0.76 HC-$4.43 Plus Postage
DESCRIPTORS	Bibliographies; *Educational Administration; *Educational Trends; Elementary Secondary Education; Government Role; Post Secondary Education; School Demography; *School Statistics; *Tables (Data); *Teacher Role
IDENTIFIERS	*United States

ABSTRACT

This report was prepared primarily to provide a general overview of education in the United States for representatives of UNESCO member nations attending an International Conference on Public Education. Chapter 1 provides a brief summary of trends in education in the United States today. Chapter 2 presents basic background information on the organization and administration of education in the United States. Chapter 3 contains statistics on American education compiled by the National Center for Education Statistics. The statistical material covers the 1973-74 school year, some enrollment data for the 1974 fall semester, and assorted data from earlier years to indicate trends or comparisons. Chapter 4 focuses on the changing role of the teacher and the implication for preservice and inservice education. A selected bibliography of approximately 60 relevant publications is also included. (Author/JG)

DHEW Publication No. (OE) 76-19104

PROGRESS OF EDUCATION IN THE UNITED STATES OF AMERICA: 1972-73 AND 1973-74

Report for the Thirty-Fifth International Conference on Education,
Sponsored by the United Nations Educational,
Scientific, and Cultural Organization,
International Bureau of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Caspar W. Weinberger,
Secretary

Virginia Y. Trotter,
Assistant Secretary for Education

Office of Education
T. H. Bell,
Commissioner

Robert Leestma,
Associate Commissioner for Institutional Development and International Education

2

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 1975

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price: $1.50
Stock Number 017-080-01469-6

Foreword

This report is the most recent in the series prepared for the International Conference on Public Education that has been held in Geneva, Switzerland, since 1934 under the auspices of the International Bureau of Education (IBE), now a part of UNESCO.

Chapter 1 provides a brief summary of the trends in education in the United States today. Chapter 2 presents basic background information on the organization and administration of education in the United States. Chapter 3 contains statistics on American education compiled by the Education Division's National Center for Education Statistics. The statistical material covers the 1973-74 school year, some enrollment data for the 1974 fall semester, and assorted data from earlier years to indicate trends or comparisons. Chapter 4 focuses on the changing role of the teacher and the implication for preservice and inservice education.

This report is being made available in a number of languages, including English, French, Spanish, and Russian. The various language versions are useful not only to the representatives of the 132 member states of UNESCO who may attend the IBE conference in Geneva, but also to the thousands of visitors from abroad who seek information from the Office of Education annually and to non-English speaking educators and policymakers in other countries who are interested in educational development in the United States.

Robert Leestma
Associate Commissioner
for Institutional Development
and International Education

President Gerald R. Ford

Remarks at Ohio State University
Columbus, Ohio, August 30, 1974

Although this Administration will not make promises it cannot keep, I do want to pledge one thing. . . . I will do everything in my power to bring education and employers together in a new climate of credibility—an atmosphere in which universities turn out scholars and employers turn them on.

I propose a great new partnership of labor and educators. . . .

I want to see labor open its ranks to researchers and problem-solvers of the campuses whose research can give better tools and methods to the workman. I want to see a two-way street speeding the traffic of scientific developments, speeding the day of self-sufficiency in energy and speeding an era of increased production for America and the world.

Contents

Tables

Figures

1. Major Trends in Educational Development

The United States will celebrate its Bicentennial next year. To mark this period in the Nation's history, leaders in U.S. education—and those in other segments of the national life—are reviewing the accomplishments in American education and identifying the tasks that remain.

Statistics reflect the success of the educational system to date. Americans stand at the highest level of educational attainment in their history. In 1974, men and women—25 years of age and older—had an average schooling of 12.3 years; illiteracy had been reduced to about 1 percent; 63.3 percent of the population over 25 had completed a secondary school education; and 14 percent had completed 4 years of college. (See tables 12 and 13, ch. 3, pp. 40, 41). The statistics on enrollment and funding, discussed in chapter 3, illustrate the important position education occupies in the U.S. society. (See tables 1-8 and 14-18, ch. 3, pp. 25-33 and 42-48, respectively.)

Promising as these achievements are, however, the United States has not yet fully attained its goal of universal education. Minority populations such as American Indians, blacks, economically disadvantaged persons, and the handicapped have not yet achieved the educational level nor the socioeconomic status of the white majority because of long-standing discriminatory practices. Confidence in the education system is by no means universal or complete. Schools and colleges, along with many students in postsecondary education, are facing serious financial strain.

An inevitable criticism is the relative slowness with which the school system, like other institutions, adapts to changing needs in a changing society. Of particular concern is the achievement of equality of educational opportunity for all. Only lately have public school educators, as a result of a U.S. Supreme Court decision, assumed responsibility for assuring that children who speak a language other than English are offered bilingual education programs to enable them to compete effectively with their peer group. Similarly, legislation followed by litigation throughout the country has given the impetus for public schools to take new measures to provide appropriate education for handicapped children.

One factor in the rate of change is directly related to a basic strength of the American educational system—local control. Educational responsibility is decentralized (see ch. 2). Basic authority for elementary and secondary education resides in the States, each of which delegates the bulk of the responsibility for public school operation to the local school districts within its jurisdiction. The ability of the community or the State to finance the educational enterprise can be one of the important determinants of the curriculum. Thus, in times of financial constraint, the concern with educational priorities becomes increasingly sharp.

In general, the major problems and trends in education during the 1972-73 and 1973-74 school years continue to be those described in the International Bureau of Education's (IBE's) report of 2 years ago: Inequities in

public school finance, financial stress in private educational institutions, segregation and relevant curriculums in urban schools, "career education" as a curriculum priority to help link education to the world of work, the continuing progress toward equalizing access to opportunity in postsecondary education, and a questioning of the methods and value of educational research.

In comparison with 1973, however, the problems in 1974 are aggravated to some extent by uncertainties about the domestic and world economies. Public confidence in the traditional structure of educational institutions seems weaker than 2 years ago. A sense of pragmatism seems to have tempered many of the experimental approaches common in recent years, and educators and the general public know that some of the problems are very complex and immediate solutions are few. New demands are being made for alternative forms of schooling and for schooling toward increasingly diverse ends. This is happening at a time when the strength of teacher organizations, which are threatened by declining school enrollments and a growing teacher surplus, is solidifying in support of established employment patterns. Increasingly, the national education debate is beginning to focus on some fundamental questions: What is the basic purpose of schools? Whom should they serve? How should they serve? Who should decide educational policy?

Progress Report

School Finance

Since the early 1970's, equalization of school financing has been propounded to help ensure equality of educational opportunity. The rationale is that because communities vary greatly in their revenue-raising capacities (largely based on local property taxes), they are unable to provide equally for their children's education. Therefore, since education is a State responsibility, the State ought to raise and distribute State funds for school support on a more equitable basis. Opponents question whether equalization of funding will, in fact, equalize educational opportunity.

At the time of the 1970-71 and 1971-72 report, the issue of equalization of school funds appeared to be on the verge of resolution. Proponents of equalization were expecting momentarily that the U.S. Supreme Court would support their position in the landmark case, *Rodriquez v. San Antonio Independent School District.*

However, in spring 1973 the Court ruled against the plaintiffs. It upheld the constitutionality of the existing Texas law. Although the court acknowledged the need for more equitable financing plans, it held that "consideration and initiation of fundamental reforms with respect to State taxation and education are matters reserved for the legislative processes of the various States," and barred direct recourse to the Federal Government.

Although the ruling weakened this particular attempt for equalization, several States have developed, or are now developing, their own financing plans to assume more equitable distribution of State funds. State activity is expected to increase further when the U.S. Congress appropriates the funds authorized in the Education Amendments of 1974. Under this legislation, the Federal Government will reimburse States for the cost of developing and implementing school finance equalization plans.

Economic Stress

Independent or private schools at all levels have been more seriously affected by constrained economic conditions than has public education. Approximately 80 smaller colleges (out of some 2,700 higher education institutions) have closed in the past 4 years. Others have merged to survive and to deal with rising costs. Aggressive enrollment campaigns by private colleges are becoming a common phenomenon. New institutions are finding the process of becoming established more difficult than in the past, so that some are limiting their programs more than originally planned; some are concentrating on serving a particular group of students, primarily those of one ethnic heritage; and some start as 2-year institutions, hoping to expand their program later to 4 years. Severe financial difficulties have also been experienced by private elementary and secondary schools, including the Roman Catholic schools, which account for about five-sixths of total private school enrollments and serve a significant number of students among the disadvantaged inner-city populations.

In an effort to cover costs, institutions have been sharply increasing tuition charges in the past 2 years. Many colleges have reached the point where they risk pricing themselves out of the market by the burden high tuition places on students from middle income families—a major source of their students and thus their support. Other important sources of private college support are also under pressure. The value of university endowment funds has declined with the stock market. Contributions from alumni have not kept pace with growing budgets. Many private foundations, ordinarily an important source of funding for experimentation and innovative activities, have reduced their grant allocations because of the reduction in value of their capital funds.

The Federal role in higher education has been to help equalize educational opportunity by offering financial assistance to those who might otherwise find the cost prohibitive, to help strengthen institutional capability in selected areas through financial and technical assistance, and to support or strengthen the basic and applied research critical to higher education and the national interest.

Desegregation

Wide attention has been given to desegregation of urban school systems as a method of equalizing educational opportunity. In the

past 2 years, prospects for increasing school desegregation have been clouded by several court decisions and continuing congressional discussion directed at limiting the use of busing for desegregation purposes.

During 1974, the 20th anniversary of the U.S. Supreme Court's landmark decision on school desegregation (*Brown v. The Board of Education, Topeka, Kansas*) was highlighted in the media, in many forums, and in workshops throughout the Nation. Yet, most large U.S. school systems, particularly in northern urban areas, remained largely segregated by race as a result of neighborhood school attendance, zones, and lack of alternative housing and economic patterns. The U.S. Supreme Court has agreed, however, to hear a case during its fall 1975 term on charges of segregated housing policies in Chicago, Ill., and in the suburbs of that city.

The majority school population in several major cities is now nonwhite; thus, desegregation in these cities is almost impossible within a single school system. The population in the suburbs surrounding these cities is typically white middle class with an increasing flow of minority middle class families as well. The movement to the suburbs over the years has, in part, been the result of parents' negative perceptions of the quality of education offered in many urban schools.

In response to this problem, advocates of integration in several cities have focused their efforts on bringing suburban and inner-city schools into a more broadly based metropolitan system and/or by increasing opportunities for urban-suburban pupil exchanges or groupings in schools where there has been a decrease in pupil population. Few proposals for social reform have met with such controversy. The "busing" of students in these approaches has become one of the most emotion-laden social, political, and educational issues in the United States today.

In June 1974, integrationists were encouraged by the U.S. Supreme Court's decision in *Keyes v. School District No. 1*, Denver, Colo. The Court ruled that where a substantial portion of a school district was *de jure* segregated, it was incumbent upon the school district to provide a remedy for the entire district, including the *de facto* portions. For the first time since the beginning of legal success against *de jure* school desegregation 20 years ago, *de facto* segregation resulting from racial residential patterns was declared illegal when coupled with substantial *de jure* segregation in the same district.

More crucial, however, and a major disappointment to integrationists, was the U.S. Supreme Court's decision (a month later) in *Milliken v. Bradley*, a case affecting a proposed lower-court-ordered metropolitan desegregation plan for Detroit, Mich., and its suburbs. In this case the Court majority concluded that "the relief ordered by the District Court and affirmed by the Court of Appeals was based upon an erroneous standard and was unsupported by record evidence that acts of the outlying districts affected the discrimination found to exist in the schools of Detroit." However, one of the Justices in

this 5-4 decision stated, in effect, that future cases of this genre might well not bring a similar ruling should it be determined that State or suburban school district acts of the *de jure* type be detected and proved.

In general, the majority public opinion was strongly behind the Court's Detroit decision. Soon afterward, the antibusing resolution became one of the major congressional debates on the proposed 1974 Education Amendments. A modified form of this resolution was incorporated into the amendments which became a law in August 1974. As title II of the 1974 law, it guarantees that an individual's rights under the 5th and 14th amendments to the U.S. Constitution shall not be abrogated.

When school opened in fall 1974, tension and violence accompanied a court-ordered desegregation plan in Boston, Mass., where *de jure* discrimination had been found to exist. Feelings over this issue run high in several other metropolitan areas as well.

Desegregation efforts in some large northern urban areas may be unsuccessful because demographic and housing patterns in many cities and towns still exclude minority groups. (A number of educational and community leaders from minority groups are now concentrating their attention and energy on improving schools that serve predominantly minority groups.)

Career Education

Development of career education continues along the lines reported 2 years ago. There appears to be widespread support of the concept and programs that have been introduced at all levels of the elementary and secondary curriculum in thousands of school systems. Good beginnings have been made at the higher education level also. In addition to allocating funds for developing model or exemplary career education programs in elementary and secondary school settings, the Federal Government has increased demonstration of career education in the postsecondary years and for special segments of the population. State funding of career education is increasing. As a result of President Ford's personal interest and initiative, all Federal agencies, and particularly the U.S. Office of Education and the U.S. Department of Labor, are seeking ways to strengthen the link between the educational system and the world of work.

Unlike traditional vocational training, which occurs mainly at the secondary level, career education has been conceived as beginning in the early grades and continuing through all of higher education. At the elementary level, it generally takes the form of career awareness programs. At the secondary level, observation of actual work places, work experience, and apprenticeships have been advocated along with occupational guidance programs. This approach reflects an awareness that most classroom experiences bear little relation to the skills needed on a job and that the disparities between the two should be lessened.

At the postsecondary (nonbaccalaureate) level, emphasis on training for jobs is

stronger than at the lower levels, and education commonly extends beyond initial entry into the job market. More people are returning to college after several years in the job market or in the home. Community colleges have expanded to serve this clientele, new external degree programs have been offered in a variety of kinds of institutions, and additional proprietary institutions have been established.

Higher Education

Higher education is becoming increasingly accessible to all segments of the population. In 1973 and 1974, one out of every two secondary school graduates went on to some sort of postsecondary education, and nearly half of these will probably graduate from a college or university. Participation by students who are members of minority populations has increased: In 1973-74, about 10 percent of all students were nonwhites, with enrollments of blacks having increased by over 200 percent in the previous 8 years. With respect to education of women, in 1963-64 women comprised only 38.5 percent of total higher education enrollment, whereas in 1973-74 they comprised 44.9 percent. At the same time, most single-sex institutions have become coeducational, reflecting a change in public attitudes and in the philosophy of many private educational institutions.

Two trends have been emerging that are likely to continue at least through the end of the decade. First, an increasing number of students give priority to obtaining the skills they will need for employment rather than to seeking a general education. This growing desire to obtain a marketable skill, along with the search for an affordable education, spurred the growth of the public 2-year community college during the first 4 years of the 1970's. In 1973 alone, enrollment in 2-year colleges increased by nearly 12 percent (compared to 1.8 percent in 4-year institutions) and preliminary estimates for 1974 showed that this trend was continuing (9.1 percent and 3.2 percent, respectively). These 2-year institutions currently enroll approximately one-third of all postsecondary students.

Second, more and more people beyond the usual college age of the late teen years and early twenties are enrolling in programs of postsecondary education. Acceptance of the idea of recurrent or life-long education is clearly growing. Colleges and universities are beginning to provide greater flexibility in their programs and in the ways these programs may be pursued. Off-campus educational programs are now available to students of all ages in their communities, at their places of work, and even in their homes through various self-study alternatives. Examples of these efforts include honor courses, tutorial work, intensified use of seminars, the independent studies programs, special services programs for disadvantaged students, cooperative arrangements with libraries, and experimentation with programmed instruction and educational television.

Educational Research and Evaluation

The past 2 years also presented many problems for educational research and evaluation. Economic constraints led to budget cuts in educational research as in other fields; and standardized normative tests, traditionally the evaluation instruments most widely used in U.S. schools, are still being questioned. Standardized tests have been attacked as being racially and culturally biased; incapable of measuring numerous factors that ought to be considered in a truly valid measure of achievement; and useful only to show a student's cognitive skills, reading ability, and skill in taking standardized tests. Nonetheless, standardized achievement tests are still being used throughout American schools, but less importance is given to IQ (intelligence quotient) testing.

Educational researchers have begun to question traditional ideas about the basic purposes of schools. For example, some studies[1] found little correlation between schooling and economic achievement, tending to support the contention that a child's family background and social environment are the crucial factors leading to success in American society. In spite of criticism by some educational researchers concerning the premises or research methodology employed, these studies have contributed to the sense of uncertainty in many quarters about the basic purposes of schools and—by implication—a growing skepticism about the returns to be derived from money spent on education and on educational research, at least education in the more traditional modes. But at the same time, such studies have contributed significantly to increasing public awareness of basic issues and to sharpening the debate on examining or reexamining premises, values, and purposes.

However, encouraging efforts continue or are accelerating. For example:

- Partly as a result of growing concern about the effectiveness of conventional testing instruments, researchers have mounted a concerted effort to develop new forms of measurement and evaluation. Although still in the developmental stages, approaches such as criterion-referenced testing in which achievement is measured by the ability to perform a specific task, and the use of classroom observation instruments that evaluate a teacher's ability to implement a specific teaching methodology have inspired cautious optimism.

- Research related to accountability is increasing, stimulated to some extent by increased educational competition for available financial resources. There are growing demands for hard data on results achieved by expenditures (input-output studies). This emphasis on ac-

[1] James S. Coleman, *Equality of Educational Opportunity;* Frederick Mosteller and Daniel P. Moynihan, eds., *On Equality of Educational Opportunity: Papers Deriving from the Harvard University Faculty Seminar on the Coleman Report;* and Christopher Jencks, et al. *Inequality: A Reassessment of the Effects of Family and Schooling in America.*

countability, along with a growing public impatience with what is often judged as the poor performance of the existing school system, has already led to heightened stress on evaluating educational research efforts as well as educational programs. It has contributed also to the present focus on the Competency Based Teacher Education movement discussed in chapter 4.

- The pressure from different cultural subgroups, combined with issues such as children's rights and equal access to school resources, focused attention on the student's individual needs and on how differences in cultural background affect the student's rate of development. Recognition of these factors has led to growing diversification in teaching methods and approaches aimed at individualizing instruction.
- Persistent problems with the young in a changing society, their discontent and difficulties in finding suitable employment, and doubts about the economic utility of traditional education offered in schools and colleges supply the basis for questioning the adequacy of the higher education system and stimulate the search for alternative solutions. Hence the commitment to research activity in career education continues and growing interest is apparent in linking more effectively the world of education with the world of work.

On balance, there is considerable interest in the broad field of educational research, and the prospects for educational evaluation —and research concerning it—can be viewed as generally encouraging. The desire for improvement in the educational system in a time of social change is serious, widespread, and healthy. There is no substitute for professionally sound investigation in theory and practice. The Congress, in the Education Amendments of 1974, expressed concern that the results of research be put into practice, that new ideas and developments be implemented, thus adding considerable impetus to the development and improvement of program evaluation.

New Trends

Throughout the years Americans have regarded their school system as the great melting pot and equalizer of society. In a social system characterized by cultural pluralism, the schools have been expected to play a major role in imparting national culture and traditions. In the past decade, and particularly in the past few years, another interest has emerged; that is, having the schools devote specific attention to developing an awareness of the ethnic heritage of all Americans and of each group's contributions to the national heritage. Since the 1960's, schools have also been called upon increasingly to provide equality of opportunity for all of the children of all of the people.

This latter development, enhanced by reaffirmation throughout the country today for local autonomy, individualism, and self-de-

termination, is molding new trends in the educational system. The demands of special interest groups are introducing increased diversity in educational services, which in turn is necessitating a restructuring of the elementary and secondary schools in efforts to deliver those services.

The increasing influence of the courts in the educational arena has sharply speeded this trend toward educational diversity in the past 2 or 3 years. When parents, students, citizens' groups, and other recipients of educational services find the public school system too slow in complying with their requests, they appeal to the courts—a reaction both widespread and often successful in the consumer movement in general.

Optional Educational Programs

The demands of different interest groups have been responsible for the development of optional programs that allow parents and students to choose from a variety of curriculum offerings and learning environments. For example, many elementary schools provide both an open classroom setting and a more structured setting that emphasizes instruction in basic skills at all grade levels. Such structural pluralism has had the related benefit of reducing, to some extent, the stridency of debates about the superiority of various approaches.

Optional programs may take any number of forms. Some encompass an entire school system. Minischools and other alternative approaches within larger schools are the most common, however, and have proliferated significantly in secondary schools during the past 2 years. Generally, they focus on particular curriculum areas such as bicultural education, career education, or the arts. New Jersey, in cooperation with New York, Pennsylvania, Delaware, Connecticut, Puerto Rico, and the Virgin Islands, for the past 2 years has been studying "alternative" schools as a regional, interstate project under Federal funding.

So far, optional educational programs have been established mainly within public institutions. Proposals for educational vouchers issued by school authorities to permit the option of obtaining educational services from private as well as from public institutions have raised complicated legal issues. Teacher organizations have strongly opposed such a development.

Coincident with the drive toward diversity within the public school system has been some decline in the strength of private schools as alternative sources of educational services. As mentioned earlier, private schools of all types are facing very serious problems because of rising costs. Unless constitutional obstacles can be overcome to provide aid for private schools, they probably will continue to decline as an educational option.

Secondary Education

The past few years have been a period of unusually significant ferment in reassessing

the status and needs of secondary education in the United States. Momentum appears to be developing for fundamental reform and renewal. Five national commissions and panels (some federally and some privately sponsored) have attempted to clarify the problems of contemporary school and society, analyze the needs and options, identify the conditions, and find effective ways of meeting the challenges of the last quarter of the 20th century. Different reports agree that "authentic learning can take place in a wide variety of settings, many of them remote from the schoolhouse. . . . They recognize that a variety of other institutions and agencies are also involved in educating and socializing youth and propose moving a substantial portion of learning opportunities outside the school building."[2] Among the common themes in the recommendations of the various reports are: increasing program alternatives, particularly in nonschool settings; increasing opportunities for students to exercise responsibility; making work experience an integral part of the education and socialization of youth; expanding and improving linkages among schools, other institutions, agencies, business, and industry; lowering the age for compulsory school attendance; and restructuring schools to achieve these objectives.

[2] A. Harry Passow, "Reforming America's High Schools," *Phi Delta Kappan*. May 1975, pp. 587-90.

Special Education

Largely because of a strong consensus between the Executive Branch and the Congress, new Federal and State legislation, and court decisions, the education of exceptional children has increasingly become a priority throughout the country. Within the last decade, funds for special education have tripled and are still being increased. During the last 2 years, seven States joined the number of those that have legislated educational programs for exceptional children. One significant result is that many exceptional children —who only a few years ago would have been limited to custodial care and education in residential institutions for the retarded and emotionally disturbed—are now receiving educational services designed to enhance self-help skills, communication, socialization, and, whenever possible, academic and vocational skills.

A 1972 citizens' suit on behalf of mentally retarded children in the State of Pennsylvania spurred major policy shifts throughout the United States in special education. This case, *Pennsylvania Association of Retarded Children v. Commonwealth of Pennsylvania*, was the cutting edge of a movement seeking to provide public education for all children regardless of their physical or mental limitations. A later court ruling in Louisiana (*Lebanks v. Spears*) in April 1973 specified that "all evaluations and educational plans, hearings, and determinations of appropriate programs of education and training . . . shall be made in the context of a presumption that

among alternative programs and plans, placement in a regular public school class with the appropriate support services is preferable to placement in special public school classes." Subsequent court decisions have further challenged conventional notions of testing and labeling children for placement in special education classes.

Out of this judicial thrust has come a major new direction for special education. An important feature is the concept of "mainstreaming," or placing children with handicapping conditions in a normal learning environment whenever possible. To some extent, mainstreaming is part of a more general reaction against the practice of tracking, or ability grouping, in separate classes on the basis of such indices as intelligence test performance or reading achievement scores. Recent research has estimated that 1 child out of 10 in school is exceptional because of some learning problem or other impairment.

A major innovation, derived in part from new legal requirements, is the age range which special education now serves. Many States have mandated special educational programs that extend services to children younger and older in age than the programs for normal children. The widest age range is in Michigan. This State provides public special education programs for the handicapped from birth to 25 years of age. Though precise data are not available, experimental educational programs for very young children, even infants in the first year of life, have increased in the past 2 years. In addition, higher education institutions (colleges and universities as well as postsecondary technical and vocational schools) are increasingly providing special education opportunities for the handicapped. Increased opportunities in higher education, vocational education, and continuing adult education have been especially significant for the deaf and orthopedically handicapped.

Also of help to the handicapped are the improvements in educational materials, both hardware and software, in the past 2 years. Innovations of particular promise include sensory aids for the blind and deaf, communication aids for the deaf and nonvocal physically impaired, and telecommunications systems for delivering special education programs to all handicapped groups. Better designed and better validated curriculum materials for teaching the handicapped have been developed. New materials designed specifically for teaching self-help skills, social skills, reading, mathematics, science, and physical education to the mentally retarded have become widely available during the past year. Other promising materials have been developed to assist blind, deaf, and orthopedically handicapped persons, and those with multiple handicaps.

Perhaps the most important achievement of all in recent years has been the development of a nationwide system of regional centers for disseminating information about the availability, characteristics, and effectiveness of instructional materials. In addition, another set of nationwide regional centers are developing model diagnostic and

prescriptive education services that are being emulated by the States. A national special education information service also maintains a computerized national directory of special education programs and facilities. And 12 referral centers around the country help parents to obtain the services most appropriate for their handicapped children.

Bilingual Education

An estimated 5 million children in the United States need or could profit greatly from the use of a language other than English in the classroom—1.8 to 2.5 million lack basic skills in the English language and 2.5 to 3.5 million, although able to speak some English, use another language at home.

Special educational services to this clientele have sharply increased during the past 2 years, largely as a result of a court decision. Early in 1974 the U.S. Supreme Court in the *Lau v. Nichols* case held that the failure of the school district in San Francisco, Calif., to provide special language instruction to some 1,800 limited-English-speaking Chinese students violated the 1964 Civil Rights Act by denying these students the right to a meaningful education. Congress quickly doubled the Federal appropriation for bilingual education, thus accelerating what had already been a promising initiative. New approaches to bilingual education including emphasis on the history and culture of children's forebears, multicultural classes, and bilingual textbooks, are being put into practice throughout the country. Numerous ethnic subgroups—Spanish-surnamed, Indians, Eskimos, etc.—have begun to find new responsiveness to their individual needs within the educational system.

During the 1974-75 school year, Federal aid programs helped support nearly 400 classroom demonstration projects in bilingual education directly serving a population of a quarter of a million children. Forty-two languages and dialects were represented —8 Indo-European (principally Spanish, Portuguese, French, Greek, and Russian), 11 Asian, and 23 American Indian. Several national projects are spurring the development of teaching materials and assessment instruments for pupil placement and teacher training. A national network of bilingual education specialists is developing and testing a wide range of curriculum materials.

One of the newer televised program efforts in the bilingual field is "Villa Alegre," a Spanish and English series aimed at 4- to 8-year olds. It made its debut over some 200 stations nationally in fall 1974. "Carrascolendas," another popular Spanish-English program for young children, expanded its offerings. The initial showing of an adult program, produced under the auspices of the national Right-To-Read project and directed toward illiterate Spanish-speaking Americans, has been scheduled for 1975.

Related to bilingual education is the recent growing interest in ethnic studies, stimulated in part by the Ethnic Heritage Studies program in the Office of Education. The pro-

gram's basic purpose is to give students an opportunity to study their own heritage and the contributions of other ethnic groups to the Nation. Approximately 50 Federal grants were made in 1974 and a similar number in 1975, to help support ethnic studies programs in elementary and secondary schools, colleges, and universities; and those sponsored by nonprofit educational organizations at local, State, and national levels. Among the ethnic populations served are: the French-Canadians in Maine; blacks in the State of Washington; the Plateau Indians in Washington; Puerto Ricans in Connecticut; and Caribbean-born Spanish-speaking young people in New York. Ethnic heritage will also be one of the major themes of the American Bicentennial Celebration.

Children's and Women's Rights

Court decisions of the late 1960's on such relatively minor issues as the length of students' hair or dress styles showed a profound shift in public attitudes toward children's rights. Later, several court decisions in cases involving disciplinary action of students by educational personnel have reduced the authority of public schools to discipline students without due process. Concern over the issue has intensified at a time when student behavior in school has emerged in public opinion polls as a high priority problem.

Another recent development has been the passage of Federal legislation regarding access to students' school records. In response to charges that the use of inaccurate or disputable information from school records had negatively affected students' education and employment opportunities, the Congress wrote a section into the Education Amendments of 1974 barring Federal funding to any school that does not give parents the right of access to their childrens' school records or that does not limit disclosure of personally identifiable information from school records without parental consent. At the college level similar rights were given to the students themselves.

Women's rights, mentioned in the report 2 years ago, has emerged as an issue of considerable influence in education. The Education Amendments of 1972 denied Federal funds to institutions (with certain exceptions) that discriminated on the basis of sex in admissions, employment, and the treatment of students. The Women's Educational Equity Act of 1974, authorized under the Education Amendments of 1974, added a new and positive element to the Federal effort in respect to women's rights by authorizing a program to support the following activities: (1) Development, evaluation, and dissemination of educational materials related to educational equity; (2) preservice and inservice training for educational personnel, including guidance and counseling with special emphasis on educational equity; (3) research, development, and educational activities designed to advance educational equity; (4) guidance and counseling activities, including the development of nondis-

criminatory tests; (5) educational activities to increase opportunities for adult women; and (6) expansion and improvement of educational programs and activities for women in vocational education, career education, physical education, and educational administration. Funding is expected in fiscal year 1976.

The Current Federal Role

Federal efforts, through the U.S. Office of Education, focus on these priority objectives:

- To equalize educational opportunity for groups and individuals who are at an educational disadvantage by reason of their economic situation, race, location, or physical or mental handicaps.
- To improve the quality and relevance of American education, primarily through assistance to research, development, experimentation, demonstration, dissemination, and training.
- To provide relief for areas of special need—limited general support to selected educational entities, foundations, and activities such as State and local education agencies, developing institutions, and vocational and adult education.

Compensatory education programs administered by the Office of Education receive the largest proportion of Federal funds. In fiscal 1974, about $1.7 billion—amounting to one-fourth of the total funds administered by the Office of Education—was allocated to elementary and secondary schools in low-income areas to provide special services for educationally disadvantaged children. In addition, during the same year, programs for migrant children received about $80 million a year in Federal education funds, special programs for the handicapped about $150 million, and bilingual programs about $70 million.

In other programs administered by the U.S. Office of Education and directed toward equalizing educational opportunity, the Federal Government in 1974 invested nearly $1.5 billion in postsecondary student financial aid programs, more than $63 million in the adult education program, and more than $14 million in the Right-To-Read program.

The Congress underlined its continuing interest in compensatory efforts as part of national policy in the Education Amendments of 1974 by: "Recognizing that the Nation's economic, political, and social security requires a well-educated citizenry, the Congress (1) reaffirms, as a matter of high priority, the Nation's goal of equal educational opportunity, and (2) declares it to be the policy of the United States of America that every citizen is entitled to an education to meet his or her full potential without financial barriers."

II. Organization and Administration of Education

Authority

The authority for education in the United States is decentralized. The 10th amendment to the Constitution provides that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." Since responsibility for education is not mentioned in the Constitution, it is legally considered delegated to the States. Thus, each State has the right and responsibility to organize and operate its educational system as it deems appropriate—subject to constitutional guarantees of the rights and privileges of U.S. citizens.

Federal Responsibility

The educational responsibilities of the Federal Government are both general and specific. Its general responsibilities are to provide encouragement, selective financial support, and leadership as appropriate within constitutional constraints. Its specific responsibilities consist of activities considered to be especially in the national interest. The Congress of the United States has constitutional powers to allocate funds for education, but it has no direct control over it. In addition to the major educational programs funded by the U.S. Department of Health, Education, and Welfare, several other departments within the Federal Government make large expenditures on specific educational programs. For example, the National Science Foundation allocates funds for a variety of research, training, and institutional development programs in science; the U.S. Department of the Interior, for the education of American Indians and support for schools in the Trust Territory of the Pacific Islands; and the U.S. Department of Defense, for its overseas schools for dependents of American military personnel.

With passage of the Education Amendments of 1972, a new structure in the organization of the education programs within the U.S. Department of Health, Education, and Welfare (HEW) was developed. This legislation established within HEW an Education Division that included the Office of Education (OE) and the National Institute of Education (NIE).[1] The head of the Education Division has the title of Assistant Secretary for Education and coordinates the activities of OE and NIE. The Assistant Secretary's Office includes the National Center for Education Statistics (NCES), which was transferred from the Office of Education by the Education Amendments of 1974, and the Fund for the Improvement of Postsecondary Education (FIPSE). The program of this latter office is designed "to improve postsecondary educational opportunities by providing assistance to encourage the reform, innovation, and improvement of postsecondary education."[2] A 14-member advisory board makes recommendations on the policy direction of the fund.

[1] Public Law 92-318, title III, sec. 401, June 23, 1972.

[2] Op. cit., sec. 404 ("Support for Improvement of Postsecondary Education").

The Office of Education is the primary agency of the Federal Government responsible for administering legislated programs of service and assistance to educational agencies, institutions, and organizations with particular reference to broad national concerns.

The National Institute of Education was created to provide Federal Government "leadership in the conduct and support of scientific inquiry into the educational process."[3] At its establishment, the NIE absorbed the bulk of the programs and functions that were previously carried out by the National Center for Educational Research and Development in the Office of Education. The NIE's functions include building an effective educational research and demonstration system; strengthening the scientific and technological foundations of education; developing ideas and materials to deal with areas of national concern in the classroom; and administering the dissemination program of the Educational Resources Information Center (ERIC) clearinghouses. It is guided by a director and a 15-member National Council on Educational Research, all appointed by the President.

State Responsibility and Control

Since each State[4] is responsible for its own educational system, their practices and policies differ. Each State's department of education, under policies set by that State's board of education and chief State school officer, administers its educational enterprise. The State legislature is responsible for enacting laws pertaining to education for both public and nonpublic schools in the State, but the State department of education and local school districts are responsible for operating the school system.

The State board of education determines State educational policies in compliance with State laws. In some instances, board members are elected by the people; in others, they are appointed by the State Governors and serve for terms ranging from 2 to 6 years. They are empowered to formulate policies relating to such educational affairs as allocation of school funds, certification of teachers, textbooks and library services, provision for records and educational statistics, and overall coordination of the State school system. The board's responsibility may include not only elementary and secondary schools but State institutions for teacher education and special schools for the handicapped.

The key education official and chief executive officer of the State board of education is the chief State school officer. The title given to this official most frequently is superintendent of public instruction or State commissioner of education. He may be elected by the people or appointed by the Governor of the State or by the State board of education; he serves from 1 to 6 years, his term of office usually determined by the board. He is responsible for administering the State school

[3] Op. cit., sec. 405.

[4] In this context, the term "States" includes the 50 States of the Union, the District of Columbia, and the outlying areas.

system and implementing policies adopted by the board. As the key official of the board, he gives leadership to the staff of the State department of education, which is composed of supervisory, professional, and administrative personnel appointed by him or by the board. The State professional personnel of elementary, secondary, and specialized fields of education work with local school officials to provide directive, consultative, and other services.

Local Responsibility and Control

Each State (except Hawaii) has provided for the establishment of local administrative districts, and vested them with extensive authority and responsibility for establishing and regulating the schools in their districts. Each local school district has a board of education, usually made up of five to seven members who have been appointed by higher officials or elected by citizens of the school district. Within the limits of State policy, the board operates the local school system through the school superintendent and his staff.

The functions of the board of education in determining educational policies, and of the superintendent of schools in executing these policies, include a broad range of duties and responsibilities. Together, the board and the superintendent are responsible for preparing the school budget. They are responsible for hiring teachers and other school personnel, providing and maintaining school buildings, purchasing school equipment and supplies, and, in most cases, providing transportation facilities for pupils who live beyond a reasonable walking distance from school. Their duties also include enacting rules and regulations consistent with State law and regulations of the State department of education governing operation of the schools. Thus, the limitations on the actions of school boards are those established by the State legislature and by the State education agencies, which have in most cases prescribed minimum standards for all local school districts.

School systems vary in size from small ones in rural areas, with a single one-room elementary school, to those in metropolitan areas with hundreds of schools of various kinds and thousands of teachers. In some States an intermediate school district has sometimes been established between the State department and the local school districts, not to administer schools but to provide services to local school systems that would not otherwise be available—consultative, advisory, and statistical services, and regulatory functions. Some also provide operation of special classes, supervision of instruction, health supervision, attendance services, and pupil transportation.

Ability to provide improved educational facilities and opportunities more economically in larger school districts than in smaller ones, has caused a trend toward reorganization and consolidation of school districts. In 1972-73, the United States had an estimated 17,036 school districts, varying among the States from 1 in Hawaii to 1,350 in Nebraska

(a reduction of 48.1 percent in the past 10 years).

One unique characteristic of U.S. education is the degree to which schools are operated by local school authorities. The broad authority given local boards of education allows public educational programs to be responsive to the will of the people and the needs of the community. The teacher shares in this authority, enjoying some measure of independence in selecting methods and materials under guidelines established by the State department of education.

The Postsecondary Level

The decentralized character of the educational system is even greater at the postsecondary education level, partly because private higher education institutions in the United States predated State departments of education and the development of public higher education. Their early autonomy set them apart from the mainstream of publicly financed schools and established a strong precedent for their relative independence.

U.S. postsecondary education institutions offer diverse programs, and vary in size and pattern of organization. Some are operated by units of local and State government, but more than half are privately controlled. They have achieved some degree of uniformity in standards and practices by affiliating with regional and national professional associations, and by cooperating with independent accrediting agencies and voluntarily accepting their evaluation.

Most colleges and universities, whether under private or public auspices, are administered by a governing body or board, usually known as a board of trustees, governors, or regents. Members of the board may be appointed or elected for a specified period of time or for life, normally the former. An institution charter, issued by the State, prescribes procedures for naming members of the boards of trustees. Board members of a publicly controlled institution usually are elected by the citizens of the State or appointed by the Governor. Board members of a private institution may be appointed by the board of trustees and in some colleges and universities the alumni may have a role in their selection. New organizational patterns are emerging that give students and faculty a share through direct involvement in the decisionmaking process that governs the operation of colleges and universities. Sometimes they are members of the board.

The board of trustees makes decisions regarding policies, management, and personnel, but the president or chancellor of the university, with the administrative staff, is the executive responsible for operating the institution. The board also selects the president, who, with the assistance of one or more vice presidents, directs the general administration of the institution. In a small institution, the dean of instruction may have responsibilities for administration as well as for professional development of educational programs. He is assisted by department or

division chairmen and by faculty groups, which work as committees on the many problems and issues that arise. Other administrative officials include the registrar, the director of admissions, the business officer, and the director of student affairs.

Structure

The Basic Framework

Education in the United States comprises three levels—elementary, secondary, and postsecondary education. Part of the program in most States includes kindergartens, vocational education, adult education, and schools or classes for the gifted, the mentally retarded, the blind, the partially seeing, the deaf, the hard of hearing, and crippled children. The organization and curriculum of private schools and universities are similar to those of the free public schools. Through transfer of students and other contacts there are many cooperative relationships between public and private schools.

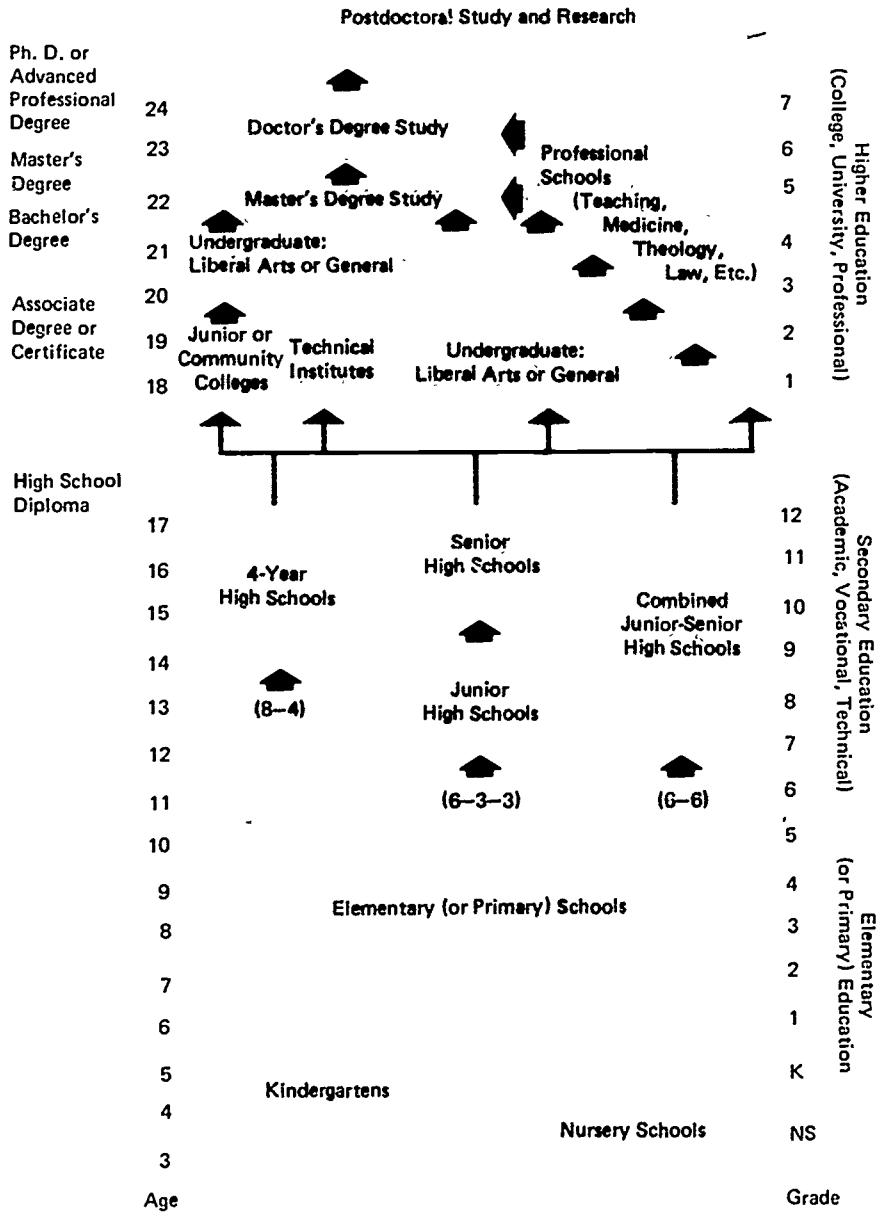
Elementary schools provide education for at least 6 years, and in some schools for 8 years. The minimum entrance age is 6. Secondary schools provide education for at least 4 years and in some cases 6 years. The usual entrance age is 12 or 14. While compulsory attendance laws vary slightly from one State to another, the laws usually require that children between the ages of 7 and 16 attend school. Completion of 12 grades of schooling is usually required before entering postsecondary education. Postsecondary education includes all programs pursued after graduation from high school, including programs of less than 4 years in professional, technical, and community colleges, 4-year undergraduate programs, and graduate studies.

The school year for public elementary and secondary schools usually begins in September and ends in June; the fiscal year usually starts in July. Increasingly, school districts across the country strive to make educational opportunities available to children in a variety of settings and throughout the year, including the summer months.

The elementary school is usually composed of the kindergarten and an additional six or eight grades. In some communities, nursery schools for 3- or 4-year olds may be provided for a period of 1 or 2 years before the children enter kindergarten. The kindergarten enrolls 4- or 5-year old children for 1 or 2 years, before they enter the first grade. In some school districts, the two beginning units overlap. Approximately 84.1 percent of the 5-year olds in the population were enrolled in kindergarten in 1973.

As shown in figure 1, in the 8-4 plan used in many schools, students pursue grades 1 through 8 in an elementary school, and grades 9 through 12 in a secondary school. The 6-3-3 plan provides for an elementary school of 6 grades and an intermediate (junior) and senior high school of 3 grades each. Some communities consider that intermediate schools ease the transition from ele-

Figure 1.—The structure of education in the United States



SOURCE. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Digest of Educational Statistics, 1974.*

mentary to secondary schools. Smaller communities sometimes use the 6-6 plan with 6 years each for both the elementary and secondary school programs. The purpose of the different organizational plans is to make the best use of a school system's physical facilities, staff, and instructional tools within the framework of established goals.

The secondary level of education in the United States is sometimes organized as a 4-year program. In some communities a 6-year program, including the intermediate school grades 7 and 8, is the preferred organizational plan. The usual entrance age for intermediate school is 12, and 14 for senior high school.

After satisfactorily completing 12 years of elementary and secondary education, a high school graduate is usually 17 or 18 years old.

High school graduates may enter a junior or community college, a technical institute, a professional school, a 4-year college, or the undergraduate division of a university. A public or private junior or community college normally offers a 2- or 3-year program of study beyond the secondary level. Programs usually include a curriculum leading to a certificate and students receive credits that may be acceptable toward a bachelor's degree in a 4-year college. Some programs are terminal in nature, and prepare students to become proficient for employment in one of a wide variety of semiprofessional and technical occupations. They also may offer general courses of continuing education for adults.

The public community college is supported and controlled by the community in which it is located. It serves students in the immediate community and those who live within commuting distance. Fees are comparatively low, because students live at home and therefore have no additional expenses for room and board.

The technical institute is an institution organized as an independent institution of postsecondary education or as a division or department in a 2- or 4-year higher education institution. It usually offers a 2- or 3-year terminal program (in such fields as health, mechanics, electrical or electronic engineering, business, or construction) designed to lead to employment in occupations requiring technical skills.

The 4-year college offers a curriculum in the liberal arts and sciences and is authorized to confer the bachelor's degree upon completion of the 4-year program. The student may begin specialization at the undergraduate level. A college may be independent or an undergraduate division of a university. Independent colleges sometimes offer advanced degrees, particularly at the master's level. At least 1 year of study beyond the bachelor's degree is required for a master's degree; the doctor's degree usually requires 3 or 4 years of graduate study beyond the baccalaureate.

The university usually includes a college of liberal arts and sciences that awards either a B.A. or B.S. degree; one or more professional schools; and a graduate school that offers opportunities for advanced study

and research. Most universities are authorized to confer the bachelor's, master's, and doctor's degrees in liberal arts, professional, and scientific fields. However, no single standard designates an institution as a university, and therefore "university" is part of the name of some colleges or other institutions that do not offer doctorates.

The professional school is either a major division of a college or university, or is an independent institution for study and research in professional or technological fields such as architecture, business, education, engineering, law, medicine, the physical sciences, and theology It offers programs that lead to a degree and fulfill academic requirements for certification or licensure in a specialized profession. Depending on the specialty selected, the entrance requirements vary from secondary school graduation to completion of a preprofessional curriculum in a college of arts and sciences.

Experimentation

Schools in the United States are continually experimenting with different structures and program organization. Among those currently receiving favorable attention are the multiunit plan, alternative schools, modular scheduling, the open school, the free school, the school without walls, the university without walls, the consortium, and experience-based learning.

The multiunit plan has an organizational pattern that replaces the classroom with a nongraded instructional and research unit. Each unit contains 100 to 150 children within four age groups (4-6, 6-9, 8-11, and 10-12). It also has a unit leader or master teacher, two or three staff teachers or teaching interns, and one or two aides. The second level of organization is the "instructional improvement committee," consisting of a school's unit leaders and principal. The third level is the "systemwide policy committee." The multiunit school is designed to be the first step in a new system of elementary education called "individually guided education." Some schools are developing their own programs to use in multiunit schools.

Alternative schools are often characterized by strict discipline and a traditional curriculum that emphasizes skill acquisition. They offer an option to parents who may prefer the alternative schools to the regular schools in the system.

Modular (flexible) scheduling encompasses a variety of plans in both elementary and high schools that reorder the traditional class time allotments. It provides greater flexibility built around individual student needs.

The open school provides for small clusters or centers of learning within large open spaces in school buildings. This plan is coupled with individualized instruction, team teaching, and wide use of audiovisual aids. The open school is able to offer instruction more tailored to student needs and capabilities than can the traditional school.

A free school is one that provides students with a variety of options as to courses of study and the timing of these courses. In some cases students may design their own courses or may request that a particular course be given. The advantages of the free school plan include high motivation and relevance to student needs and desires.

A school without walls is an elementary or secondary school that provides learning opportunities throughout the community. Classes are not restricted to a formal school building. Thus, students studying art may study at the local museum, students taking writing may study at a newspaper or magazine office, those studying civics may study at city hall, etc. The school without walls relieves the need for central school facilities, provides more "real-life" learning for students, and utilizes the community's expertise to teach courses.

The university without walls (also called an open university) is an alternative form of postsecondary education that seeks to build highly individualized and flexible programs of learning and makes use of new and largely untapped resources for teaching and learning, including correspondence courses, TV, tapes, and tutoring on demand. It moves toward a new faith in the student and his capacity for learning on his own, while at the same time providing close and continuing contact between the student and teacher. It redefines the role of the teacher as a facilitator and coparticipant in the planning and design of the student's learning experience, and it seeks, through inclusion of a new age range (10 to 60 and older), to open access to education to younger and older persons who lack formal credentials or might otherwise be barred from degree study. Candidates are chosen in part through interviews.

The consortium is a group of several universities or colleges in the same metropolitan or geographic area that voluntarily band together to permit students in one institution to use the resources in the others. Where demand for a particular course or courses is limited, the colleges may also combine departments and faculties so that only one school gives the course and economies are achieved.

Experience-based learning provides college credit for such off-campus learning as work-experience, independent study, and equivalency examinations. It provides opportunity for people with full-time jobs to acquire college credit and degrees with minimum attendance in formal classrooms. The Empire State College in New York is a pioneering example.

Under proposed legislation that provides greater autonomy at the local level for utilizing funds from Federal sources, opportunity is provided for increased experimentation in educational structure and program organization. As the National Institute of Education proceeds with research in this area, additional innovations may be forthcoming. Meanwhile, at the postsecondary level, the new Fund for the Improvement of Postsecondary Education is already supporting several programs which enable good, new ideas to be put into practice.

III. Statistics on Education[1]

An Overview

Education was the primary occupation of 62.2 million Americans in the fall of 1974. Included in this total were 58.9 million students, 3 million teachers, and some 300,000 superintendents, principals, supervisors, and other instructional staff members. This means that, in a nation of 212 million people, nearly 3 out of every 10 persons were directly involved in the educational process. It is not surprising, therefore, that so much attention is being focused upon our schools and colleges and that a substantial portion of our resources is being allocated to this vital enterprise. Increased support for education in recent years has come from Federal, State, and local government, as well as from a variety of private sources. The total expenditures of educational institutions amounted to approximately $100 billion during the school year 1973-74.

Enrollment

Total enrollment in regular educational programs from kindergarten through graduate school increased for 27 consecutive years before reaching an all-time high of 59.7 million in fall 1971. Subsequently, there have been small annual decreases at the elementary school level, reflecting the fact that there are now fewer children 5 to 13 years of age than in the recent past. Further reductions in elementary school enrollment are expected for the next several years because fewer children will be reaching school age. Enrollment is continuing to rise at the high school and college levels.

Between fall 1973 and fall 1974, enrollment in kindergarten (ages 5-6; excluding nursery schools) through grade 8 decreased from 35.1 to 34.4 million, or about 2 percent; enrollment in grades 9 through 12 increased from 15.4 to 15.6 million, or nearly 1½ percent; and degree-credit enrollment in higher education institutions rose from 8.5 to 8.9 million, or about 4½ percent. Additional enrollment information by level and control may be found in table 1.

Since the end of World War II, a dominant trend in this country has been for more and more persons to enter the educational system at an earlier age and to remain in school for a longer period of time than their predecessors. This trend is illustrated most dramatically in table 2, which shows the percentage of 5-year olds enrolled in school in 1973 with the comparable percentages one and two decades ago. More than 84 percent of the 5-year olds were enrolled in school in fall 1973, as compared with 68 percent in 1963 and 58 percent in 1953. The enrollment percentages for persons in their middle and late teens, while down slightly from the peaks they attained around 1968, were substantially higher in 1973 than in 1953 and somewhat higher than they were in 1963. At all ages after 5, peak enrollment percentages came before 1973, the greatest decline (7.5 percent) being for the group aged 18 and 19.

[1] Prepared by HEW's National Center for Education Statistics.

Table 1.—Estimated enrollment in educational institutions, by level of instruction and by type of control: United States, fall 1973 and fall 1974[1]

[In thousands]

Level of instruction and type of control	Fall 1973	Fall 1974
1	2	3
Total elementary, secondary, and higher education	59,039	58,910
Public	52,038	51,940
Nonpublic	7,001	6,970
Kindergarten-grade 12 (regular and other schools)[2]	50,519	50,010
Regular public schools	45,409	45,000
Regular nonpublic schools	4,800	4,700
Other public schools	240	240
Other nonpublic schools	70	70
Kindergarten-grade 8 (regular and other schools)[2]	35,133	34,400
Regular public schools	31,333	30,700
Regular nonpublic schools	3,600	3,500
Other public schools	170	170
Other nonpublic schools	30	30
Grades 9-12 (regular and other schools)[2]	15,386	15,610
Regular public schools	14,076	14,300
Regular nonpublic schools	1,200	1,200
Other public schools	70	70
Other nonpublic schools	40	40
Higher education (total degree-credit enrollment in universities, colleges, professional schools, teachers colleges, and junior colleges)[3]	8,520	8,900
Public	6,389	6,700
Nonpublic	2,131	2,200
Undergraduate[4]	7,397	7,700
Graduate	1,123	1,200

[1] The 1973 figures for regular nonpublic and other elementary and secondary schools, and all 1974 figures, are estimates. Surveys of nonpublic elementary and secondary schools have been conducted at less frequent intervals than those of public schools and of institutions of higher education. Consequently, the estimates for nonpublic schools are less reliable than those for other types of institutions. The estimates for 1974 are derived from the increases expected from population changes combined with the long-range trend in school enrollment rates of the population.

[2] "Regular" schools include schools which are a part of State and local school systems and also most nonprofit-making nonpublic elementary and secondary schools, both church-affiliated and nonsectarian. "Other" schools include subcollegiate departments of institutions of higher education, residential schools for exceptional children, Federal schools for Indians, and Federal schools on military posts and other Federal installations.

[3] Excludes undergraduate students in occupational programs which are not ordinarily creditable toward a bachelor's degree. There were approximately 1,082,000 of these nondegree-credit students in fall 1973.

[4] Includes students working toward first-professional degrees, such as M.D., D.D.S., LL.B., and B.D.

NOTE.—Fall enrollment is usually smaller than school-year enrollment, since the latter is a cumulative figure which includes students who enroll at any time during the year.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Day Schools, Fall 1973*; Fall Enrollment in Higher Education, 1973; and estimates of the National Center for Education Statistics.

Table 2.—Percent of the population 5 to 34 years old enrolled in school, by age: United States, October 1947 to October 1973

Year	Total, 5—34 years	5 years [1]	6 years [1]	7—9 years	10—13 years	14—15 years	16—17 years	18—19 years	20—24 years	25—29 years	30—34 years
1	2	3	4	5	6	7	8	9	10	11	12
1947	42.3	53.4	96.2	98.4	98.6	91.6	67.6	24.3	10.2	3.0	1.0
1948	43.1	55.0	96.2	98.3	98.0	92.7	71.2	26.9	9.7	2.6	.9
1949	43.9	55.1	96.2	98.5	98.7	93.5	69.5	25.3	9.2	3.8	1.1
1950	44.2	51.8	97.0	98.9	98.6	94.7	71.3	29.4	9.0	3.0	.9
1951	45.4	53.8	96.0	99.0	99.2	94.8	75.1	26.3	8.3	2.5	.7
1952	46.8	57.8	96.8	98.7	98.9	96.2	73.4	28.7	9.5	2.6	1.2
1953	48.8	58.4	97.7	99.4	99.4	96.5	74.7	31.2	11.1	2.9	1.7
1954	50.0	57.7	96.8	99.2	99.5	95.8	78.0	32.4	11.2	4.1	1.5
1955	50.8	58.1	98.2	99.2	99.2	95.9	77.4	31.5	11.1	4.2	1.6
1956	52.3	58.9	97.0	99.4	99.2	96.9	78.4	35.4	12.8	5.1	1.9
1957	53.6	60.2	97.4	99.5	99.5	97.1	80.5	34.9	14.0	5.5	1.8
1958	54.8	63.8	97.3	99.5	99.5	96.9	80.6	37.6	13.4	5.7	2.2
1959	55.5	62.9	97.5	99.4	99.4	97.5	82.9	36.8	12.7	5.1	2.2
1960	56.4	63.7	98.0	99.6	99.5	97.8	82.6	38.4	13.1	4.9	2.4
1961	56.8	66.3	97.4	99.4	99.3	97.6	83.6	38.0	13.7	4.4	2.0
1962	57.8	66.8	97.9	99.2	99.3	98.0	84.3	41.8	15.6	5.0	2.6
1963	58.5	67.8	97.4	99.4	99.3	98.4	87.1	40.9	17.3	4.9	2.5
1964	58.7	68.5	98.2	99.0	99.0	98.6	87.7	41.6	16.8	5.2	2.6
1965	59.7	70.1	98.7	99.3	99.4	98.9	87.4	46.3	19.0	6.1	3.2
1966	60.0	72.8	97.6	99.3	99.3	98.6	88.5	47.2	19.9	6.5	2.7
1967	60.2	75.0	98.4	99.4	99.1	98.2	88.8	47.6	22.0	6.6	4.0
1968	60.0	74.9	98.3	99.1	99.1	98.0	90.2	50.4	21.4	7.0	3.9
1969	60.0	76.2	98.2	99.3	99.1	98.1	89.7	50.2	23.0	7.9	4.8
1970	58.9	77.7	98.4	99.3	99.2	98.1	90.0	47.7	21.5	7.5	4.2
1971	58.5	82.5	98.4	99.1	99.2	98.6	90.2	49.2	21.9	8.0	4.9
1972	56.8	83.5	98.1	99.0	99.3	97.6	88.9	46.3	21.6	8.6	4.6
1973	55.4	84.1	98.5	99.1	99.2	97.5	88.3	42.9	20.8	8.5	4.5

[1] Includes children enrolled in kindergarten, but excludes those enrolled in nursery schools.

NOTE.—Data are based upon sample surveys of the civilian noninstitutional population.

SOURCES. U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, and U.S. Department of Health, Education, and Welfare, Office of Education, reports on *Preprimary Enrollment*.

Table 3 provides evidence of the long-term growth of secondary education in the United States. From 1890 to 1973, the population 14 to 17 years of age tripled, enrollment in grades 9 through 12 increased 43 times, from 360,000 to 15.4 million. In 1890 only about 1 person in 15 in the 14 to 17 age group was enrolled in school; in 1973 the figure was more than 9 out of 10.

Within the past 20 years, college enrollment in the United States has quadrupled. Part of the increase in college enrollment

Table 3.—Enrollment in grades 9-12 in public and nonpublic schools compared with population 14-17 years of age: United States, 1889-90 to fall 1973

School year	Enrollment, grades 9–12 and postgraduate[1]			Population 14–17 years of age[2]	Total number enrolled per 100 persons 14–17 years of age
	All schools	Public schools	Nonpublic schools		
1	2	3	4	5	6
1889–90	359,949	[3] 202,963	[3] 94,931	5,354,653	6.7
1899–1900	699,403	[3] 519,251	[3] 110,797	6,152,231	11.4
1909–10	1,115,398	[3] 915,061	[3] 117,400	7,220,298	15.4
1919–20	2,500,176	[3] 2,200,389	[3] 213,920	7,735,841	32.3
1929–30	4,804,255	[3] 4,399,422	[3] [4] 341,158	9,341,221	51.4
1939–40	7,123,009	6,635,337	487,672	9,720,419	73.3
1941–42	6,933,265	6,420,544	512,721	9,749,000	71.1
1943–44	6,030,617	5,584,656	445,961	9,449,000	63.8
1945–46	6,237,133	5,664,528	572,605	9,056,000	68.9
1947–48	6,305,168	5,675,937	629,231	8,841,000	71.3
1949–50	6,453,009	5,757,810	695,199	8,404,768	76.8
1951–52	6,596,351	5,917,384	678,967	8,516,000	77.5
1953–54	7,108,973	6,330,565	778,408	8,861,000	80.2
1955–56	7,774,975	6,917,790	857,185	9,207,000	84.4
1957–58	8,869,186	7,905,469	963,717	10,139,000	87.5
1959–60	9,599,810	8,531,454	1,068,356	11,154,879	86.1
1961–62	10,768,972	9,616,755	1,152,217	12,046,000	89.4
Fall 1963	12,255,496	10,935,536	1,319,960	13,492,000	90.8
Fall 1965	13,020,823	11,657,808	1,363,015	14,145,000	92.1
Fall 1969	14,518,301	13,084,301	[5] 1,434,000	15,550,000	93.4
Fall 1971	15,226,000	13,886,000	[5] 1,340,000	16,279,000	93.5
Fall 1973[6]	15,386,000	14,146,000	1,240,000	16,743,000	91.9

[1] Unless otherwise indicated, includes enrollment in subcollegiate departments of institutions of higher education and in residential schools for exceptional children. Beginning in 1949-50, also includes Federal schools.
[2] Includes all persons residing in the United States, but excludes Armed Forces overseas. Data from the decennial censuses have been used when appropriate. Other figures are Bureau of the Census estimates as of July 1 preceding the opening of the school year.
[3] Excludes enrollment in subcollegiate departments of institutions of higher education and in residential schools for exceptional children.
[4] Data for 1927-28.
[5] Estimated.
[6] Preliminary data.

NOTE.—Beginning in 1959-60, includes Alaska and Hawaii.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Statistics of State School Systems, Statistics of Public Elementary and Secondary Day Schools, Statistics of Nonpublic Elementary and Secondary Schools;* and unpublished data.

may be accounted for by the increased population of young people. Table 4 shows, however, that another factor has contributed to increased college attendance; the proportion of young people attending college has risen from about 13 percent in the early 1950's to approximately one-third today.

For more than half a century the Federal Government has assisted State and local governments in providing vocational education programs. In recent years new programs have been added to the traditional classes in agriculture, home economics, and trades and industry, and the number of participants has increased at a rapid rate. As shown in table 5, more than 12 million students were enrolled in federally aided vocational classes in 1973.

Teachers and Instructional Staff

The teaching staff in U.S. schools and colleges grew rapidly during the 1960's, keeping pace with, and frequently exceeding, the rise in enrollments. The number of teachers has now stabilized at a high level. Table 6 shows that between the fall of 1973 and 1974 the number of teachers remained near 3.0 million. Small gains in the number of secondary and college teachers were nearly offset by a small decline in elementary teachers.

The long-range trend is for the number of public elementary and secondary school teachers to grow at a somewhat faster rate than school enrollment. Consequently, there has been a slight decline in the past few years in the number of pupils per teacher. As table 7 indicates, there were 21.4 pupils per teacher in public schools in 1973 as compared with 23.2 pupils per teacher 5 years earlier.

Schools and School Districts

There were approximately 16,700 local school districts in the United States in fall 1973. More than 3,700 school districts were eliminated over a 5-year period, as seen in table 7. The number of school districts is gradually being reduced through a process of reorganization and consolidation.

The number of public elementary schools is also declining, reflecting school consolidations and some elimination of small rural schools. In 1972-73 the public school system included 62,900 elementary schools, 23,900 secondary schools, and 2,000 combined elementary-secondary schools (organized and administered as a single unit).

High School and College Graduates

More than 3 million persons graduated from high school in 1973, and about 1.3 million received earned degrees from U.S. colleges and universities. Included in the degrees conferred were 1 million bachelors' degrees and first-professional degrees, and nearly 300,000 masters' and doctors' degrees. Tables 8 and 9 show that within the past 15 years the annual number of high school graduates has doubled; bachelors' and first-

Table 4.—Degree-credit enrollment in institutions of higher education compared with population aged 18-24: United States, fall 1950 to fall 1973

Year	Population 18–24 years of age [1]	Enrollment	Number enrolled per 100 persons 18–24 years of age	Year	Population 18–24 years of age [1]	Enrollment	Number enrolled per 100 persons 18–24 years of age
1	2	3	4	1	2	3	4
1950	16,076,000	2,286,500	14.2	1960	16,128,000	3,582,726	22.2
1951	15,781,000	2,107,109	13.4	1961	17,004,000	3,860,643	22.7
1952	15,473,000	2,139,156	13.8	1962	17,688,000	4,174,936	23.6
1953	15,356,000	2,235,977	14.7	1963	18,268,000	4,494,626	24.6
1954	15,103,000	2,452,466	16.2	1964	18,783,000	4,950,173	26.4
1955	14,968,000	2,660,429	17.8	1965	20,293,000	5,526,325	27.2
1956	14,980,000	2,927,367	19.5	1966	21,376,000	5,928,000	27.7
1957	15,095,000	3,047,373	20.2	1967	22,327,000	[2] 6,406,000	28.7
1958	15,307,000	3,236,414	21.2	1968	22,883,000	6,928,115	30.3
1959	15,677,000	3,377,273	21.5	1969	23,723,000	7,484,073	31.5
				1970	24,683,000	7,920,149	32.1
				1971	25,776,000	8,116,103	31.5
				1972	25,901,000	8,265,057	31.9
				1973	26,381,000	8,519,750	32.3

[1] These Bureau of the Census estimates are as of July 1 preceding the opening of the academic year. They include Armed Forces overseas.

[2] Estimated.

NOTE.—Data are for 50 States and the District of Columbia. Beginning in 1953, enrollment figures include resident and extension students; data for earlier years exclude extension students.

SOURCES: U S Department of Health, Education, and Welfare, National Center for Education Statistics, *Fall Enrollment in Higher Education*, U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-25 Nos. 311 and 519.

Table 5.—Enrollment in federally aided vocational classes, by type of program: United States and outlying areas, 1920 to 1973

Fiscal year	Type of program								
	Total	Agriculture	Distributive occupations	Home economics	Trades and industry	Health occupations	Technical education	Office occupations	Other programs
1	2	3	4	5	6	7	8	9	10
1920	265,058	31,301		48,938	184,819				
1930	981,882	188,311		174,967	618,604				
1940	2,290,741	584,133	129,433	818,766	758,409				
1942	2,624,786	605,099	215,049	954,041	850,597				
1944	2,001,153	469,959	181,509	806,605	543,080				
1946	2,227,663	510,331	174,672	911,816	630,844				
1948	2,836,121	640,791	292,936	1,139,766	762,628				
1950	3,364,613	764,975	364,670	1,430,366	804,602				
1952	3,165,988	746,402	234,984	1,391,389	793,213				
1954	3,164,851	737,502	220,619	1,380,147	826,593				
1956	3,413,159	785,599	257,025	1,486,816	883,719				
1958	3,629,339	775,892	282,558	1,559,822	983,644	27,423			
1960	3,768,149	796,237	303,784	1,588,109	938,490	40.250	101,279		
1962	4,072,677	822,664	321,065	1,725,660	1,005,383	48,935	148,920		
1964	4,566,390	860,605	334,126	2,022,138	1,069,274	59,006	221,241		
1966	6,070,059	907,354	420,426	1,897,670	1,269,051	83,677	253,838	1,238,043	
1968	7,533,936	851,158	574,785	2,283,338	1,628,542	140,987	269,832	1,735,997	49,297
1970	8,793,960	852,983	529,365	2,570,410	1,906,133	198,044	271,730	2,111,160	354,135
1972	11,710,767	896,460	640,423	3,445,698	2,397,968	336,652	337,069	2,351,878	1,304,619
1973	12,283,538	927,591	738,547	3,516,683	2,702,238	421,075	364,044	2,499,095	1,114,265

SOURCES: U.S. Department of Health, Education, and Welfare, Office of Education, annual reports *on Vocational and Technical Education;* and *Summary Data, Vocational Education, Fiscal Year 1973.*

Table 6.—Estimated number of classroom teachers in elementary and secondary schools, and total instructional staff for resident courses in institutions of higher education: United States, fall 1973 and fall 1974[1]

[Full-time and part-time teachers and staff]

Level of instruction and type of control	Fall 1973	Fall 1974
1	2	3
Total elementary, secondary, and higher education	2,997,000	3,005,000
Public	2,565,000	2,572,000
Nonpublic	432,000	433,000
Elementary and secondary classroom teachers in regular and other schools[2]	2,377,000	2,383,000
Public	2,141,000	2,147,000
Nonpublic	236,000	236,000
Elementary classroom teachers in regular and other schools[2]	1,300,000	1,290,000
Public	1,146,000	1,135,000
Nonpublic	154,000	155,000
Secondary classroom teachers in regular and other schools[2]	1,077,000	1,093,000
Public	995,000	1,012,000
Nonpublic	82,000	81,000
Higher education instructional staff for resident courses (first term)[3]	620,000	622,000
Public	424,000	425,000
Nonpublic	196,000	197,000

[1] The 1973 figures for nonpublic and other elementary and secondary schools and for institutions of higher education, and all 1974 figures, are estimates. Data for nonpublic elementary and secondary schools are not as complete as those for public schools; consequently, the estimates for nonpublic schools are not as reliable as those for public schools or for higher education. The estimates for 1974 are derived from expected enrollment changes combined with the long-term trend in pupil-teacher ratios.

[2] The figures include elementary and secondary classroom teachers in regular public and nonpublic schools and other schools, such as Federal schools for Indians, federally operated schools on posts, subcollegiate departments of colleges, and residential schools for exceptional children. For 1973, the numbers of such teachers are estimated as 12,000 in public and 2,000 in nonpublic elementary schools; 4,000 in public and 3,000 in nonpublic secondary schools.

[3] Includes full-time and part-time staff with rank of instructor or above, and junior staff, such as graduate assistants, for instruction in resident courses.

SOURCES: Surveys and estimates of the National Center for Education Statistics, U.S. Department of Health, Education, and Welfare.

Table 7.—Selected statistics for public elementary and secondary schools: United States, fall 1968 and fall 1973

Item	Fall 1968	Fall 1973	Percentage change, 1968 to 1973
1	2	3	4
Local school districts			
Total	20,440	16,698	−18.3
Operating	19,339	16,338	−15.5
Nonoperating	1,101	360	−67.3
Number of schools [1]			
Total	94,197	88,864	−5.7
Elementary only	67,186	62,942	−6.3
Secondary only	23,318	23,919	2.6
Combined elementary and secondary	3,693	2,003	−45.8
Enrollment			
Total	44,943,904	45,408,805	1.0
Elementary	27,362,858	26,414,389	−3.5
Secondary	17,581,046	18,994,416	8.0
Percent of total membership in elementary schools	60.9	58.2	
Percent of total membership in secondary schools	39.1	41.8	
Classroom teachers			
Total, full-time and part-time	1,936,331	2,125,094	9.7
Elementary schools	1,075,927	[2] 1,134,056	[2] 5.4
Secondary schools	860,404	[2] 991,038	[2] 15.2
Percent of total teachers in elementary schools	55.6	[2] 53.4	
Percent of total teachers in secondary schools	44.4	[2] 46.6	
Pupil-teacher ratio			
All schools	23.2	21.4	
Elementary schools	25.4	[2] 23.3	
Secondary schools	20.4	[2] 19.2	
Public high school graduates [1]			
Total graduates of regular day school programs	2,394,535	2,730,000	14.0
Boys	1,193,425	1,353,000	13.4
Girls	1,201,110	1,377,000	14.6
Other programs	42,746	34,973	−18.2
High school equivalency certificates	96,509	190,713	97.6

[1] Data for previous school year.

[2] Estimated.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Statistics of State School Systems 1967-68* and *Statistics of Public Elementary and Secondary Day Schools, Fall 1971* and *Fall 1973*.

Table 8.—Number of high school graduates compared with population 17 years of age: United States, 1869-70 to 1972-73

School year	Population 17 years old [2]	High school graduates [1]			Number graduated per 100 persons 17 years of age
		Total	Boys	Girls	
1	2	3	4	5	6
1869-70	815,000	16,000	7,064	8,936	2.0
1879-80	946,026	23,634	10,605	13,029	2.5
1889-90	1,259,177	43,731	18,549	25,182	3.5
1899-1900	1,489,146	94,883	38,075	56,808	6.4
1909-10	1,786,240	156,429	63,676	92,753	8.8
1919-20	1,855,173	311,266	123,684	187,582	16.8
1929-30	2,295,822	666,904	300,376	366,528	29.0
1939-40	2,403,074	1,221,475	578,718	642,757	50.8
1941-42	2,425,574	1,242,375	576,717	665,658	51.2
1943-44	2,410,389	1,019,233	423,971	595,262	42.3
1945-46	2,254,738	1,080,033	466,926	613,107	47.9
1947-48	2,202,927	1,189,909	562,863	627,046	54.0
1949-50	2,034,450	1,199,700	570,700	629,000	59.0
1951-52	2,040,800	1,196,500	569,200	627,300	58.6
1953-54	2,128,600	1,276,100	612,500	663,600	60.0
1955-56	2,270,000	1,414,800	679,500	735,300	62.3
1957-58	2,324,000	1,505,900	725,500	780,400	64.8
1959-60	2,862,005	1,864,000	898,000	966,000	65.1
1961-62	2,768,000	1,925,000	941,000	984,000	69.5
1963-64	3,001,000	2,290,000	1,121,000	1,169,000	76.3
1965-66	3,515,000	2,632,000	1,308,000	1,324,000	74.9
1967-68	3,521,000	2,702,000	1,341,000	1,361,000	76.7
1969-70	3,825,343	2,896,000	1,433,000	1,463,000	75.7
1971-72	3,957,000	3,006,000	1,490,000	1,516,000	76.0
1972-73	4,024,000	3,037,000	1,501,000	1,536,000	75.5

[1] Includes graduates of public and nonpublic schools.
[2] Data from Bureau of the Census.

NOTE.—Beginning in 1959-60, includes Alaska and Hawaii.

SOURCES. U S Department of Health, Education, and Welfare, National Center for Education Statistics. *Statistics of State School Systems*, *Statistics of Public Elementary and Secondary Day Schools, Fall 1973*, *Statistics of Nonpublic Elementary and Secondary Schools*; and unpublished data.

Table 9.—Earned degrees conferred by institutions of higher education: United States, 1869-70 to 1972-73

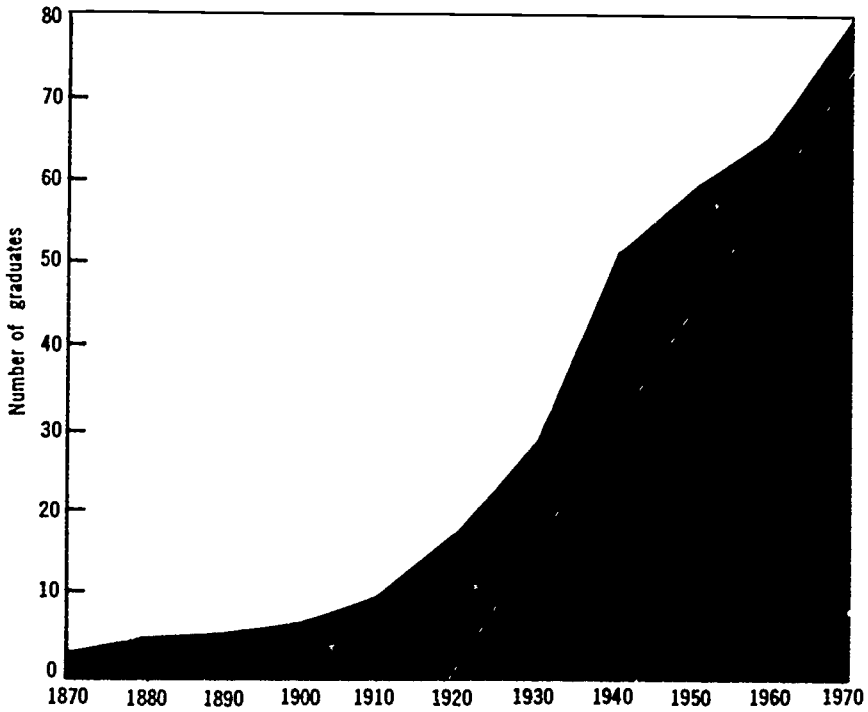
Year	Earned degrees conferred			
	All degrees	Bachelor's and first-professional	Master's except first-professional [1]	Doctor's
1	2	3	4	5
1869–70	9,372	9,371	0	1
1879–80	13,829	12,896	879	54
1889–90	16,703	15,539	1,015	149
1899–1900	29,375	27,410	1,583	382
1909–10	39,755	37,199	2,113	443
1919–20	53,516	48,622	4,279	615
1929–30	139,752	122,484	14,969	2,299
1939–40	216,521	186,500	26,731	3,290
1941–42	213,491	185,346	24,648	3,497
1943–44	141,582	125,863	13,414	2,305
1945–46	157,349	136,174	19,209	1,966
1947–48	317,607	271,019	42,400	4,188
1949–50	496,661	432,058	58,183	6,420
1951–52	401,203	329,986	63,534	7,683
1953–54	356,608	290,825	56,788	8,995
1955–56	376,973	308,812	59,258	8,903
1957–58	436,979	362,554	65,487	8,938
1959–60	476,704	392,440	74,435	9,829
1961–62	514,323	417,846	84,855	11,622
1963–64	614,194	498,654	101,050	14,490
1965–66	709,832	551,040	140,555	18,237
1967–68	866,548	666,710	176,749	23,089
1969–70	1,065,391	827,234	208,291	29,866
1970–71	1,140,292	877,676	230,509	32,107
1971–72 [2]	1,210,280	926,870	250,080	33,330
1972–73 [3]	1,295,100	1,004,700	256,300	34,100

[1] Beginning in 1965-66, includes all master's degrees.
[2] Preliminary data.
[3] Estimated.

NOTE.—Beginning in 1959-60, includes Alaska and Hawaii.

SOURCES. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Biennial Survey of Education in the United States; Earned Degrees Conferred;* and unpublished data.

Figure 2.—Number of high school graduates for each 100 persons 17 years of age: United States, 1869–70 to 1969–70



SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Digest of Educational Statistics, 1974.*

professional degrees, tripled; and advanced degrees, quadrupled. These monumental growth rates reflect the rise in the number of young people of high school and college age and also a substantial increase in the proportion completing each level of education. Trends in the proportion of young people completing high school over the past century are indicated in figure 2.

Data on earned degrees conferred by major field of study in the year ending in June 1972 are shown in table 10. At the bachelor's level more degrees were conferred in education, social sciences, and business and management

Table 10.—Earned degrees conferred by institutions of higher education, by field of study and by level: United States, 1971-72

Field of study	Earned degrees conferred			
	Bachelor's degrees (requiring 4 or 5 years)	First professional degrees (requiring at least 6 years)	Second level (master's) degrees	Doctor's degrees (Ph.D., Ed.D., etc.)
1	2	3	4	5
All fields	883,460	43,410	250,080	33,330
Agriculture and natural resources	13,640		2,660	970
Architecture and environmental design	6,440		1,900	50
Area studies	2,980		1,050	160
Biological sciences	37,230		6,100	3,650
Business and management	121,830		29,960	900
Communications	12,340		2,200	110
Computer and information sciences	3,370		1,850	170
Education	190,850		97,730	7,040
Engineering	50,310		16,650	3,660
Fine and applied arts	33,810		7,540	570
Foreign languages	18,800		4,620	840
Health professions	28,420	15,800	7,120	440
Home economics	12,070		1,670	100
Law	500	21,760	620	40
Letters[1]	73,200		12,710	2,590
Library science	990		7,380	60
Mathematics	23,630		5,190	1,130
Military sciences	200			
Physical sciences	20,390		6,160	4,090
Psychology	43,080		5,290	1,880
Public affairs and services	12,540		9,360	210
Social sciences	157,640		17,420	4,080
Theology	3,880	5,570	2,760	440
Interdisciplinary and other fields	15,320	280	2,140	150

[1] Includes general English; English literature, Comparative literature, Classics; Linguistics; Speech, debate, and forensic science; Creative writing, Teaching of English as a foreign language; Philosophy; and Religious studies.

SOURCE: U S Department of Health, Education, and Welfare, National Center for Education Statistics, preliminary data from the survey of *Earned Degrees Conferred, 1971-72.*

than in any other fields. The traditional fields of law, health professions, and theology were the leaders at the first-professional level. The leading fields for masters' degrees, in terms of number conferred, were education, business and management, and the social sciences. More than 3,600 doctors' degrees were conferred in each of the following: Education, physical sciences, social sciences, engineering, and biological sciences. Degrees in education, at all levels totaled 7,040.

School Retention Rates and Educational Attainment

Table 11 shows the increase in school retention rates from the fifth grade through college entrance over the past 40 years. During this period the proportion of fifth graders who went on to graduate from high school increased from about 30 to 75 percent. In other words, the rate of graduation is now about 2½ times that which prevailed in the early 1930's. The increase in college attendance is even more striking: Approximately 43 percent of our young people now enter college; in 1932 the comparable figure was 12 percent. Retention rates for the high school graduating class of 1973 are shown in figure 3.

Since 1940 the U.S. Bureau of the Census has collected statistics on the educational attainment of the population in this country. Table 12, derived from Census publications, compares the educational attainment of the population 25 to 29 years of age with the total population 25 years of age and over. The former group in March 1974 had completed one-half year of school more than had the total adult population (nonwhites of that group completed 14 years more than the total nonwhite group). More than four-fifths of the 25 to 29 age group reported that they were high school graduates, as compared with slightly over three-fifths of all adults. More than one-fifth of the young adults identified themselves as college graduates, while 13 percent of the total adult population had completed 4 or more years of college.

Only 1 percent of the persons 14 years of age and over was illiterate in 1969, as shown in table 13. In figure 4, this illiteracy rate may be compared with that of 2.2 percent in 1959, 4.3 percent in 1930, and 10.7 percent in 1900 (figure 4). Thus the 20th century has seen a steady reduction in the percentage of persons in this country who are unable to read and write any language.

Income

Public elementary and secondary schools in the United States derive virtually all their revenue from governmental sources. Income from other sources, such as gifts and fees, amounts to less than 0.5 percent of the total revenue receipts. Local governments contribute more than any other source, but in recent years the proportions from the Federal and State Governments have been increasing. Table 14 indicates that in the school year 1972-73 approximately 51 percent of the rev-

Table 11.—Estimated retention rates,[1] 5th grade through college entrance, in public and nonpublic schools: United States, 1924-32 to 1965-73

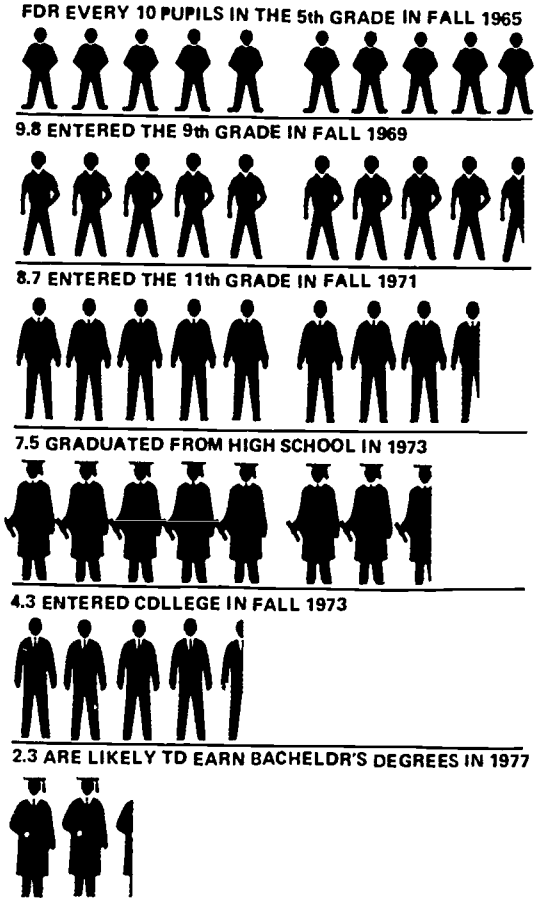
School year pupils entered 5th grade	Retention per 1,000 pupils who entered 5th grade								High school graduation		First-time college students
	5th grade	6th grade	7th grade	8th grade	9th grade	10th grade	11th grade	12th grade	Number	Year of graduation	
1	2	3	4	5	6	7	8	9	10	11	12
1924–25	1,000	911	798	741	612	470	384	344	302	1932	118
1926–27	1,000	919	824	754	677	552	453	400	333	1934	129
1928–29	1,000	939	847	805	736	624	498	432	378	1936	137
1930–31	1,000	943	872	824	770	652	529	463	417	1938	148
1932–33	1,000	935	889	831	786	664	570	510	455	1940	160
1934–35	1,000	953	892	842	803	711	610	512	467	1942	129
1936–37	1,000	954	895	849	839	704	554	425	393	1944	121
1938–39	1,000	955	908	853	796	655	532	444	419	1946	([2])
1940–41	1,000	968	910	836	781	697	566	507	481	1948	([2])
1942–43	1,000	954	909	847	807	713	604	539	505	1950	205
1944–45	1,000	952	929	858	848	748	650	549	522	1952	234
1946–47	1,000	954	945	919	872	775	641	583	553	1954	283
1948–49	1,000	984	956	929	863	795	706	619	581	1956	301
1950–51	1,000	981	968	921	886	809	709	632	582	1958	308
1952–53	1,000	974	965	936	904	835	746	667	621	1960	328
1954–55	1,000	980	979	948	915	855	759	684	642	1962	343
1956–57	1,000	985	984	948	930	871	790	728	676	1964	362
Fall 1958	1,000	983	979	961	946	908	842	761	732	1966	384
Fall 1960	1,000	980	973	967	952	913	858	787	749	1968	452
Fall 1962	1,000	987	977	967	959	928	860	790	750	1970	461
Fall 1964	1,000	988	985	976	975	942	865	791	748	1972	433
Fall 1965	1,000	996	983	980	980	947	874	786	749	1973	433

[1] Rates for the 5th grade through high school graduation are based on enrollments in successive grades in successive years in public elementary and secondary schools and are adjusted to include estimates for nonpublic schools. Rates for first-time college enrollment include full time and part-time students enrolled in programs creditable toward a bachelor's degree.
[2] Data not available.

NOTE.—Beginning with the class in the 5th grade in 1958, data are based on fall enrollment and exclude ungraded pupils. The net effect of these changes is to increase high school graduation and college entrance rates slightly.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Biennial Survey of Education in the United States, Statistics of State School Systems, Fall Statistics of Public Elementary and Secondary Day Schools;* and unpublished data.

Figure 3.—Estimated retention rates, fifth grade through college graduation: United States 1965 to 1977



SOURCE. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Digest of Educational Statistics, 1974.*

enue receipts of public schools came from local sources, 40 percent from State governments, and 9 percent from the Federal Government. The Federal contribution between 1963-64 and 1972-73 rose from about $900 million to $4.5 billion.

Although State and local governments have the primary responsibility for public education in the United States (as noted above), the Federal Government for many years has maintained an active interest in the educational process. In recent years an increasing amount of Federal support for all levels of education has been provided through a variety of programs administered by a number of Government agencies. Federal grants are expected to reach an all-time high of $14.3 billion in the fiscal year ending June 30, 1975. Table 15 presents a summary of Federal funds for education, training, and related activities for the fiscal years 1974 and 1975.

Expenditures

Expenditures for public elementary and secondary schools in the United States exceeded $56 billion during the school year 1973-74, as shown in table 16. This represented an increase of one-sixth over the $48 billion expended 2 years earlier. Per-pupil expenditures have also risen rapidly in recent years. The current expenditure per pupil in average daily attendance in 1973-74 exceeded $1,000; and the total expenditure, including current expenditure, capital out-

Table 12.—Level of school completed by persons 25 years old and over and 25 to 29 years old, by color: United States, 1910 to 1974

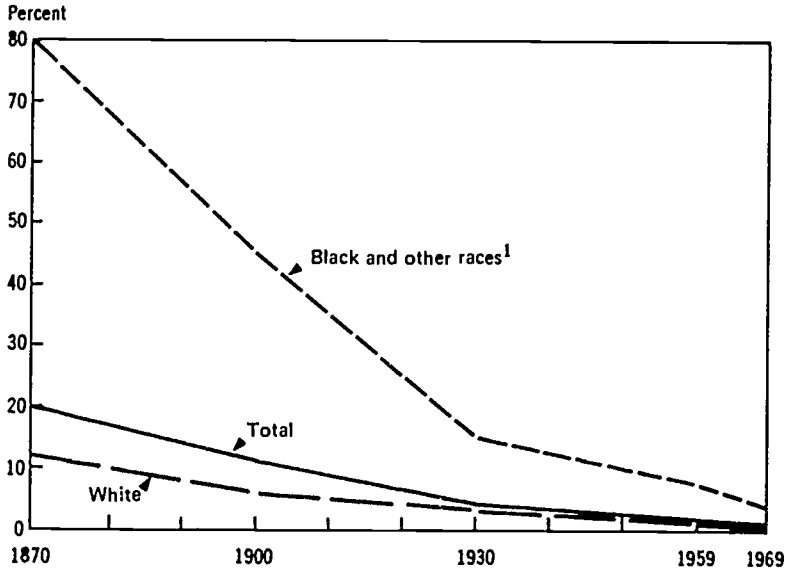
Color, age, and date	Percent, by level of school completed			
	Less than 5 years of elementary school	4 years of high school or more	4 or more years of college	Median school years completed
1	2	3	4	5
WHITE AND NONWHITE				
25 years old and over:				
1910[1]	23.8	13.5	2.7	8.1
1920[1]	22.0	16.4	3.3	8.2
1930[1]	17.5	19.1	3.9	8.4
April 1940	13.5	24.1	4.6	8.6
April 1950	10.8	33.4	6.0	9.3
April 1960	8.3	41.1	7.7	10.5
March 1970	5.3	55.2	11.0	12.2
March 1972	4.6	58.2	12.0	12.2
March 1974	4.4	61.2	13.3	12.3
25 to 29 years old:				
April 1940	5.9	37.8	5.8	10.4
April 1950	4.6	51.7	7.7	12.1
April 1960	2.8	60.7	11.1	12.3
March 1970	1.1	75.4	16.4	12.6
March 1972	.8	79.8	19.0	12.7
March 1974	1.2	81.9	20.7	12.8
WHITE				
25 years old and over:				
April 1940	10.9	26.1	4.9	8.7
April 1950	8.7	35.5	6.4	9.7
April 1960	6.7	43.2	8.1	10.8
March 1970	4.2	57.4	11.6	12.2
March 1972	3.7	60.4	12.6	12.3
March 1974	3.5	63.3	14.0	12.4
25 to 29 years old:				
1920[1]	12.9	22.0	4.5	8.5
April 1940	3.4	41.2	6.4	10.7
April 1950	3.2	55.2	8.1	12.2
April 1960	2.2	63.7	11.8	12.3
March 1970	.9	77.8	17.3	12.6
March 1972	.8	81.5	19.9	12.7
March 1974	1.1	83.4	22.0	12.8
NONWHITE				
25 years old and over:				
April 1940	41.8	7.7	1.3	5.7
April 1950	31.4	13.4	2.2	6.9
April 1960	23.5	21.7	3.5	8.2
March 1970	14.7	36.1	6.1	10.1
March 1972	12.8	39.1	6.9	10.5
March 1974	12.2	44.3	8.0	11.1
25 to 29 years old:				
1920[1]	44.6	6.3	1.2	5.4
April 1940	26.7	12.1	1.6	7.1
April 1950	15.4	23.4	2.8	8.7
April 1960	7.2	38.6	5.4	10.8
March 1970	2.2	58.4	10.0	12.2
March 1972	1.2	66.6	11.6	12.4
March 1974	1.8	71.3	11.0	12.5

[1] Estimates based on retrojection of 1940 census data on education by age.

NOTE.—Prior to 1950, data exclude Alaska and Hawaii. Data for 1972 and 1974 are for the noninstitutional population.

SOURCES: U.S. Department of Commerce, Bureau of the Census. 1960 Census of Population, Vol. 1, Part 1, *Current Population Reports* Series P-20; Series P-19, No. 4; and 1960 Census Monograph, *Education of the American Population*, by John K. Folger and Charles B. Nam.

Figure 4.—Percent of illiteracy in the population, by race: United States, 1870 to 1969



[1] Data for 1969 are for blacks only.

NOTE.—Data for 1870 to 1930 are for the population 10 years old and over; data for 1959 and 1969 are for the population 14 years old and over.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P—20, No. 217.

Table 13.—Percent of illiteracy[1] in the population: United States, 1870 to 1969

Year	Percent illiterate[2]	Year	Percent illiterate[2]
1	2	1	2
1870	20.0	1930	4.3
1880	17.0	1940	[3]2.9
1890	13.3	1947	2.7
1900	10.7	1952	2.5
1910	7.7	1959	2.2
1920	6.0	1959	1.0

[1] Illiteracy is defined as the inability to read or write a simple message either in English or in any other language.
[2] Percentages refer to the population 10 years old and over from 1870 to 1940 and to the population 14 years old and over from 1947 to 1969.
[3] Estimated.

SOURCE. U.S Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, No. 217.

Table 14.—Public elementary and secondary school revenue receipts from Federal, State, and local sources: United States, 1919-20 to 1972-73

School year	Total	Federal	State	Local (including intermediate)[1]
1	2	3	4	5
	AMOUNT IN THOUSANDS OF DOLLARS			
1919-20	$970,120	$2,475	$160,085	$807,561
1929-30	2,088,557	7,334	353,670	1,727,553
1939-40	2,260,527	39,810	684,354	1,536,363
1941-42	2,416,580	34,305	759,993	1,622,281
1943-44	2,604,322	35,886	859,183	1,709,253
1945-46	3,059,845	41,378	1,062,057	1,956,409
1947-48	4,311,534	120,270	1,676,362	2,514,902
1949-50	5,437,044	155,848	2,165,689	3,115,507
1951-52	6,423,816	227,711	2,478,596	3,717,507
1953-54	7,866,852	355,237	2,944,10[illegible]	4,567,512
1955-56	9,686,677	441,442	3,828,886	5,416,350
1957-58	12,181,513	486,484	4,800,368	6,894,661
1959-60	14,746,618	651,639	5,768,047	8,326,932
1961-62	17,527,707	760,975	6,789,190	9,977,542
1963-64	20,544,182	896,956	8,078,014	11,569,213
1965-66	25,356,858	1,996,954	9,920,219	13,439,686
1967-68	31,903,064	2,806,469	12,275,536	16,821,063
1969-70	40,266,923	3,219,557	16,062,776	20,984,589
1971-72	50,003,645	4,467,969	19,133,256	26,402,420
1972-73	52,117,930	4,525,000	20,843,520	26,749,412
	PERCENTAGE DISTRIBUTION			
1919-20	100.0	0.3	16.5	83.2
1929-30	100.0	.4	16.9	82.7
1939-40	100.0	1.8	30.3	68.0
1941-42	100.0	1.4	31.5	67.1
1943-44	100.0	1.4	33.0	65.6
1945-46	100.0	1.4	34.7	63.8
1947-48	100.0	2.8	38.9	58.3
1949-50	100.0	2.9	39.8	57.3
1951-52	100.0	3.5	38.6	57.8
1953-54	100.0	4.5	37.4	58.1
1955-56	100.0	4.6	39.5	55.9
1957-58	100.0	4.0	39.4	56.6
1959-60	100.0	4.4	39.1	56.5
1961-62	100.0	4.3	38.7	56.9
1963-64	100.0	4.4	39.3	56.3
1965-66	100.0	7.9	39.1	53.0
1967-68	100.0	8.8	38.5	52.7
1969-70	100.0	8.0	39.9	52.1
1971-72	100.0	8.9	38.3	52.8
1972-73	100.0	8.7	40.0	51.3

[1] Includes a relatively minor amount from other sources (gifts, tuition, and transportation fees from patrons), which accounted for 0.4 percent of total revenue receipts in 1967-68.

NOTE.—Beginning in 1959-60, includes Alaska and Hawaii. Because of rounding, detail may not add to totals.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Statistics of State School Systems*; and *Expenditures and Revenues for Public Elementary and Secondary Education*, 1972-73.

Table 15.—Federal funds for education and related activities: Fiscal years 1974 and 1975

Level and type of support	1974	1975	Percentage change, 1974 to 1975
1	2	3	4
Federal funds supporting education in educational institutions			
Total grants and loans	$13,953,833,000	$14,656,322,000	5.0
Grants, total	13,572,679,000	14,262,241,000	5.1
Elementary-secondary education	4,599,477,000	4,896,057,000	6.5
Higher education	6,584,689,000	6,530,844,000	— .8
Vocational-technical and continuing education	2,388,513,000	2,835,340,000	1.2
Loans, total (higher education)	381,154,000	394,081,000	1.0
Other Federal funds for education and related activities			
Total	5,425,322,000	5,722,789,000	1.1
Applied research and development	1,559,640,000	1,651,000,000	1.1
School lunch and milk programs	1,674,155,000	1,789,243,000	1.1
Training of Federal personnel	1,153,653,000	1,217,886,000	1.1
Library services	225,157,000	192,643,000	—14.4
International education	79,712,000	78,999,000	— .9
Other [1]	733,005,000	793,018,000	1.1

[1] Includes agricultural extension services, educational television facilities, education in Federal correctional institutions, value of surplus property transferred, and any additional Federal programs.

NOTE.—These are preliminary data subject to change when final figures become available.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Digest of Educational Statistics*, 1974.

Table 16.—Total aid per-pupil expenditures of public elementary and secondary schools: United States, 1919-20 to 1973-74

School year	Expenditures for public schools (in thousands of dollars)					Expenditure per pupil in average daily attendance	
	Total	Current expenditures for day schools	Current expenditures for other programs [1]	Capital Outlay	Interest	Total [2]	Current [3]
1	2	3	4	5	6	7	8
1919-20	$1,036,151	$861,120	$3,277	$153,543	$18,212	$64	$54
1929-30	2,316,790	1,843,552	9,825	370,878	92,536	108	87
1939-40	2,344,049	1,941,799	13,367	257,974	130 909	106	88
1949-50	5,837,643	4,687,274	35,614	1,014,176	100,578	259	209
1959-60	15,613,255	12,329,389	132,566	2,661,786	489,514	472	375
1961-62	18,373,339	14,729,270	194,093	2,862,153	587,823	530	419
1963-64	21,324,993	17,218,446	427,528	2,977,976	701,044	559	460
1965-66	26,248,026	21,053,280	648,304	3,754,862	791,580	654	537
1967-68	32,977,182	26,877,162	866,419	4,255,791	977,810	786	658
1969-70	40,683,428	34,217,773	635,803	4,659,072	1,170,782	955	816
1971-72	48,050,283	41,817,782	395,319	4,458,949	1,378,236	1,128	990
1973-74 [4]	56,031,041	46,956,775	2,127,998	5,259,330	1,686,938	1,281	1,116

[1] Includes expenditures for adult education, summer schools, community colleges, and community services (when separately reported).
[2] Includes ent expenditures for day schools, and other programs, capital outlay and interest on school debt.
[3] Includes day school expenditures only; excludes current expenditures for other programs.
[4] Estimated.

NOTE.—Beginning in 1959-60, includes Alaska and Hawaii. Because of rounding, detail may not add to totals.

SOURCES. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, Statistics of State School Systems; and Statistics of Public Elementary and Secondary Day Schools, Fall 1973.

Table 17.—Gross national product related to total expenditures[1] for education: United States, 1929-30 to 1973-74

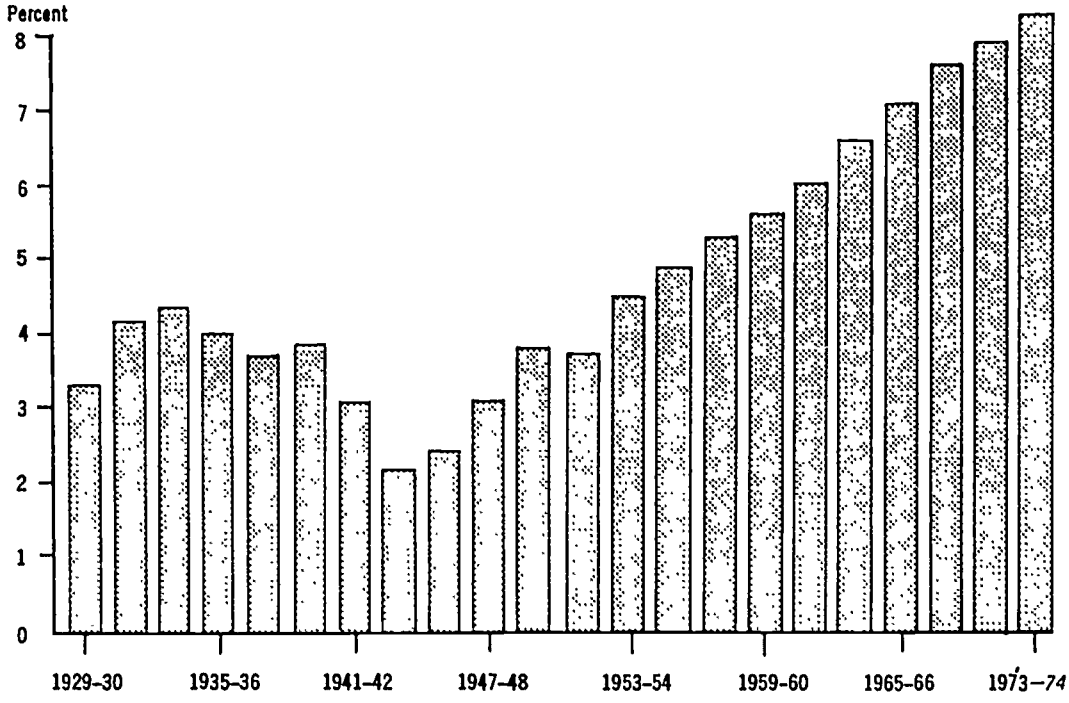
Calendar year	Gross national product (in millions)	School year	Expenditures for education	
			Total (in thousands)	As a percent of gross national product
1	2	3	4	5
1929	$103,095	1929–30	$3,233,601	3.1
1931	75,820	1931–32	2,966,464	3.9
1933	55,601	1933–34	2,294,896	4.1
1935	72,247	1935–36	2,649,914	3.7
1937	90,446	1937–38	3,014,074	3.3
1939	90,494	1939–40	3,199,593	3.5
1941	124,540	1941–42	3,203,548	2.6
1943	191,592	1943–44	3,522,007	1.8
1945	212,010	1945–46	4,167,597	2.0
1947	231,323	1947–48	6,574,379	2.8
1949	256,484	1949–50	8,795,635	3.4
1951	328,404	1951–52	11,312,446	3.4
1953	364,593	1953–54	13,949,876	3.8
1955	397,960	1955–56	16,811,651	4.2
1957	441,134	1957–58	21,119,565	4.8
1959	483,650	1959–60	24,722,464	5.1
1961	520,109	1961–62	29,366,305	5.6
1963	590,503	1963–64	36,010,210	6.1
1965	684,884	1965–66	45,397,713	6.6
1967	793,927	1967–68	57,213,374	7.2
1969	930,284	1969–70	70,077,228	7.5
1971	1,054,915	1971–72	84,748,779	8.0
1973	1,294,919	1973–74	[2]100,000,000	7.7

[1] Includes expenditures of public and nonpublic schools at all levels of education (elementary, secondary, and higher education).
[2] Estimated.

NOTE.—Beginning with 1959-60 school year, includes Alaska and Hawaii.

SOURCES: U S Department of Health, Education, and Welfare, National Center for Education Statistics, *Statistics of State School Systems*, *Financial Statistics of Institutions of Higher Education*, and unpublished data, U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, August 1965, July 1971, and July 1974.

Figure 5.—Total expenditures for education as a percentage of the gross national product: United States, 1929–30 to 1973–74



SOURCE. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Digest of Educational Statistics, 1974.*

lay, and interest on school debt, approached $1,300 per pupil.

Table 17 compares total expenditures for public and private education at all levels (elementary, secondary, and higher education) with the gross national product (GNP) over the past 45 years. Educational expenditures are estimated at $100 billion during the school year 1973-74, an amount equal to 7.7 percent of the GNP. Preliminary estimates indicate that the expenditures of educational institutions may exceed $110 billion in 1974-75. In relation to the GNP, expenditures today are more than four times as great as they were during the middle 1940's as indicated in figure 5. During the last 2 years, however, expenditures have remained essentially unchanged in terms of constant dollars.

Expenditures for vocational education from Federal, State, and local funds are shown in table 18. In 1973 the Federal Government contributed 16 percent of the money, and the remaining 84 percent came from State and local sources. A major goal of American education at the present time is to train young people for useful careers after they leave the educational system. The increased emphasis on education for a career is reflected in the tenfold rise in outlays for vocational education over the past decade. In many respects vocational education is the fastest growing segment of the American educational system.

Table 18.—Expenditures of Federal, State, and local funds for vocational education: United States and outlying areas, 1920 to 1973

[In thousands of dollars]

Fiscal year	Total	Federal	State	Local
1	2	3	4	5
1920	$8,535	$2,477	$2,670	$3,388
1930	29,909	7,404	8,233	14,272
1940	55,081	20,004	11,737	23,340
1942	59,023	20,758	14,045	24,220
1944	64,299	19,958	15,016	29,325
1946	72,807	20,628	18,538	33,641
1948	103,339	26,200	25,834	51,305
1950	128,717	26,623	40,534	61,561
1952	146,466	25,863	47,818	72,784
1954	151,289	25,419	54,550	71,320
1956	175,886	33,180	61,821	80,844
1958	209,748	38,733	72,305	98,710
1960	238,812	45,313	82,466	111,033
1962	283,948	51,438	104,264	128,246
1964	332,785	55,027	124,975	152,784
1966	799,895	233,794	216,583	349,518
1968	1,192,863	262,384	400,362	530,117
1970	1,841,846	300,046	(1)	[1] 1,541,801
1972	2,660,759	466,029	(1)	[1] 2,194,730
1973	3,033,659	482,259	(1)	2,551,400

[1] State funds are included with local funds in column 5.

NOTE.—Because of rounding, detail may not add to totals.

SOURCES. U.S. Department of Health, Education, and Welfare, Office of Education, annual reports on Vocational and Technical Education; and unpublished data.

IV. The Changing Role of Teachers and Teacher Education[1]

Teacher policies in the United States grow out of a system of education unlike that of most Western countries. As explained in chapter 2, authority for education in the United States is decentralized. The 10th amendment of the U.S. Constitution states that any powers not expressly granted to the Federal Government are reserved to the States and to the people. Because authority over education is not expressly granted to the Federal Government in the Constitution, it remains with the States. They have plenary power as long as provisions of the U.S. Constitution are not violated.

The States in turn, through their legislative bodies, have created school districts to operate the public elementary and secondary schools. Over 90 percent of these districts are governed by elected or appointed school boards, and are fiscally independent to raise and collect their own tax funds. States have also created State boards of education and State superintendents of education. At the State administrative level, education is a quasi-independent, nonpartisan structure. Some State offices exercise strong control over the operation of schools, but most State offices are regulatory and/or advisory.

As the authority for education is decentralized, so is the responsibility for teacher policies diffused. Broad policies concerning initial and continuing education and experience qualifications for professional teachers (certification) are set by the State education department, with decisive input from professional personnel. Interstate cooperative certification agreements ensure that most States have uniform minimum qualifications. On the other hand, many policies covering salaries, conditions of employment, and in some cases minimum education resources to be made available are negotiated at the local level by State boards and State superintendents, usually under the broad outlines of State professional negotiation laws, where they exist.

The Changing Society

Population Shifts

Teaching in the United States has been markedly affected by social trends such as the redistribution of population that has occurred in the past few decades—a vast movement largely of the poor from rural to urban areas and of the middle class from urban areas to the suburbs.

Inevitably these shifts in rural, urban, and suburban populations have brought about a profound social depersonalization[2]—jobs outside the neighborhood, leisure activities away from the family, traditional family functions performed by nonfamily organizations, and a decline in identification with the commu-

[1] Adapted from the U.S. report to the Organization for Economic Co-operation and Development (OECD), *Intergovernmental Conference, Teacher Policies*. Paris: November 1974.

[2] Noel P. Gist and Sylvia F. Fava. *Urban Society*. New York: Thomas Y. Crowell. 1964.

nity. Broken homes are now no longer atypical. In 1973, of all children under 18 years old, 14 percent lived in mother-headed homes. For example, among blacks, 35 percent of the children in this age group and 50 percent of those under 6 years were raised by mothers only.[3] There are implications for education in all of these facts, particularly for the inner-city schools, now largely populated by disadvantaged ethnic minorities.

Many teachers joined in the population shift. As they began to live in communities other than the one in which they taught, traditional links between teachers, pupils, and parents weakened. By 1973, 67 percent of all teachers no longer lived in the districts in which they taught.[4] At the same time, particularly in large schools, they found themselves increasingly excluded from curriculum and program decisions. As the gap between administration and teacher widened, teachers experienced depersonalization in their work.[5] Teacher role redefinition became an important issue.

[3] The New York Times. "14% of U.S. Children Under 18 Are Being Raised by Mothers Alone," *Report by United States Government Census Bureau*, Aug. 8, 1974.

[4] Research Report 1972-73. *Status of the American Public School Teacher, 1970-71*. Project Director, Elizabeth C. Moffat, Research Division, Washington, D.C., National Education Association, 1972.

[5] James Cass and Max Birnbaum. "What Makes Teachers Militant," *Contemporary American Education*. S. Dropkin, H. Full, and E. Schwarz, eds. New York: The Macmillan Co., 1970, p. 436.

Desegregation

The 1960's saw a major thrust on the part of the Federal Government toward effecting desegregation in the schools, with varied results in different regions. Small city, rural area, and large city trends differed. As noted earlier, many of the poor, black, and other ethnic minority pupils increased in the cities and the middle class—black and white—moved to the suburbs. The result was that many of the schools became in effect segregated again.

To increase school desegregation, transportation of children from one area to another was mandated by the courts. This is called "busing." It should be noted that transportation of pupils by bus has been acceptable for a long time in the consolidation of schools in rural areas and small towns. As the logistical requirements of integration and busing for desegregation grew more complex, many former supporters began to have second thoughts about the basic strategies used to reach these goals. Busing for desegregation, where it has occurred, has caused the pupil population mix to become more heterogeneous, increasing the complexity of the teacher's task. In addition, many parents did not live in the area where their children attended school, thus further weakening the relationship among teachers, pupils, and community. Other strategies, such as community control, reassignment of administrators, and redrawing boundaries of school districts have been attempted.

Efforts to maximize desegregation within certain school systems, such as New York

and Denver, have employed two specific mechanisms: (1) *Rezoning*, which is realigning attendance districts to improve pupil mix (only possible if neighboring areas have concentrations of majority and minority children); and (2) *magnet schools*, in which certain schools in majority (usually white) areas are given special resources of high quality to help retain the majority students when minority children are bused in.

Decrease in the Number of Private Schools

In the midfifties, many parents sent their children to private schools to avoid integration and to secure what they believed to be quality education for their children. Thus, the number of private schools increased markedly in the 1950's and 1960's. Since the mid-1960's (see chapter 1), financial problems have been the major cause for their decline. This is particularly true for church-affiliated private schools, since Federal funding is severely limited under laws that provide for separation of church and state. High costs are bankrupting many parochial schools in the North.

Increase in the Supply of Teachers

The baby boom at the end of World War II contributed to the growth in the number of children attending secondary schools in the midfifties. This created a teacher shortage that enabled teachers to demand higher salaries and greater benefits, which, when coupled with the availability of jobs, attracted many to the field, including growing numbers of men. The 1960's produced a new and larger crop of teachers. Severe shortages of teachers during the sixties led to the provision of military-service exemptions for draft-age men who trained for the profession. The National Defense Student Loan program provided further inducement to teach: a 50 percent forgiveness on the loan was granted (at a rate of 10 percent each year for 5 years) for those who remained in teaching. Special provisions applied to those who teach in low-income areas or teach handicapped children in public or nonprofit elementary or secondary school systems.

The shortage has since abated, especially on the elementary school level. In some regions, partly as a result of mobility of population, an actual surplus of teachers has developed. At the same time, the inability to predict pupil-population shifts has forced a number of relatively new schools to close their doors.[6]

Meanwhile, with the number of teachers increasing, the supply-demand situation becoming reversed, and the economic situation changing, the power of teacher organizations has grown. The American Federation of Teachers (AFT), largely urban based, had 414,000 members in 1974; and the older National Education Association (NEA) listed 1.6 million members. The latter has tradi-

[6] David A. Andelman. "Population Shifts Upsetting the Planning and Use of Suburban Schools Here," The New York Times, Apr. 1, 1973.

tionally been regarded as more professionally oriented,[7] although this distinction is increasingly questioned as the two organizations become more competitive and at the same time appear to move toward ultimate merger. The strength of teacher organizations tends further to separate teachers from administrative staffs in the schools.

The Demand for Day-Care Centers

Still another social trend is the increase of working mothers who now need day-care centers for their children. Recognizing that early childhood is crucial for learning, educators are responding to the demand. The Teachers' National Field Task Force suggests "Early Childhood Centers" rather than day-care centers. "What is needed are purposefully designed educational programs which provide activities and materials to develop understandings, aptitudes and skills. . . ."[8] This will require new roles and responsibilities for teachers, paraprofessionals, and the community at large.

Education in the Changing Society

National Goals

Americans assign great importance to education. As stated in chapter 3, expenditures for education at all levels in 1973-74 totaled approximately $100 billion, about 8 percent of the gross national product. (See table 17, p. 45). Education is the principal occupation of nearly 30 percent of the Nation's population. Overall funding for public elementary and secondary education more than doubled in the 1960's. (See table 14, p. 42). Children are required to remain in school for 10 to 12 years (depending upon State laws), normally from ages 6, 7, or 8 through ages 16, 17, or 18.

The Constitution gives the Federal Government, through its duty to protect the rights and privileges of U.S. citizens, some authority over education. The fifth paragraph of the 14th amendment enables the Congress to pass civil rights laws. The Federal courts have acted to secure the rights of individuals by implementing provisions of the 1st and 14th amendments. The U.S. Supreme Court mandated school desegregation in 1954 in *Brown v. Board of Education*, and prohibited arbitrary school-board action against a teacher in *Perry v. Sindermann*. In addition, the Congress has the power "to lay and collect taxes . . . and provide for the . . . general welfare of the United States." Congress can therefore tax and spend to support education and, along with this power, can attach conditions to its grants consistent with the constitutional provisions noted earlier.

Funding of New Programs

Quality universal education remains largely a local and State responsibility—supported

[7] James Cass and Max Birnbaum, op. cit., p. 436.

[8] *Inside Out: The Final Report and Recommendations of the Teachers National Field Task Force on the Improvement and Reform of American Education.* Washington, D.C.: U.S. Government Printing Office, 1974. Pp. 35-46.

by certain items of Federal or State legislation and their associated funding. Local school districts wishing to obtain Federal funds must incorporate State mandatory requirements into their programs. Thus, in the majority of federally funded programs, the State decides which local school program and activities will be approved for funding while Federal funds serve as a catalyst in implementing national education goals.

In recent years the Federal Government has provided substantial assistance to education, such as the following:

- Expansion and improvement of training in science, mathematics, and modern foreign languages (1958).
- Education that prepares young people and some adults for employment. Legislation, first initiated in 1919, has been much strengthened since 1963. To improve the chances of the Nation's youth for obtaining jobs, the Federal Government has supported manpower programs, on-the-job training, vocational and career education programs, programs for functionally illiterate adults, and programs to assist adults in post-secondary education.
- Improved education for poor children, many of whom are of minority ethnic groups and living in urban areas (1965).
- Increased emphasis on educational research, innovation, and improved library resources. The Federal Government supports research and development activities, including studies of learning theory; new instruction techniques; updating, revising, and modernizing curriculums;[9] and programs for dissemination of research results through the National Institute of Education and information centers such as the Educational Resources Information Center (ERIC) and interstate collaboration programs for educators.[10]
- Education for physically and mentally handicapped youngsters, as well as gifted and talented children. Federal programs provide extra resources and encourage integration of these children into the regular classroom.
- Equality of educational opportunity (desegregation, integration, and program improvement). This has meant Federal support of busing, preschool programs, and attempts to increase parental involvement in the schools.

Demand for Results

The trend toward accountability.—Negative economic forecasts, the impact of the

[9] "Educational Research and Development in the United States," *Reviews of National Policies for Education.* Paris, Organization for Economic Cooperation and Development, 1971. Pp. 341-52.

[10] Miriam Clasby. "National Influences on Educational Decisionmaking (Working Draft)," *Changing Contexts for Educational Decisionmaking: The Evidence of Recent Federal and State Legislation.* Syracuse: Educational Policy Research Center, Syracuse University Research Corporation, 1973. Pp. 15-18.

energy crisis, inflation, and unemployment have caused tax bases in many States and municipalities to shrink considerably. These declining tax bases and the need to reduce costs are causing elected officials to scrutinize closely the allocations requested for education.

Taxpayers, legislators, and State and Federal education agencies wanting to optimize the tax dollar are demanding to be shown what improvements have come from education innovations and improved salary, prerequisites, working conditions, and prestige for teachers. Teachers have been somewhat unique among public employees in being able to perform duties with relatively little exposure to peers, supervisors, or the public, but this generally modest level of unaccountability is fast eroding, with a current trend toward peer review.

At the State level, accountability is becoming a strong trend. During the 1960's many parents and parent groups expressed growing dissatisfaction with the performance of the schools. Accountability inevitably became a public demand. By fall 1972, 23 States had some type of accountability legislation; 10 States had legislation proposed in 1973; and 8 States required employee evaluation.[11]

[11] Maureen Webster. "Statewide Testing Legislation and Educational Policy," *Changing Contexts for Education Decisionmaking. The Evidence of Recent Federal and State Legislation.* Syracuse: Educational Policy Research Center, Syracuse University Research Corporation. 1973.

Teaching innovations (such as team teaching or differentiated staffing) may also tend to facilitate peer review. Teachers may now have to interact more frequently with other teachers, specialists, paraprofessionals, parents, and supervisors.[12] This will add strain to already complex activities, and will demand greater knowledge and expertise than in the past. Some teachers may welcome the contact with coworkers required by these innovations; others may find it difficult to face the scrutiny involved.

The search for criteria.—However, there is relatively little agreement yet on the criteria for teacher performance. Some have suggested that teachers be judged by the performance of their pupils as measured by tests of cognitive skills. Teachers have objected to this,[13] arguing that pupil achievement is more deeply determined by family, home, peer, and community factors than by teacher performance.[14]

As noted in chapter 1, the use of standardized tests to measure teacher perform-

[12] Anna L. Hyer and Robert M. McClure. *Changing Teacher Roles and Their Implications: A Summary Paper.* 1974. Pp. 5-6.

[13] Alexander M. Mood. "How Teachers Make A Difference," *How Teachers Make A Difference.* Washington, D.C.: U.S. Government Printing Office, 1971.

[14] James G. Anderson. *Bureaucracy in Education.* Baltimore: Johns Hopkins Press, 1968; *and* M. Gittell and T. E. Hollander. *Six Urban School Districts.* New York: Praeger, 1967; *and* David Rogers. *110 Livingston Street: Politics and Bureaucracy in the New York Schools.* New York: Random House, 1968.

ance—through the medium of pupil achievement—is also fraught with snares. Educators and researchers can point out that as many as 70 percent of the items on a standardized reading test are culture-biased and, or represent measures of general intelligence rather than taught reading skills. As classes become more heterogeneous, the difficulty in designing tests that reflect pupil achievement in terms of teacher effectiveness becomes greater. Assessment of test validity and interpretation of results has become a complicated and sophisticated component of education research. There must be a fuller understanding of what types of pupil measures are related to teacher performance and thus can be used to judge teacher effectiveness.

Assessment of teacher performance—whatever the basis of an accountability system—will remain complex. A number of disparate elements within teaching receive different priorities from different groups of educational researchers. Subject-matter knowledge, teaching-learning skills, curriculum-development skills, ability to work with minority-group parents and community groups, capacity for peer-group leadership, expertise in education management, and experience in school-community politics—all are positive and needed elements within the spectrum of teacher skills and performances. No single teacher can hope to have mastered all of those capabilities; yet, since teachers perform in many roles, there are clearly difficult questions involving the selection of criteria by which teachers will be judged and how the various elements in the mix will be weighted.

Teacher organizations stress that teachers cannot be held responsible for results as long as they do not have authority for decision-making with respect to curriculum, teaching policies, or other matters affecting pupil performance. In general, teachers are willing to participate in accountability programs that they have helped to develop. Such involvement has taken place in New York, Baltimore, Detroit, and several other cities.

Diversification and Integration of Teaching Personnel

Trends.—Developments over the past decades have both diversified and integrated the teacher's roles and functions. On the one hand, technological advances (e.g., in the computer field), have given the teacher a new role as manager of learning resources and facilitator of learning, thus broadening and diversifying what had previously been a finite range of tasks. On the other hand, the teacher has become one member within a team providing services to the pupil; not only does the teacher join with other teachers in certain instructional approaches, but also interacts with counselors, psychologists, other specialized professionals, and community representatives on behalf of the pupil. Some trends currently receiving attention include—

- Individualized instruction—pupil diagnostic-prescription systems, and possible programmed instruction, involving both paper-and-pencil methodologies and educational technology. Emphasis is on en-

abling pupils to do their own work at their own pace and become, in part, the assessors of their own progress. Much technological innovation in individualized instruction has originated in the private sector. The kinds of individualized instruction now in use vary from those keyed to specific series of work to those that are open-ended. Open-ended pupil diagnostic-prescription systems are the most flexible means of gearing learning to the individual pupil's pace. To a significant extent the public sector has developed individualized instruction in the field of special education. Recently it has become apparent that some of the philosophy, practices, and products from special education are beginning to be integrated into regular education. Regular classroom teachers have been stimulated toward new ways of thinking and problem-solving and are better serving pupils with learning and behavior problems in the regular classroom.

- *Open education*—open classrooms, small groups on separate projects, schools without walls — programs generally aimed at middle-class pupils. Disadvantaged children frequently require more structure. Open education implies a give-and-take relationship between teacher and pupil rather than an authoritarian one.
- *Team teaching*—also called horizontal differentiated staffing, a collaboration among teachers of equal status in the same or different subjects, in one or more classrooms, and receiving equal pay. This means increasingly cooperative work.
- *Vertical differentiated staffing*—a varied mix of people from paraprofessionals to master teachers hierarchically arranged to carry out instruction, frequently associated with flexible class scheduling, including modular time units, use of large classes for certain elements of instruction (such as audio-visual presentations), small classes for lectures and questions, and individual counseling.

Use of paraprofessionals.—Employment of paraprofessionals has become an issue of central importance in implementing vertical differentiated staffing. Most cities, including New York City with its decentralized school system (32 community school districts), employ paraprofessionals to some degree. In recent years, educators and community leaders have stressed the value of paraprofessionals both as a bridge across the gulf created by cultural differences between teachers and pupils, and as a means of providing services toward achieving education objectives generally. Studies indicate that where the paraprofessional is part of the instructional team, differentiated roles are defined, thus providing more time for the teacher to deal with instructional activities. Better adult-pupil ratios for individualized services also result.

To date, paraprofessionals have been used as aides in classrooms, shops and laborato-

ries, study halls, lunchrooms, and buses, and as drug program aides. They are employed as well in materials centers, in registration and attendance work, and as parent and family assistants. The paraprofessional's responsibilities are not those of a part-time teacher. Many school systems hire music, art, and other specialist teachers on a part-time basis.

Political concern to cycle back part of the education support-services dollar to benefit the community's parent-resident population has played a role in the growth of the paraprofessional movement. Teachers have not opposed the opportunity to relinquish custodial tasks. However, teacher organizations insist that paraprofessionals must not encroach upon professional pedagogic status, nor negate any need for greater numbers of teachers. This stance may have thus far prevented teachers from employing paraprofessionals more fully and imaginatively in today's multiactivity classrooms. Not all teachers have fully perceived their new role as classroom managers with creative options in their deployment of personnel and resources.

Many State and federally funded programs to finance the hiring of paraprofessionals in the schools have stipulated that career ladder access to the profession be provided to these community aides. Their school jobs have been combined with college instruction that can lead to eventual qualification as a teacher, a requirement seen as one means of opening the teaching profession to minority group candidates. Currently the percentage of minority group members in the teaching profession is not as large as their percentage in the national population.

Technological Advances

Technological advances have had a substantial impact on teacher roles. Among the new technologies available to educators, computers have figured significantly. They serve two major areas, each requiring different levels of involvement from the teacher and affecting teacher roles to a different extent. First, computers are used in administration for such tasks as scheduling, creating rosters, storing test and achievement records, generating book orders, and maintaining personnel, inventory, and budget records. Other education data storage, retrieval, and analysis functions can also be programed. The effects on teacher roles are positive and welcomed: time is freed from administrative work and can be devoted to teacher-pupil interaction.

Second, computers are the key component in computer-managed instruction (CMI) and in computer-assisted instruction (CAI). The former can generally be described as an adjunct process to teaching based upon printed materials. The computer is programed for the materials used, and makes diagnoses of specific weaknesses and strengths that each pupil exhibits through check-off, fill-in, or complete-the-sentence types of testing. Further, the computer generates a prescription—a specific remedial task using designated materials—for each pupil showing lack of mastery in a course component or subject skill. Prescriptions are generated for pupils showing superior skills. CMI calls for special training of teachers; though the diagnostic-pre-

scriptive system is straightforward, basic familiarity and operational requirements must be taught. The actual teaching remains a direct teacher-to-pupil process.

The latter, computer-assisted instruction (CAI), uses computer capabilities in two ways: first, the computer—through a cathode ray terminal ("TV screen")—presents some or all of the material being taught; secondly, pupils may be required to demonstrate understanding of the material taught by responding to questions displayed on the screen. Desktop keyboard consoles or electronic light pencils used directly on the screen are employed. CAI changes the teacher's role. Part of the broad-based, highly repetitive foundation work can be taught by the computer, leaving the teacher free to act as a trouble-shooter for pupils with specific individual difficulties or as a facilitator for highly talented pupils.

CMI, CAI, and related equipment such as talking typewriters (used in teaching reading and writing) present multifaceted challenges to the school systems that consider adapting them. Suitability for different curriculum areas, installation and maintenance costs vs. costs of professional personnel, numbers of pupils served, level of sophistication of programing, potential for programing additional functions (scores, score analysis, etc.) are among the issues to be analyzed. In all cases, the transfer of as many tasks as possible to the computer so as to free the experienced teacher for one-to-one work with pupils remains the basic premise. Use of the computer thus adds to the teacher's role as a manager of resources and further emphasizes the teacher's responsibility for selecting instructional approaches and alternate strategies.

Other technologies affect teacher roles and responses. Increased use of audiovisual, videotape, and tape-recording equipment has enabled teachers to (1) use or create a wide range of materials in support of the core curriculum in any subject, and (2) analyze teaching behaviors and teaching styles. This can be done through microteaching and interaction analysis, or through development of protocol materials. In addition, the pupil input into instructional materials can become greater and more enriching.

The use of electronic aids—from computers to hand-held calculators—is increasing in the Nation's high schools. It is argued that use of computers in major scientific projects has a twofold benefit: more exacting work can be completed, and the pupil learns programing and modern problem-solving methodologies. Less enthusiam is evidenced for pocket calculators, because some educators fear that the American pupil will no longer master the basics of unaided computing.

Resistance to Innovation

Many children exhibit affective as well as cognitive deficiencies. Yet conceptual and technological innovation to correct these

problems is limited and often strongly resisted by school personnel in public schools. Taxpayers as well as teachers can be catalysts for educational change.[15]

Among the significant facts that have emerged from observing innovations at work is that despite the designers' best efforts, few innovations are teacher-proof. In theory, a teacher is expected to adapt himself and his methods to the basic requirements of the innovation (in equipment, materials, or methods) that he adopts. Only then can maximum benefits be realized. However, in practice, the teacher tends to adapt or distort the innovation until it best fits his existing methods.[16] Thus the innovation may deliver less than promised. When this result is included in key data in evaluation reports, the valid concept underlying the innovation is damaged. Thus, as innovations are transferred in more significant number to the classroom, the teacher's role as a manager with judgmental capacities becomes more critical.

In all fairness, part of the resistance stems from inadequate research on effective innovation. Teacher organizations point out that in the past teachers have been required to participate in successive innovation programs, implemented without sufficient research, funding, or inservice training, and without their advice and consent. Some proposals are perceived as threats to teacher economic security. Consultation, negotiation, and involvement of the affected employees can increase chances for successfully adapting and implementing innovations. It is generally agreed that teacher education should include preservice and inservice training that would enable teachers to interpret and selectively apply those research findings that already exist as well as to understand and participate in designing and implementing research studies.

Implications of the Changing Role for Preservice and Inservice Training

Teacher training must be viewed as an education personnel development system. In such a system, preservice and inservice education would be totally integrated, fostering the concept of life-long learning and the need for recurrent education. Thus older teachers would not constitute an obstructive force thwarting the creativity of more recently and broadly trained teachers. Acceptance of this concept has major implications not only for recipients of teacher education, but for teacher educators themselves. Because all are involved in change, all need continuing education.

Recruitment for the Teaching Profession

The selection of potential teachers is an essential factor in determining quality and

[15] Ibid.

[16] Martin A. Siegel and Barak Rosenshine. "Teaching Behavior and Student Achievement in the Bereiter-Engelmann Follow-Through Program." Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, 1973.

effectiveness in any teacher education program, as well as the ultimate effectiveness of the teacher in the classroom.

There are no national or State plans for limiting the number of teachers to be trained. Most State university systems are maintained on the principle of open admissions, at least for State residents; some units of the system may be more selective than others. Private universities and colleges determine their own goals. As budget constraints increase, more institutions may limit the size of their teacher education programs. In conflict with curtailment is the ideological commitment of many educators to a "democratic" and open recruitment procedure. Students who are high school graduates can find places in one institution or another, assuming they can bear the costs of college tuition and living. In the first year of higher education about one-third will drop out of the usual college program. In each succeeding year, attrition is reduced.

There is a general need throughout the country to recruit more minority and bilingual teachers, as well as to train teachers already in the profession in the required skills. Screening devices using traditional prior education standards tend to eliminate many of the candidates among those most sought at this time. Use of other standards as screening devices would raise objections in many quarters. In New York City, 80 percent of the Puerto Rican pupils do not complete high school, and thus are not eligible for inclusion in conventional teacher education programs. Mexican-Americans and American Indians in the Southwest are in a similar situation. Pressure from minority communities is leading to decisions requiring recruitment of more minority teachers.

Philanthropic foundations and the Federal Government have over the years encouraged more flexibility and experimentation through special funding of institutions willing to move in new directions. The major emphasis on recruitment in most foundation-supported and federally supported programs has been to expand minority populations in the profession.

In a major U.S. Supreme Court decision in 1974 (*Lau v. Nichols*), it was determined that Chinese or any non-English speaking pupils must be provided with the special facilities, materials, and teachers necessary to give them an education. Based on this decision, Aspira of New York and Aspira of America, Inc., won a similar decision in August 1974 against the New York City Board of Education for Spanish-speaking pupils in New York City. The new trend toward considering what special facilities, materials, and teachers are most productive for differing groups of pupils may influence recruitment as well as add to the ability to assign teachers to settings in which they can achieve the best results with their pupils.

New Concepts in Teacher Training

Competency-based teacher education.— The major change in evaluation of teacher candidates in teacher-education programs

has been the movement toward competency-based programs. These programs, based on research and demonstration programs funded by the U.S. Office of Education (USOE) in the late 1960's, are now being initiated by State agencies and professional societies and were developed to help ensure that standards for judging teacher performance went beyond the quantity and quality of a candidate's academic achievements in a 4-year college program. Previously, a prospective teacher would be judged by his grades in courses and examinations, with little evaluation of his performance as a student teacher in a classroom setting.

A series of court decisions was also instrumental in fostering this change in approach. In the 1970 *Griggs v. Power* case, the U.S. Court of Appeals declared that any test that could not be specifically demonstrated to test the ability of the candidates to perform a given job could not be sustained as the basis of selection for employment. Subsequently, the National Teachers Examination was challenged in a case in which the court stated, "It is not known whether there is a relationship between academic preparation as measured by the National Teachers Examination and effective teaching." [17] Competency-based evaluation of teacher candidates is an effort to demonstrate that the skills judged are those necessary in the performance of the job. Observation and evaluation of the candidate in a field-based setting are essential to the procedure. This process became a key part of the preservice program.

The movement toward competency-based teacher education (CBTE) also had its roots in the social upheavals of the 1960's. Out of this era came the feeling that the public schools were not doing the job they were expected to do. It was also felt particularly that the education needs of minority group pupils were not being met. The assumption that the schools were not performing properly led to questions about teacher education programs. The increasing use of the "systems approach" to problem solving (measuring system inputs and outputs and the relationship of the two) laid the foundation for CBTE emphasis.

Competency-based programs have at least three basic reference criteria: knowledge, performance, and consequences.[18] In this definition, performance refers to "behavior the student-teacher is expected to demonstrate" and consequences refers to "outcomes that the student-teacher is expected to bring about in the emotional and intellectual growth of the pupils." [19]

A CBTE program generally has the following characteristics:

- *Individualized instruction*—the student teachers are involved in making instruc-

[17] Baker et al. *The Columbus Municipal Separate School District et al.*, Vol. 62s F. 2nd. 11, 12 (1972) at 7.4.

[18] Phyllis Hamilton. *Competency-Based Teacher Education*, U.S. Office of Education, July 1973. P. 4.

[19] Ibid.

tion choices that they consider relevant to their own interests.

- *Instruction modules*—a module is a unit of learning consisting of a set of activities intended to help a student-teacher achieve specified objectives.
- *Time as a variable*—completion of modules and rate of progress through the program are determined by the student teacher's competence, rather than by the traditional requirement of course completion in a fixed time-span.
- *Field-centered instruction*—because of the emphasis on performance in real settings with pupils, there is more and earlier practice teaching.
- *Emphasis on exit rather than entrance*—while program admission requirements are less rigid, demonstration of competence is required for certification.

As is pointed out by almost all writers who comment on CBTE, this approach does not currently have a strong research base. This is the major objection held by many to implementation of CBTE programs. As even its defenders almost universally concede, research techniques that could validly measure on-the-job performance simply do not exist; in other words, "we are unable to identify specific teaching behaviors which are in fact directly correlated to improved pupil ability." [20] This observation raises serious questions about CBTE when it is viewed as a systems approach. In teacher education, the relationship between inputs and outputs is not clear and, in addition, is difficult to measure.

When a State or individual college commits itself to CBTE, it is also committing itself to re-evaluation of the relationship between the teacher education program and the traditional liberal arts curriculum. CBTE proponents argue that the limited integration between the traditional liberal arts curriculum and teacher education curriculums has been one of the major failings of existing teacher education programs.

Another criticism of CBTE is raised by the "humanists" (as contrasted with the "behaviorists"), who feel that the development of required competencies will result in inflexible standards that will serve to perpetuate the status quo. The humanists stress the need for "encounter" teachers. No sets of criteria can be specified, they claim, for their qualifications.

Currently, the strongest organized opposition to the implementation of CBTE comes from the teacher unions. The American Federation of Teachers (AFT) is waiting for completion of further research on CBTE before taking a final position. It suggests that the existing certification standards should remain in force until CBTE can be validated. The National Education Association (NEA) takes a similar position on CBTE: it demands that State education departments postpone implementation until

[20] Michael A. Rebell. *Teacher Credentialing Reform in New York State.* Study Commission on Undergraduate Education and Education of Teachers. March 1974. P. 30.

valid and reliable research is forthcoming and indicates that these programs are an improvement over existing ones. Further research may show that many of the skills identified and selected for competency-based programs are useful embellishments, but not essential elements in teaching and learning. Proponents of CBTE must be ready to face this fact and to revise competency-based programs as new evidence is made available.

The potential for CBTE seems to hinge on the outcome of ongoing research as well as adjustments in its approach to satisfy its critics. Currently, approximately 32 States are moving toward a CBTE emphasis. While no State or individual college has developed a complete CBTE program, current approaches fit in with the Federal focus as evidenced in some of the federally funded teacher education programs with a CBTE component.

Federal initiatives.—The Federal Government has been an active catalyst for change in teacher education. Its major initiatives in teacher education during the past few years have been in the following seven programs: Teacher Corps, Career Opportunities, Training of Teacher Trainers, Urban/Rural School Development, Early Childhood Education, Exceptional Children in the Regular Classroom, and Educational Leadership.

1. *Teacher Corps*: The goal of the original Teacher Corps law enacted in 1965 was "to strengthen the educational opportunities available to children in areas having concentrations of low-income families, and to encourage colleges and universities to broaden their programs of teacher preparation."

These objectives are met by developing innovative teacher education programs encompassing the following basic strategies: Mutual collaborative decisionmaking between higher education institutions, the State education authority, the local education authority, and the community; community-based education; field-based instruction; school-staff focus; diagnostic and prescriptive teaching; multicultural consideration; training-needs analysis; teaching teams; and management and evaluation plans.

Teacher Corps supports 2-year teacher-education programs, employing 2,500 interns and using up to 1,800 volunteers and experienced teachers. Each year approximately 40 new projects are initiated.

At present, in order to qualify for participation as an intern in a Teacher Corps program, one must have completed at least 2 years toward a Bachelor of Arts degree. Competition for places is keen, with 100 applications for every 17 places. After having been admitted into the program, one is assigned to a team composed of interns and more experienced teachers or team leaders. The actual content of a Teacher Corps program includes work in an assignment school, enrollment in several academic courses and seminars, and participation in community-based education activities.

While working in schools located in impoverished areas, interns also fulfill requirements enabling them to complete education degrees and gain State certification.

In the past, Teacher Corps has been successful in training minority-group members for professions in education. Over half of the present Corps members are black or of Spanish-speaking origin, and 6 percent are American Indian. In addition to increased recruitment of minority groups, it has been reported that 70 percent of Teacher Corps graduates trained to work with pupils from impoverished areas continue to teach in low-income school districts.[21] This persistence of interest is a factor of special importance.

Legislation for a broader Teacher Corps program was approved in 1974. While in the past only persons who had not completed teaching certification were admitted to the program as interns, the new legislation emphasizes support for demonstration of new strategies for retraining experienced teachers and aides. The demonstration project must adopt one of the following broadly defined strategies: The training complex, competency-based teacher education, training for implementing alternative-school designs, interdisciplinary-training approaches, and training for the systematic adaptation of research findings.

2. *Career Opportunities*: Established under the Education Professions Development Act, the Career Opportunities Program (COP) is primarily concerned with training school personnel. COP employs members of low-income communities and Vietnam veterans, "personnel different from those at present employed as teachers," as education auxiliaries in poverty-area schools.[23] These education auxiliaries work as paraprofessionals in schools in low-income areas while training for teacher certification. COP trainees tend to graduate and be offered employment at a rate exceeding that of most new student teachers.

   The aims of the program are (1) to alter the organization, structure, and staffing patterns of the local educational systems, (2) to affect the population served by higher education institutions, and (3) to improve the education of children from poverty areas. Because of the current state of the economy and the teacher surplus, this Federal program is being phased out after completion of the federally funded demonstration cycle.

3. *Training of Teacher Trainers*: Terminated in 1974, the Training of Teacher

[21] *Assessment of the Teacher Corps Program.* U.S. Office of Education. B-164031 (1) 1972.

[22] O. Smith. *Teachers For the Real World.* American Association of Colleges of Teacher Education, 1968.

[23] *Career Opportunities Diagnosis: Progress of a Mid-Range Demonstration.* COP Bulletin No. 3. Queens College, 1974. P. 1.

Trainers (TTT) program was based at more than 40 university/city/community locations. It operated on the premise that intervention at a high level in the teacher education process could help produce change in teacher education institutions. This intervention was based on identification, recruitment, selection, and training of future teacher trainers; a role for teachers themselves in planning project activities; the need for those involved to arrive at new understandings of their role as trainers; and participation of public schools, communities, and all sectors of the higher education institution concerned in the process. This participation was of pivotal importance; without it, TTT would have become and remained a university-centered effort.

4. *Urban/Rural School Development*: The most recent development of the USOE education personnel development programs, the Urban/Rural School Development Program (URSDP) is based on the belief that the most effective change in education will take place in the single school. It is a 5-year program at 26 sites, and focuses on the relationship between teachers, parents, and pupils. URSDP predicates its activities on the assumption that change is more likely to occur when those directly affected determine what changes are needed and actively participate in decisionmaking processes designed to bring about those changes. Thus it involves the community at all stages in the school's decisionmaking process.

   Experience and knowledge from other sources are utilized. In an interesting departure from normal practices, the relevant services of higher education institutions are purchased by the local schools.

5. *Early Childhood Education*: In the mid-1960's, it became evident that a marked shortage of persons highly qualified to teach children at the preschool and early school (kindergarten through third grade) levels had developed. There were too few teachers, and many of those available needed to upgrade and reorient their skills, especially in areas where poverty and low incomes prevailed. In response to this need, the USOE embarked upon a many-sided approach involving schools, universities, communities, parents, and distinguished child development experts. Typical programs were based at State departments of education, school systems, and colleges and universities. Operating on the premise that the problem transcended the classroom, the program managers involved teacher trainers, supervisors, curriculum and evaluation specialists, and other teacher aides.

   The following are three examples of the kinds of programs funded: (a) A project in the Southwest trained participants in diagnostic and prescriptive techniques and emphasized the socio-

political-economic system of Chicano children in the barrios; (b) a Southern project approached the problem on a regional basis, identified leadership personnel, and drew on the combined resources of three State departments of education; (c) a Western project trained first-grade teachers to recognize learning disabilities and to individualize programs for functionally limited children.

6. *Exceptional Children in the Regular Classroom*: This teacher education program is designed to help meet the needs of handicapped children. It is based on the premise (upheld in court decisions and State laws in many parts of the United States) that such children should be kept in regular classrooms as much as possible. This premise, termed "mainstreaming," poses a real challenge to school systems and teacher education institutions to sensitize regular classroom teachers to the needs of children so handicapped.

The idea of mainstreaming (also discussed in chapter 1) has gained increasing acceptance educationally and legally, in no small part because of the contributions of this program.

7. *Educational Leadership*: Since the late 1960's, the USOE has supported some limited small-scale ventures in training leaders for education. Two main programs are involved—the National Program for Educational Leadership (NPEL) and the City/University (C/U) program. The NPEL is a low-cost effort to identify and recruit already successful men and women from minority and other traditionally under-represented groups—all without experience in school systems—and to train and place them in responsible leadership and management positions in education. The C/U program is based on the belief that school systems and universities each have assets that can be shared and needs the other can satisfy. At six universities and school systems, enduring cooperative relationships were initiated. The result has been the development of training capacities, relationships, and change strategies not common a decade earlier.

Private sector initiatives and contributions.—Private sector institutions—philanthropic foundations and industries servicing education—have stimulated or facilitated many of the initiatives designed to improve teaching and the schools in recent years. Foundations experience few restraints in their choices of objectives.

Several of the major foundations have adopted consistent emphases in their funding practices. The Ford Foundation has spent millions of dollars during the last decade on innovation in education personnel development and service programing. The Foundation designated 20 major cities in the United States as "grey cities" (with depressed, inner-city areas) and funded remedial education programs. These laid the basis for many early initiatives funded subsequently

under title 1 of the Elementary and Secondary Education Act, 1965. Other key aims were: (1) community involvement in education; (2) training of superintendents and principals in administration and management techniques; (3) leadership training for local, State, and national education leadership personnel; and (4) development of an Institute for Educational Leadership, bringing together Federal education leaders, congressional staff members, State department of education staffs, and other groups and professions having policy rather than school or student involvements with education, for a variety of single-session or short-term interservice education activities.

The Carnegie Foundation, while funding many small innovative programs, has emphasized major research studies of critical educational issues, many of which have had implications for teacher education. The Rockefeller Foundation, while supporting other small innovative programs, has emphasized development of superintendent internships particularly for minority group personnel. The Rockefeller Brothers Foundation has stressed open-education projects and Teacher Centers, where planning and governance were undertaken by teachers and where participation was voluntary. Teacher education remains significant in a wide range of foundation activities, even though recently some foundations have cut back funding significantly because of the decline in investment income.

The education service industries have operated in more areas than have the foundations. These encompass—but are not limited to—the following activities: (1) Education goods and equipment for which increased demand is generated by legislation (e.g., because of recent court decisions, bilingual materials are becoming increasingly important as did audiovisual equipment and science kits in the post-Sputnik 1960's because of the National Defense Education Act); (2) hardware and software for computer-managed and computer-assisted instruction; (3) professional services under contract, including personnel, plant, and budgetary management; (4) specialized education services such as pupil testing, program evaluation, and curriculum design.

Since the 1960's, an increasing number of major corporations have acquired publishing or education service subsidiaries as a means of entering the education market. A very limited number of companies entered the performance contracting field of education in the late 1960's and early 1970's. (Performance contracting is delivery of instruction to schools by personnel from outside the school system, with payment based upon the demonstrated achievement by the pupils of a specified level of learning.) Performance contracting has been strongly attacked on the grounds that the techniques of the manufacturer and marketplace cannot easily be transferred to or applied in education. Results to date have fallen considerably short of expectations. Its defenders argue, however, that the contexts in which it has been attempted have been unduly embattled ones often characterized by

acute managerial and administrative problems.

Training for New Responsibilities

Teacher education must prepare people to work not only in the schools themselves but also in the political and financial climates in which the schools operate. In light of new political consciousness among minority groups, students' rights movements, and parent-school confrontations, teachers must concern themselves to a far greater degree than previously with conflict mediation and political and legal processes. The greater role of the Federal Government in education (Elementary and Secondary Education Act, National Defense Education Act, Vocational Educational Act, etc.) requires the teacher to discharge new responsibilities. These include execution of mandated program requirements (applicable to most education programs receiving part of total Federal funding) and preparation of evaluations and reports. Current innovations in teacher education reflect the need for these managerial and administrative skills.

The technologies discussed earlier (CMI, CAI, ETV, and audiovisual) also require updated training on the part of old and new users if their maximum potential in the classroom is to be realized.

One experienced teacher-educator has offered a framework for effective inservice teacher training—a three-vector approach, calling for: (1) analysis of school needs through review of school objectives, teacher assessment of needs, analysis of teacher needs by a qualified observer (based on classroom observations and teacher interviews), and random pupil judgments; (2) review of current educational perspectives and research findings and assessment of the teacher's relative position; and (3) constant research-action and action-research feedbacks.[24] This three-vector approach can only be activated through coordinated inservice education for professors, deans, superintendents, and their leadership staffs.

Rather than as ends in themselves, administration and publications must be viewed as means to achieve better teacher education and more effective counseling. They should support teamwork in school-university affairs, leading to curriculum revamping at both levels as the need for change becomes apparent through careful on-going education.

Management and planning are areas in which training is needed at all levels of education. In addition to their education functions, school systems, local schools, and teacher-education institutions are also business organizations with a full range of planning, budgetary, administrative, and manpower recruitment and deployment requirements. The need for management information such as budgetary data analysis,

[24] Sam P. Wiggins. "The Teacher Education Market Paradox," *The Journal of Teacher Education.* Fall 1974.

data on teacher supply and demand, job descriptions, and reporting systems has until recently been incompletely recognized. Timely receipt of this information enables administrators to support teacher performance, whether in traditional or innovative programs, by effective decisionmaking. Administrators need training in management and planning in order to be able to predict long-term programmatic consequences. Teachers need to recognize the management needs of their working environment and to understand that effective ongoing management is an essential support to growth, development, and learning activities.

Continuing Education

There is also a need to upgrade many of the teachers hired in the "shortage" years of the 1950's and 1960's when jobs were plentiful for teacher education graduates, regardless of the quality of their training or performance. These teachers, who still have 20 or 25 years of teaching ahead of them, deserve assistance in responding to the changing needs of the classroom and in learning to adapt their teaching techniques to the findings of modern research.

Incentives and opportunities.—There are various incentives for teachers to acquire additional training graduate credits. Not only do teachers with graduate credits normally earn higher salaries, but several States and many local school districts have adopted formal requirements for teachers (particularly at the secondary level) to have earned a graduate degree or graduate credits. Also, special courses are offered by local school districts with the hope that teachers will be encouraged to pursue additional learning experience. Salary incentives have been used successfully to encourage teachers to pursue these programs.

Establishment of a variety of teacher-learning centers around the country has stimulated some teachers voluntarily to take workshops and pursue new interests and approaches that enhance their capabilities. Where incentives of increased salary or released time are available, teacher response has been greater. The open-classroom movement has been an important factor in stimulating teachers to develop skills in this area and school districts have encouraged such training by recruiting teachers with that kind of experience.

Teacher organizations have been another source of inservice education, offering courses and workshops on subjects of interest. The development of new curricular materials and the dissemination of information on new techniques are part of that effort.

Several State education departments have developed special training centers as ongoing facilities providing resources and technical competence to local school districts that cannot afford their own programs. Inservice teacher education programs in these centers are voluntary but often provide payment and/or released time for teachers willing to participate in them.

University graduate programs.—Recently, several universities reorganized their graduate programs to relate more specifically to inservice problems and needs. Field-based, these programs are more responsive to the particular concerns of the classroom teacher. Clearly, one of the problems in offering such programs is that many university faculty members are not experienced classroom teachers familiar with current problems in schools. Local school districts have as a result taken the initiative in offering inservice courses either independently or in cooperation with the State and/or the university. Universities, recognizing the advantage of using school personnel, are drawing on these people more frequently and are moving increasingly to practicum-style training in the schools both for preservice and inservice education. As noted earlier, various Federal programs, particularly Teacher Corps, have made important contributions to expanding and improving effective collaborative efforts between and among school systems, State education departments, and colleges and universities.

Selected References

Association of Teacher Educators. *Alternative Approaches to Student Involvement in Teacher Education: Three Research Studies.* Washington, D.C.: the Association, 1973. 36 pp.

Bailey, Stephen K., et al. *Alternative Paths to the High School Diploma.* (Prepared by the Policy Institute, Syracuse University Research Corp.) Reston, Va.: National Association of Secondary School Principals, 1973. 63 pp.

Basil, Douglas Constantine. *The Management of Change.* New York: McGraw-Hill, Inc., 1974.

Bell, Terrell Howard. *A Performance Accountability System for School Administrators.* West Nyack, N.Y.: Parker Publishing Co., 1974. 214 pp.

Benson, Charles. *Planning for Educational Reform; Financial and Social Alternatives.* New York: Dodd, Mead and Company, 1974.

Berke, Joel S. *Answers to Inequity; An Analysis of the New School Finance.* Berkeley, Calif.: McCutchan Publishing Corp., 1974. 369 pp.

Bolino, August C. *Career Education: Contributions to Economic Growth.* New York: Praeger Publishers, Inc., 1973.

Bolton, Dale L. *Selection and Evaluation of Teachers.* Berkeley, Calif.: McCutchan Publishing Corp., 1973.

Bornheimer, Deawe E. *The Faculty in Higher Education. Danville, Ill.*: Interstate Printers and Publishers, Inc., 1973.

Brown, B. Frank, et al. *The Reform of Secondary Education;* a Report of the National Commission on the Reform of Secondary Education. New York: McGraw-Hill Book Co., 1973. 188 pp.

Carnegie Commission on Higher Education, *College Graduates and Jobs: Adjusting to a New Labor Market Situation.* New York: McGraw-Hill, 1973.

Clasby, Miriam, Maureen Webster and Naomi White. *Laws. Tests and Schooling: Changing Contexts for Educational Decision-Making.* Syracuse, N.Y.: Syracuse University Research Corp., Educational Policy Research Center, 1973. 209 pp.

Commission on Non-traditional Study. *Diversity by Design.* Samuel B. Gould, chairman. 1st ed. San Francisco: Jossey-Bass Publishers, 1973. 178 pp.

Committee on National Program Priorities in Teacher Education. *The Power of Competency-based Teacher Education.* Boston: Allyn & Bacon, Inc., 1973.

Corwin, Ronald G. *Reform and Organizational Survival. The Teachers Corps as an Instrument of Educational Change.* New York: John Wiley & Sons, 1973. 469 pp.

Denemark, George W. and Joost Yff. *Obligation for Reform: Final Report of the Higher Education Task Force on Improvement and Reform in American Education.* Washington, D.C.: American Association of Colleges for Teacher Education, 1974. 68 pp.

Dunkin, M. J. *The Study of Teaching.* New York: Holt, Rinehart and Winston, 1974.

Edelfelt, Roy A. et al. *Teacher Designed Reform in Teacher Education.* Final Report, Project No. 1-0683. Washington, D.C.: National Center for Educational Research and Development, Office of Education, U.S. Department of Health, Education, and Welfare, August 1972. 96 pp.

Fantini, Mario D. *Public Schools of Choice: A Plan for the Reform of American Education.* New York: Simon and Schuster, 1974. 256 pp.

Florida, Department of Education. *Protocol Catalog Materials for Teacher Education.* Tallahassee, Fla.: Department of Education, 1974. 41 pp.

Cage, N. L., et al., *Computerized Catalogue of Teacher Training Products*, Research and Development Memorandum No. 116. Palo Alto, Calif.: Stanford Center for Research and Development in Teaching, Stanford University, 1974.

——. *Teacher Training Products: The State of the Field*, Research and Development Memorandum No. 116. Palo Alto, Calif.: Stanford Center for Research and Development in Teaching, Stanford University, 1974.

Gronlund, Norman E. *Determining Accountability for Classroom Instruction.* New York: MacMillan, Inc., 1974.

Haberman, Martin and T. M. Stinnett. *Teacher Education and the New Profession of Teaching.* Berkeley, Calif.: McCutchan Publishing Corp., 1973. 257 pp.

Hahn, Robert O. *Creative Teachers: Who Wants Them?* New York: John Wiley & Sons, 1973. 272 pp.

Halstead, D. Kent. *Statewide Planning in Higher Education.* Washington, D.C.: U.S. Government Printing Office, 1974. 812 pp.

Heath, G. Louis. *The New Teacher, Changing Patterns of Authority and Responsibility.* New York: Harper and Row, 1973. 210 pp.

House, Ernest R. *School Evaluation: The Politics and Process.* Berkeley, Calif.: McCutchan Publishing Corp., 1973.

Houston, W. Robert. *Exploring Competency-Based Education.* Berkeley, Calif.: McCutchan Publishing Corp., 1974. 426 pp.

Howes, Virgil M. *Informal Teaching in the Open Classroom.* New York: Macmillan Publishing Co., 1974. 220 pp.

Hughes, John F. and Anne O. Hughes. *Equal Education: A New National Strategy.* Bloomington, Ind.: Indiana University Press, 1973.

Hunter, William A., ed., *Multicultural Education through Competency-based Teacher Education.* Washington, D.C.: American Association of Colleges of Teacher Education, 1974. 276 pp.

Ianni, Francis A. J. and Edward Storey. *Cultural Relevance and Educational Issues.* Readings in Anthropology and Education. Boston: Little, Brown and Co. 1973.

Kimball, Solon T. *Culture and the Education Process: An Anthropological Perspective.* New York: Teachers College Press, 1974. 285 pp.

Klassen, Frank H. and John L. Collier, eds. *Innovation Now! International Perspectives on Innovation in Teacher Education.* Washington, D.C.: International Council on Education for Teaching, 1972. 133 pp.

Mark, Jorie Lester. *Training and Utilization of Paraprofessionals: A Study of the Nation's Public School Systems Enrolling 5,000 and More Pupils.* Amherst, Mass.: University of Massachusetts School of Education, 1975.

McCarty, Donald J. et al. *New Perspectives on Teacher Education.* San Francisco, Calif.: Jossey-Bass Publishers, 1973. 255 pp.

Mayhew, Lewis B. and Patrick F. Ford. *Reform in Graduate and Professional Education.* San Francisco: Jossey-Bass, 1974. 254 pp.

National Commission on the Financing of Postsecondary Education. *Financing Postsecondary Education in the United States.* Washington, D.C.: U.S. Government Printing Office, 1973. 442 pp.

National Education Association. *Handbook of Research on Teaching,* 2nd ed. (Project of the American Educational Research Association) Chicago, Ill.: Rand McNally & Co., 1973.

——. *Status of the American Public School Teacher, 1970–71.* (Research Report 1970-R-3). Washington, D.C.: the Association, 1972.

——. *Teacher Supply and Demand in Public Schools, 1973.* Washington, D.C.: the Association, Research Division, 1973. 62 pp.

Phi Delta Kappa. *Financing the Public Schools: a Search for Equality.* Bloomington, Ind.: Phi Delta Kappa, 1973.

Regier, Harold G. *Too Many Teachers: Fact or Fiction?* Fastback Series, No. 5. Bloomington, Ind.: Delta Kappan Education Foundation, 1972. 38 pp.

Reischauer, Edwin O. *Toward the 21st Century: Education for a Changing World.* New York: Alfred A. Knopf, Inc., 1973.

Rubin, Louis J., ed., *Improving Inservice Education: Proposals and Procedures for Change.* Boston, Mass.: Allyn and Bacon, Inc., 1971. 284 pp.

Ryan, Kevin, ed. *Yearbook on Teacher Education* (the Seventy-third Yearbook of the National Society for the Study of Education). Chicago: University of Chicago Press, 1975.

Schmieder, Allen A. *Competency-based Education: the State of the Scene.* PBTE Series No. 7, Washington, D.C.: American Association of Colleges for Teacher Education, 1973. 77 pp.

———. *Profile of the States in Competency-Based Education.* PBTE vol. 3, no. 5, November 1974. Published by the Multi-State Consortium on Performance-Based Teacher Education. Albany, N.Y.: New York State Education Department, 1974. 24 pp.

——— and Sam J. Yarger. *Teaching Centers: toward the state of the scene.* Washington, D.C.: American Association of Colleges for Teacher Education, 1974. 56 pp.

Smith, B. Othanel, et al. *Handbook on the Development and Use of Protocol Materials for Teacher Education.* Chipley, Fla.: Panhandle Area Educational Cooperative (P.O. Drawer 190). 1973. 146 pp.

Smith, B. Othanel, et al. *Teachers for the Real World.* Report of the NDEA National Institute for Advanced Study in Teaching Disadvantaged Youth. Washington, D.C.: American Association of Colleges for Teacher Education, 1969. 185 pp.

State University of New York at Albany. Teacher Education Developmental Service. *Glossary of Terms; Competence-Based Teacher Education.* Supplement to PBTE Newsletter, September 1974. Albany, N.Y.: School of Education, State University of New York, 1974.

Stiles, Lindley J., ed. *Theories for Teaching.* New York: Dodd, Mead & Co. 1974. 177 pp.

Stinnett, T. M. *A Manual on Standards Affecting School Personnel in the United States.* Washington, D.C.: National Education Association, 1974. 184 pp.

Study Commission on Undergraduate Education and the Education of Teachers. *Education for 1984 and After: A Symposium of Deans of Education and Leaders in Institutions Educating Teachers.* Paul A. Olson, Larry Freeman, James Bowman, eds. Lincoln, Nebr.: the Commission, 1971. 232 pp.

Travers, R. M., ed. *Second Handbook of Research on Teaching.* Chicago: Rand McNally, 1973.

U. S. Office of Education. *Better Schools Through Better Partnerships*—Final Report and Recommendations of the Council of Chief State School Officers National Field Task Force on the Improvement and Reform of American Education. Washington, D.C.: U. S. Government Printing Office, 1974.

———. The Final Report and Recommendations of the Summer Institute on the Improvement and Reform of American Education. Washington, D.C.: U. S. Government Printing Office, 1974. 304 pp.

———. *How Teachers Make a Difference.* Washington, D.C.: U. S. Government Printing Office, 1971.

———. *Inside-Out:* Final Report and Recommendations of the Teachers National Field Task Force on the Improvement and Reform of American Education. Washington, D.C.: U. S. Government Printing Office, 1975. 57 pp.

———. *Institutional Viability*—Final Report and Recommendations of the Administration and Supervision National Field Task Force on the Improvement and Reform of American Education. Washington, D.C.: U. S. Government Printing Office, 1974. 112 pp.

———. *Obligation for Reform:* The Final Report and Recommendations of the Higher Education National Field Task Force on the Improvement and Reform of American Education. Washington, D.C.: U. S. Government Printing Office, 1974. 54 pp.

———. *A Real Alternative*—Final Report and Recommendations of the Community National Field Task Force on the Improvement and Reform of American Education. Washington, D.C.: U. S. Government Printing Office, 1975. 91 pp.

———. *The Second Newman Report: National Policy and Higher Education.* Prepared by an independent task force, Frank Newman, chairman. Cambridge, Mass.: MIT Press, 1973. 227 pp.

———. *Working Together*—Final Report and Recommendations of the Basic Studies National Field Task Force on the Improvement and Reform of American Education. Washington, D.C.: U. S. Government Printing Office, 1975. 42 pp.

———. National Center for Educational Statistics. *National Longitudinal Study of the High School Class of 1972: A Capsule Description of High School Seniors, Base-Year Survey.* Washington, D.C.: U. S. Government Printing Office, 1974. The first in a series of publications which will regularly present the highlights of a 10-year study of a cross section (10,000) of the high school graduating class of 1972.

U.S. GOVERNMENT PRINTING OFFICE 1975 O - 590-125