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ABSTRACT

This document, organized in 3 parts, reports significant achievements at the elementary, secondary, and higher education levels in United States public education, and discusses the professional development of teachers as a major achievement and innovative movement. Part one describes the governmental organization and the grade placement structure of American education. The second part provides nationwide data that may be used to compare the 1968-69 period with previous time periods for factors such as enrollment, instructional staff, graduates, retention rates and educational attainment, income sources, and expenditures. The final part discusses aspects of the professional development of teachers, such as teacher education, accreditation of institutions, teacher certification, and various programs for teacher development and recruitment. A related document is ED 038 523. (JH)

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PROGRESS OF PUBLIC EDUCATION IN THE UNITED STATES OF AMERICA 1968–1969

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

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

Office of Education

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Foreword

It is my pleasure to present this report on recent progress in American education.

We believe with Abraham Lincoln that education is "the most important subject which we, as a people, can be engaged in." Education has played an indispensable role in the development of the United States to date and will be even more important in helping our citizens meet the complex challenges of the future.

In the United States we are now engaged in a fundamental reassessment of the role of education in modern society. We welcome the opportunity provided by the UNESCO International Bureau of Education to share educational experiences with other member states and to cooperate on studies of problems of mutual concern.

JAMES E. ALLEN, JR.
Assistant Secretary for Education
and
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U.S. Department of Health, Education, and Welfare

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Introduction

In the United States, as elsewhere, education is recognized as an instrument for change which can contribute substantially to the country's growth and development. Over the years, the American people have supported increased expenditures for schools and colleges as a sound investment in their future. They realize that education is the best means of giving each individual the knowledge and skills necessary to accomplish satisfying work and to fulfill personal goals.

Although State, local, and private agencies bear the major responsibility for administering education, in recent years the Federal Government has been given a prominent role—to assure equality in educational opportunities and also to strengthen and improve education. To provide a more uniform base for education across the Nation, the Congress of the United States has enacted legislation authorizing funds to assist schools and colleges in meeting national educational goals. The Office of Education, Department of Health, Education, and Welfare, an agency within the Federal structure with primary concern for education, is responsible for administering a wide range of educational programs designed to improve the quality of educational programs. Federal funds have been made available to establish new programs, to demonstrate new approaches, to conduct research, and to train personnel to staff schools.

Progress of Public Education in the United States of America: 1968–1969 reports significant achievements at the elementary, secondary, and higher education levels and discusses the professional development of teachers as a major achievement and innovative movement.

Part I

Organization and Structure of Education

ORGANIZATION

The present organization of education in the United States is one of decentralized authority. 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 the responsibility for education is not mentioned in the Constitution, it is 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 United States citizens.

The educational responsibilities of the Federal Government are to provide encouragement, financial support, and leadership. The Congress of the United States has constitutional powers to allocate funds for education, but it has no direct control over education. Several departments within the Federal Government make large expenditures on specific educational programs (e.g., the Department of Defense and the Department of Interior). The Federal agency having primary responsibility for education in the United States, however, is the Office of Education, within the Department of Health, Education, and Welfare. The Office provides leadership and cooperates with institutions and professional associations in efforts to strengthen and improve public education. For more than a century, the Office has collected, interpreted, and disseminated a wide range of educational data and information on educational progress. In recent years, specific Congressional legislation has called upo . the Office of Education to administer many kinds of educational programs, research, and services.

Since each of the States* is responsible for its own educational system, their practices and policies differ. In each State, the State department of education and its controlling State board of education and chief State school officer hold central authority for the State's educational enterprise. The legislature, as the source of power, enacts 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 the operation of the school system.

The State board of education determines State educational policies in compliance with State laws. Board members are elected by the people or appointed by the State Governor, and serve for terms ranging from 2 to 6 years. They are empowered to formulate policies relating to educational affairs such as allocation of school funds, certification of teachers, textbook 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

*In this context, States include the 50 States of the Union, the District of Columbia, and the outlying areas.

to this official is Superintendent of Public Instruction or State Commissioner of Education. He may be elected by the people or he may be 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 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 in an advisory capacity to provide consultative and other services.

Each State 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 five to seven members elected by citizens of the school district. Within the limits of State policy, the local board operates the local school system. 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 and, in most cases, for determining the amount of local taxes necessary to finance the school program. They are responsible for employing teachers and other school personnel, for providing and maintaining school buildings, for purchasing school equipment and supplies and, in most cases, for 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 the operation of the schools. Thus, the limitations on the actions of school boards are those established by the State legislature and by the State educational agencies. Most States have prescribed minimum standards for all local school districts.

One of the unique characteristics of United States 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 decentralized character of the educational system is even greater at the higher education (tertiary) level. This is because private higher education schools in the United States predated State departments of education. The early autonomy set them apart from the mainstream of publicly financed schools and established a precedent for their relative independence.

Higher education institutions in the United States offer diverse programs and vary in size and pattern of organization—a few are operated by units of local and State government but most are privately operated. They have achieved some degree of uniformity of standards and practices by affiliating with regional and national professional associations (including accrediting agencies).

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. An institution charter, issued by the State, provides for procedures naming the first board of trustees and for selecting their successors. 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 which give students and faculty an increased share in the decisionmaking process that governs the operation of colleges and universities.

The board of trustees makes decisions regarding policies, management, and personnel but the president or chancellor of the university with the administrative staff are 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 be responsible for administration and educational programs. He is assisted by departmental or divisional chairmen and by the faculties which work as committees on the many problems and issues that can and do arise. Other administrative officials include the registrar, the director of admissions, the business officer, and the director of student affairs.

STRUCTURE

No major changes have taken place during 1968–69 in the structure of education in the United States (figure 1). Elementary (primary) 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 minimum entrance age is 12 or 14. The period for compulsory education covers 10 to 12 years within the age limits of 6–7–8 to 16–17–18. Completion of 12 grades of schooling is required before entering postsecondary education. Higher education includes college-level curriculums pursued after graduation from high school.

The school year begins in September and ends in June; the fiscal year usually starts in July. There is an increasing tendency to make educational opportunities available to children throughout the year, including the summer months, and in a variety of settings such as camps, after-school centers, and mobile schools.

Schools in the United States are continually experimenting with different plans of organization. Among the plans currently receiving favorable attention is the "nongraded primary" school. The concept underlying this plan is to eliminate specific grade placement for each pupil and to allow continuous promotion during the primary classes. This plan allows the child to progress at his own rate in all subject areas. In some school systems the plan allows flexibility during the first 3 or 4 years of school, and in some during the entire elementary period. Middle schools are grad-

ually increasing in number. Combining the four grades from fifth through eighth, they stand midway between the early years of the elementary school and the final years of the secondary.

The elementary school is composed of the nursery school and kindergarten (as beginning units) and of an additional six or eight grades, depending on the organizational structure. The nursery school, planned for 3- or 4-year-olds, may be 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, prior to their entrance to the first grade. In some school districts, the two beginning units overlap. Approximately 73 percent of the 5-year-olds in the population are enrolled in kindergarten. The majority of children in the United States enter school at the age of 5 or 6 and progress through elementary and secondary schools.

In the 8–4 plan used in many schools, students pursue grades one through eight in an elementary school, and grades nine through 12 in a secondary school. The 6–3–3 plan provides for an elementary school of six grades and a junior and senior high school of three grades each. 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 rather than to provide different curriculums of instruction at the elementary and secondary school level.

The secondary level in the United States may be a 4-year program or a 6-year program if it includes the junior high school (grades seven and eight) in its organizational plan. The usual entrance age for junior high school is 12 years and for senior high school, 14 years.

After satisfactorily completing 12 years of elementary and secondary education, a student graduates usually at the age of 17 or 18 years.

High school graduates may enter a junior or community college, a technical institute, a special career program, or a 4-year college. The junior or community college offers a 2- or 3-year program of study beyond the secondary level. Programs usually include a curriculum leading to a certificate. Sometimes they give credits which may be used toward a bachelor's degree in a 4-year college. Some programs are terminal in nature and prepare students to become proficient in one of a wide variety of semiprofessional and technical areas. They also may offer general courses of continuing education for adults.

The 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 reasonable and because students live at home they have no additional expenses for room and board.

The technical institute is an institution organized as a division or department in a 2- or 4-year institution of higher education or as an independent institution of postsecondary education. It usually offers a 2- or 3-year terminal program which is designed to lead to employment in engineering-related occupations.

The 4-year college offers a curriculum in the liberal arts and sciences and is authorized to confer the bachelor's degree on 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.

The university usually includes a college of liberal arts and sciences, one or more professional schools, and a graduate school which offers advanced study and research. It is authorized to confer the bachelor's, master's, and doctor's degrees in liberal arts, professional, and scientific fields.

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

Part II

General Statistics on Education

The year 1968–69 was another period of continuous growth in enrollments, teaching staff, and Federal expenditures for education. Amendments to Federal legislation allowed continued assistance for ongoing programs as well as the organization of new activities which centered on support for students, professional personnel, and facilities. Sixty-one million people were engaged in the educational enterprise which cost about $61.4 billion, or approximately 7 percent of the gross national product.

ENROLLMENT

In fall 1968 approximately 58 million students were enrolled in American educational institutions from kindergarten through graduate school. (This represented 29 percent of the Nation's population of 200 million.) From 1967 to 1968 enrollment increased by 1,400,000 (2.5 percent). The highest increase rate (8.4 percent) occurred at the higher education level (table 1).

In 1968 almost 75 percent of the 5-year-olds, over 90 percent of the 16- and 17-year-olds, and over 50 percent of the 18- and 19-year-olds were attending school (table 2).

In fall 1968 almost 95 percent of the 14- to 17-year-old population were enrolled in the secondary level grades 9–12 (table 3).

INSTRUCTIONAL STAFF

Between fall 1967 and fall 1968, a 4.2 percent increase took place in the instructional staff (full-time and part-time, all levels), raising the total to 2,723,000. The highest rate of increase, 5.9 percent, occurred at the higher education level (table 4).

In elementary and secondary schools, the number of public school teachers increased between 1963 and 1968 at a rate (23.1 percent) faster than the rate (11.9 percent) for public school pupils. The ratio of pupils to teachers decreased from 25.5 to 1 in 1963 to 23.1 in 1968 (table 5).

GRADUATES

At the end of the 1967–68 school year, more than 2.7 million young people were graduated from high school. The number of girls exceeded the number of boys by the relatively narrow margin of an estimated 20,000. These graduates represented approximately 77 percent of the young people 17 years of age. A decade ago, only about 65 percent of the 17-year-olds earned high school diplomas (table 6).

More bachelor's, first professional, master's, and doctor's degrees—a total of 971,300—were conferred in the United States in 1968–69 than in any previous year (table 7).

In 1967–68, at the bachelor's and at the master's level more degrees were conferred in education, in social sciences, and in business and commerce (in that order) than in other fields of study. At the doctor's level, education, physical sciences, engineering, social sciences, and biological sciences (in that order) were the prevailing fields (table 8).

SCHOOL RETENTION RATES AND EDUCATIONAL ATTAINMENT

From 1924–25 to 1959–60 the proportion of fifth grade pupils who went on to graduate from high school 7 years later increased from about 30 percent to about 72 percent during those 35 years. The increase in college attendance is even more striking: Approximately 40 percent of the 1959–60 fifth graders entered college in 1967, whereas 35 years ago only 12 percent of fifth graders entered college (table 9 and figure 2).

The population 25 to 29 years of age in March 1966 had completed one-half year of school more than had the total adult population of 25 years and over. Of the 25–29 age group, 71 percent were high school graduates, compared with only 50 percent of the adult group. Of the former, 14 percent were college graduates, compared with only 10 percent of the adult population (table 10).

In the 20th century there has been a steady reduction in the percent of illiterate persons in the United States—from 11.3 percent in 1900 to 2.4 percent in 1960 (table 11).

INCOME

Local, State, and Federal governments supply virtually all the revenue for public elementary and secondary schools in the United States. (Income from other sources, such as gifts and fees, amounts to less than 0.5 percent). In 1967–68, 53 percent of the funds came from local sources, 39 percent from State governments, and 8 percent from the Federal Government. The Federal contribution between 1965–66 and 1967–68 rose from about $2 billion to $2.4 billion; State contributions rose about $2 billion (from $9.9 billion to $12 billion); and local sources about $3 billion (from $13.4 billion to $16.3 billion) (table 12 and figure 3).

Total Federal grants and loans for education increased 7.1 percent between 1968 and 1969, the largest increase taking place in vocational-technical and continuing education (table 13).

EXPENDITURES

Expenditures for public elementary and secondary education in the United States have more than doubled from 1959–60 to 1968–69, reaching a total cost of $35.5 billion, with the total expenditure per pupil in average daily attendance estimated at $834 for the year (table 14).

The expenditures for education at all levels, public and private, reached $61.4 billion in 1968—7.1 percent of the gross national product (GNP). The percent of GNP has risen steadily since it hit a low of 1.8 during World War II in 1943 (table 15 and figure 4).

INTERNATIONAL EDUCATION

Activities in the United States in the field of international education are designed to strengthen American education at all levels. This field embraces students of modern foreign languages and world affairs and also teachers and students who either come from abroad to the United States or Americans

who go abroad for research, study, or teaching. Federal Government programs represent only a fraction of the activities in the international education field.

The Office of Education's Institute of International Studies administers programs for education in modern foreign languages and world affairs. Authorized by Title VI of the National Defense Education Act (NDEA) and the Mutual Educational and Cultural Exchange Act of 1961 (Fulbright-Hays), programs sponsored by the Institute include foreign language and area centers, fellowships, and research to help American colleges and universities and State departments of education develop curriculums primarily in non-Western studies.

The Agricultural Trade Development and Assistance Act (Public Law 83–480) in conjunction with NDEA and Fulbright-Hays enables the Office of Education to support educational research and study in those countries where U.S.-owned currency is generated from the sale of agricultural commodities.

The centers—107 in 1968–69—offer advanced graduate training in over 100 important foreign languages and in world area studies under various disciplines, intensive undergraduate foreign language studies during summer sessions, and the opportunity for college faculty to prepare for introducing language and area programs in their own institutions by taking part-time or summer work at major centers. During 1968–69, the Government spent $19 million for centers, fellowships, projects, and seminars (table 16).

The Office of Education programs for American exchange teachers and educators from abroad, also administered by the Institute of International Studies, in 1968–69 provided aid to 1,308 teachers (table 17).

The number of students from abroad (not necessarily receiving U.S. aid) enrolled in U.S. higher education institutions in 1968–69 totaled 121,362. Of these students, over 42,000 (about 35 percent) came from the Far East and over 23,000 (about 20 percent) from Latin America. Over 25,000 (about 20 percent) studied in the engineering field, and over 24,000 (about 20 percent) in the field of the humanities (table 18).

Definitive 1968–69 figures on the number of U.S. students and teachers abroad are not available. However, the Institute of International Education (a non-Federal agency with headquarters in New York City) has reported that in 1967–68 more than 25,000 U.S. students were enrolled in higher education institutions abroad; and that in 1968–69, over 5,000 U.S. faculty members were studying, teaching, or doing research abroad.

Table 1.—Enrollment in educational institutions, by grade level and by type of school: United States, fall 1967 and fall 1968

(In thousands)

Grade level and type of school	Fall 1967	Fall 1968	Percentage change 1967 to 1968
Total: elementary, secondary and higher education	56,583	57,989	2.5
Kindergarten through grade 8	36,441	36,840	1.1
Public school systems (regular full-time)	31,641	32,240	1.9
Nonpublic schools (regular full-time)[1]	4,600	4,400	—4.3
Other schools [1 2]	200	200	.0
Grades 9 through 12	13,750	14,221	3.4
Public school systems (regular full-time)	12,250	12,721	3.8
Nonpublic schools (regular full-time)[1]	1,400	1,400	.0
Other schools [1 2]	100	100	.0
Kindergarten through grade 12	50,191	51,061	1.7
Public school systems (regular full-time)	43,891	44,961	2.4
Nonpublic schools (regular full-time)[1]	6,000	5,800	—3.3
Other schools [1 2]	300	300	.0
Higher education: universities, colleges, professional schools, teachers colleges, and junior colleges (degree-credit enrollment)	[1] 6,392	6,928	8.4

[1] Estimated.
[2] Includes federally operated schools, subcollegiate departments of higher education institutions, and residential schools for exceptional children.

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.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, surveys and estimates of the National Center for Educational Statistics.

Table 2.—Percent of the population 5 to 34 years old enrolled in school, by age: United States, October 1947 to 1968.

Year	Total, 5 to 34 years	5 years [1]	6 years [1]	7 to 9 years	10 to 13 years	14 and 15 years	16 and 17 years	18 and 19 years	20 to 24 years	25 to 29 years	30 to 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

[1] Includes children enrolled in kindergarten.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics, 1969.*

Table 3.—Enrollment in grades 9-12 of public and nonpublic schools compared with population 14-17 years of age: United States, 1889–90 to fall 1968

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		
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
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	[5] 8,516,000	77.5
1953-54	7,108,973	6,330,565	778,408	[5] 8,861,000	80.2
1955-56	7,774,975	6,917,790	857,185	[5] 9,207,000	84.4
1957-58	8,869,186	7,905,469	963,717	[5] 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	[5] 12,006,000	89.7
Fall 1963	12,255,496	10,935,536	1,319,960	[5] 13,499,000	90.8
Fall 1965	13,020,823	11,657,808	1,363,015	[5] 14,104,000	92.3
Fall 1967	13,700,000	12,300,000	1,400,000	[5] 14,618,000	93.7
Fall 1968 [6]	14,200,000	12,800,000	1,400,000	[5] 15,048,000	94.4

[1] Unless indicated, includes enrollment in subcollegiate departments of higher education institutions 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 shown are actual figures from the decennial censuses of population unless otherwise indicated.
[3] Excludes enrollment in subcollegiate departments of higher education institutions and in residential schools for exceptional children.
[4] Data for 1927–28.
[5] Estimated by the Bureau of the Census as of July 1 preceding the opening of the school year.
[6] Preliminary data.

Note.—Beginning in 1959–60, includes Alaska and Hawaii.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics, 1969.*

Table 4.—Number of classroom teachers in elementary and secondary schools, and instructional staff members in higher education institutions: United States, fall 1967 and fall 1968

(In thousands)

Level and type of school	Fall 1967	Fall 1968	Percentage change, 1967 to 1968
1	2	3	4
Total: elementary, secondary, and higher	2,613	2,723	4.2
Elementary schools	1,213	1,244	2.6
Public (regular full-time)	1,040	1,079	3.8
Nonpublic (regular full-time)	159	151	−5.0
Other [2]	14	14	.0
Secondary school	905	955	5.5
Public (regular full-time)	815	864	6.0
Nonpublic (regular full-time)	83	84	1.2
Other [2]	7	7	.0
Elementary and secondary schools	2,118	2,199	3.8
Public (regular full-time)	1,855	1,943	4.7
Nonpublic (regular full-time)	242	235	−2.9
Other [2]	21	21	.0
Higher education [3]	495	524	5.9
Public	303	335	10.6
Nonpublic	192	189	−1.6

[1] Includes full-time and part-time teachers and staff. All figures except those for public elementary and secondary schools are estimated.
[2] Includes federally operated schools, subcollegiate departments of institutions of higher education, and residential schools for exceptional children.
[3] Includes faculty for resident instruction in degree-credit courses; excludes faculty engaged in administration, research, extension work, etc.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, surveys and estimates of the National Center for Educational Statistics.

Table 5.—Comparative statistics on enrollment, teachers, and schoolhousing in full-time public elementary and secondary schools: United States, fall 1963 and fall 1968

Item	Fall 1963	Fall 1968	Percentage increase, 1963 to 1968
1	2	3	4
Enrollment			
Total	40,186,751	44,961,662	11.9
Elementary schools	25,774,289	27,418,423	6.4
Secondary schools	14,412,462	17,543,239	21.7
Classroom teachers			
Total	1,577,777	1,942,785	23.1
Elementary schools	908,353	1,079,253	18.8
Secondary schools	669,424	863,532	29.0
Pupil-teacher ratio			
All schools	25.5	23.1	—
Elementary schools	28.4	25.4	—
Secondary schools	21.5	20.3	—
Instruction rooms			
Total available	1,496,950	1,764,509	17.9
Number completed during preceding school year	65,300	75,400	15.5

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Fall Statistics of Public Schools 1964 and 1968.*

Table 6.—Number of high school graduates compared with population 17 years of age: United States, 1869–70 to 1967–68

School year	Population 17 years old [2]	High school graduates [1]			Number graduated per 100 persons 17 years of age
		Total	Boys	Girls	
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
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	2,672,000	1,326,000	1,346,000	76.0
1967–68 [3]	3,524,000	2,702,000	1,341,000	1,361,000	76.7

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

Note.—Beginning in 1959–60, includes Alaska and Hawaii.
SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics, 1969.*

Table 7.—Earned degrees conferred by higher education institutions: United States, 1869–70 to 1968–69

Year	Earned degrees conferred			
	Total	Bachelor's and first professional	Master's except first professional	Doctor's
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
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
1968–69 [1]	971,300	755,000	190,000	26,300

[1] Estimated.

Note.—Beginning in 1959–60, includes Alaska and Hawaii.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics, 1969.*

Table 8.—Earned degrees conferred by higher education institutions, by area of study and by level: United States and outlying areas, 1968–69

Area of study	Bachelor's degrees requiring 4 or 5 years	First-professional degrees requiring at least 6 years	Master's degrees	Doctor's degrees (Ph.D., Ed.D., etc.)
1	2	3	4	5
All areas	636,863	34,728	177,150	23,091
Agriculture	6,742	0	1,492	561
Architecture	2,956	205	536	6
Biological sciences	32,055	0	5,517	2,786
Business and commerce	80,440	0	17,868	445
Computer science and systems analysis	459	0	548	36
Education	135,848	0	63,664	4,079
Engineering	37,614	0	15,188	2,932
English and journalism	52,489	0	8,654	1,009
Fine and applied arts	25,555	0	6,563	528
Foreign languages and literature	19,522	0	4,865	707
Forestry	1,586	0	315	87
Geography	2,624	0	549	96
Health professions	17,571	13,815	3,718	243
Home economics	7,420	0	966	71
Law	477	16,692	724	36
Library science	814	0	5,165	22
Mathematical subjects	23,625	0	5,533	947
Military science	2,029	0	0	0
Philosophy	5,768	0	657	278
Physical sciences	19,442	0	5,508	3,593
Psychology	23,972	0	3,482	1,268
Religion	4,575	3,966	2,724	401
Social sciences	121,643	0	20,426	2,821
Trade and industrial training	3,173	0	65	1
Other fields	8,464	50	2,423	138

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

Table 9.—Estimated retention rates, fifth grade through college entrance, in public and nonpublic schools: United States, 1924–32 to 1959–67

School year in which pupils entered 5th grade	For every 1,000 pupils entering 5th grade in a specified year, this number—				
	Entered 6th grade 1 year later	Entered 7th grade 2 years later	Entered 8th grade 3 years later	Entered 9th grade 4 years later	Entered 10th grade 5 years later
1924–25	911	798	741	612	470
1926–27	919	824	754	677	552
1928–29	939	847	805	736	624
1930–31	943	872	824	770	652
1932–33	935	889	831	786	664
1934–35	953	892	842	803	711
1936–37	954	895	849	839	704
1938–39	955	908	853	796	655
1940–41	968	910	836	781	697
1942–43	954	909	847	807	713
1944–45	952	929	858	848	748
1946–47	954	945	919	872	775
1948–49	984	956	929	863	795
1950–51	981	968	921	886	809
1952–53	974	965	936	904	835
1954–55	980	979	948	915	855
1956–57	985	984	948	930	871
1958–59	985	978	960	940	906
1959–60	990	983	976	966	928

	Entered 11th grade 6 years later	Entered 12th grade 7 years later	Graduated from high school 7 years later (i.e., in the year shown)	Entered college 8 years later
1924–25	384	344	302 (in 1932)	118
1926–27	453	400	333 (in 1934)	129
1928–29	498	432	378 (in 1936)	137
1930–31	529	463	417 (in 1938)	148
1932–33	570	510	455 (in 1940)	160
1934–35	610	512	467 (in 1942)	129
1936–37	554	425	393 (in 1944)	121
1938–39	532	444	419 (in 1946)	(1)
1940–41	566	507	481 (in 1948)	(1)
1942–43	604	539	505 (in 1950)	205
1944–45	650	549	522 (in 1952)	234
1946–47	641	583	553 (in 1954)	283
1948–49	706	619	581 (in 1956)	301
1950–51	709	632	582 (in 1958)	308
1952–53	746	667	621 (in 1960)	328
1954–55	759	684	642 (in 1962)	343
1956–57	790	728	676 (in 1964)	362
1958–59	838	782	717 (in 1966)	394
1959–60	853	785	721 (in 1967)	400

[1] Data not available.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics, 1969.*

Table 10.—Level of school completed by persons 25 years old and over, and 25 to 29 years old: United States, 1940 to 1968

Date and age	Percent by level of school completed			Median school years completed
	Fewer than 5 years of elementary school	4 years of high school or more	4 or more years of college	
25 years and over				
March 1968	5.9	52.6	10.5	12.1
March 1966	6.5	49.9	9.8	12.0
March 1964	7.1	48.0	9.1	11.7
March 1962	7.8	46.3	8.9	11.4
March 1959	8.0	42.9	7.9	11.0
March 1957	9.0	40.8	7.5	10.6
October 1952	9.1	38.4	6.9	10.1
April 1950	10.8	33.4	6.0	9.3
April 1947	10.4	32.6	5.4	9.0
April 1940	13.5	24.1	4.6	8.4
25 to 29 years				
March 1968	1.1	73.2	14.7	12.5
March 1966	1.6	71.0	14.0	12.5
March 1964	2.1	69.2	12.8	12.4
March 1962	2.4	65.9	13.1	12.4
March 1959	3.0	63.3	11.0	12.3
October 1952	3.8	56.7	10.0	12.2
April 1950	4.6	51.7	7.7	12.1
April 1940	5.9	37.8	5.8	10.4

Note.—Beginning in 1962, includes Alaska and Hawaii. Data for 1962 and 1964 are not strictly comparable with earlier years.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, Nos. 99 and 158, published in the *Digest of Educational Statistics*, 1969 (U.S. Department of Health, Education, and Welfare, Office of Education).

Table 11.—Percent of illiteracy [1] in the population: United States, 1900 to 1960

Year	Percent illiterate [2]	Year	Percent illiterate [2]
1900	11.3	1930	4.8
1910	8.3	1950 [3]	3.3
1920	6.5	1960 [3]	2.4

[1] Illiteracy is defined as the inability to read and write a simple message either in English or in any other language.
[2] Percentages refer to the population 15 years old and over from 1900 to 1930 and to the population 14 years old and over in 1950 and 1960.
[3] Estimated.

Note.—Data are for 50 States and the District of Columbia.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-23, No. 8.

Table 12.—Revenue receipts for public elementary and secondary schools, by source: United States, 1919–20 to 1967–68

School year	Total	Federal Government	State governments	Local sources [1]
	AMOUNTS (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
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	2,944,103	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 [2]	30,780,000	2,430,000	12,040,000	16,310,000
	PERCENTAGE DISTRIBUTION			
1919-20	100.0	0.3	16.5	83.2
1929-30	100.0	0.4	16.9	82.7
1939-40	100.0	1.8	30.3	68.0
1949-50	100.0	2.9	39.8	57.3
1951-52	100.0	3.5	38.6	57.9
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 [2]	100.0	7.9	39.1	53.0

[1] Includes a relatively minor amount from other sources (gifts and tuition and transportation fees from patrons).
[2] Preliminary data or estimated.

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

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics, 1969.*

Table 13.—Federal funds for education and related programs: Estimated outlays for fiscal years 1968 and 1969

(In thousands of dollars)

Type of support	1968	1969	Percentage change 1968 to 1969
1	2	3	4
Federal funds supporting education in educational institutions			
Total	$7,771,496	$8,323,454	7.1
Grants total	7,168,215	7,754,427	8.2
Elementary-secondary education	2,967,004	2,765,875	—6.8
Higher education	3,230,030	3,754,515	16.2
Vocational-technical and continuing education (not classifiable by level)	971,181	1,234,037	27.1
Loans total (higher education)	603,281	569,027	—5.7
Other Federal funds for education and related activities			
Applied research and development	1,174,412	1,287,641	9.6
School lunch and milk programs	543,845	622,913	14.5
Training of Federal personnel	1,138,333	1,240,164	8.9
Library services	136,099	159,098	16.9
International education	272,008	323,318	18.9
Other	332,088	351,404	5.8

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics, 1969.*

Table 14.—Total and per-pupil expenditures for public elementary and secondary education: United States, 1919–20 to 1968–69

School year	Total	Total expenditure per pupil in average daily attendance	School year	Total	Total expenditure per pupil in average daily attendance
1919-20	$1,036,151,000	$64	1957-58	$13,569,163,000	$449
1929-30	2,316,790,000	108	1959-60	15,613,255,000	472
1939-40	2,344,049,000	106	1961-62	18,373,339,000	518
1949-50	5,837,643,000	259	1963-64	21,324,993,000	559
1951-52	7,344,237,000	313	1965-66	26,195,500,000	652
1953-54	9,092,449,000	351	1967-68 [1]	31,511,051,000	750
1955-56	10,955,047,000	388	1968-69 [1]	35,511,170,000	834

[1] Estimated.

Note.—Beginning in 1959–60, includes Alaska and Hawaii.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Statistics of State School Systems*, and *Fall Statistics of Public Schools.*

Table 15.—Gross national product related to total expenditures [1] for education: United States, 1929–30 to 1968–69

Calendar year	Gross national product (in millions)	School year	Expenditures for education	
			Total (in thousands)	As a percent of gross national product
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	789,663	1967–68	[2] 54,900,000	7.0
1968	860,600	1968–69	[2] 61,400,000	7.1

[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, Office of Education, *Digest of Educational Statistics, 1969.*

Table 16.—Number and amount of Federal awards and programs in foreign languages and world affairs: United States, 1968–69

Federal program or award	Number	Amount
Total		$19,247,822
NDEA, Title VI language and area centers, fellowships, and research	2,625	15,190,877
Language and area centers program	129	6,080,000
Continuing language and area centers	107	5,570,241
Summer intensive language programs	21	472,759
Faculty development summer seminars	1	37,000
Language and area fellowships program	2,361	6,616,570
National defense foreign language graduate fellowships	1,981	6,191,903
Undergraduate summer program stipends	346	306,116
Faculty development awards	34	118,551
Language and area research program (NDEA, Sec. 602)	149	2,494,307
Language and area research projects	149	2,494,307
Fulbright-Hays training grants for overseas language and area studies	958	2,998,968
Development projects for individuals	224	1,986,203
Graduate fellowships	151	1,002,881
Faculty overseas research and study grants	73	983,322
Program development projects (groups)	734	1,967,765
Foreign studies extension program (including summer seminars)	707	633,779
Language and area studies specialists abroad for american education	27	333,986
Professional services	0	45,000
Special foreign currency program (P.L. 83-480)	26	1,057,977
Institutional development grants for training, research, and study	18	896,492
Research in foreign education	8	161,485

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, Institute of International Studies.

Table 17.—Number of participants in international education programs administered by the U.S. Office of Education: 1958–59, 1963–64, 1968–69

Program	1958-59	1963-64	1968-69
Teacher development	404	701	419
Teacher interchange	292	278	170
U.S. teachers to foreign countries	119	142	46
Foreign teachers to United States	20	79	88
Seminars for teachers and administrators	157	225	58
Technical assistance in education	647	790	527

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, Institute of International Studies.

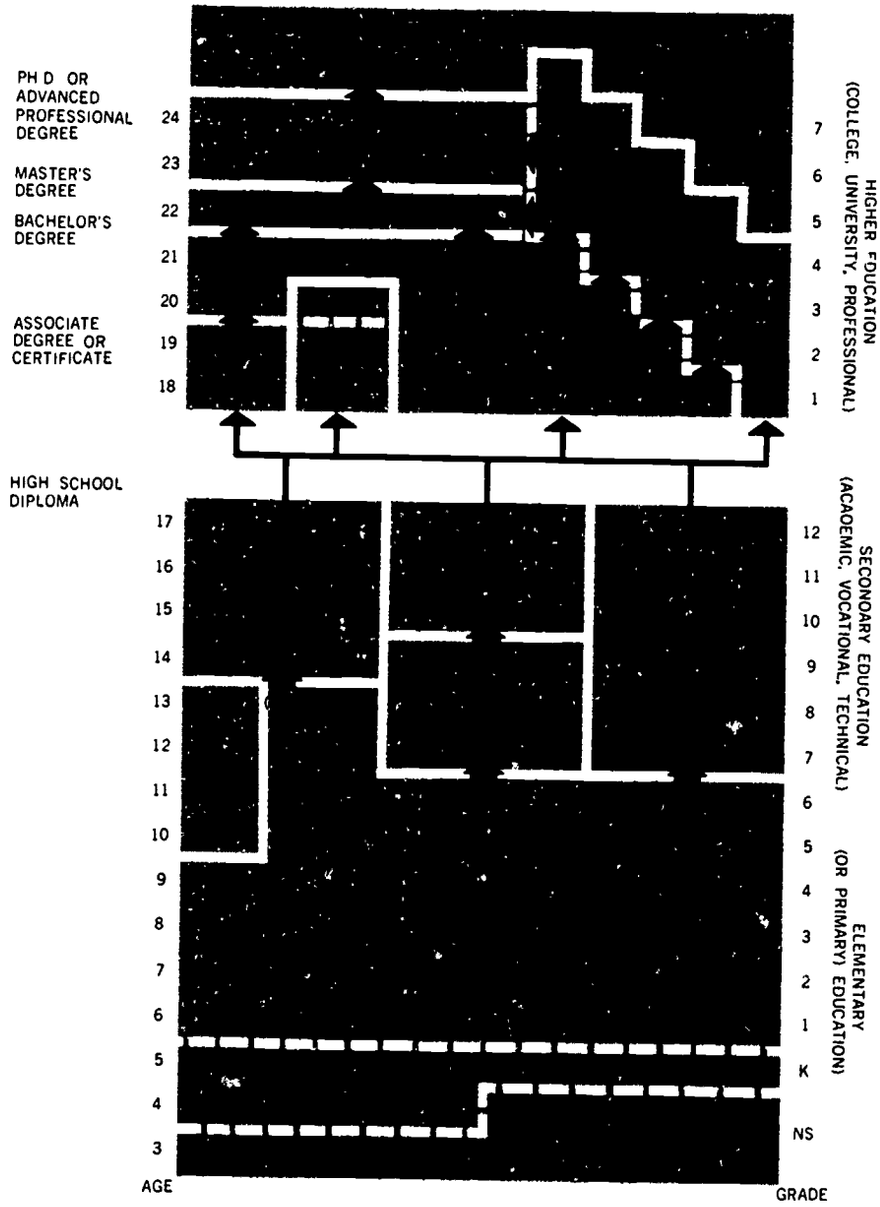
Table 18.—Students from abroad enrolled in higher education institutions in the United States by area of origin and by major field of interest: 1968–69

Major field of interest and year	World total	Far East	Near East	Europe	Latin America [1]	North America [2]	Africa	Oceania	U.S.S.R.	Stateless or country unknown
1	2	3	4	5	6	7	8	9	10	11
Total	121,362	42,632	13,918	16,418	23,438	12,948	1,979	1,869	35	3,125
Agriculture	3,556	1,111	369	303	968	317	394	75	—	19
Business administration	13,376	4,496	1,216	1,825	2,964	1,564	763	163	2	383
Education	7,002	1,929	467	732	1,056	1,857	456	275	—	230
Engineering	25,497	11,407	4,838	2,514	4,148	1,048	1,050	139	9	344
Humanities	24,580	5,900	1,887	4,916	6,243	3,200	967	402	11	1,054
Medical sciences	5,174	1,631	503	557	1,105	694	462	124	—	98
Physicial and natural sciences	19,881	9,952	2,149	2,142	2,577	1,495	1,101	294	5	166
Social sciences	16,804	4,813	1,953	2,602	3,122	2,245	1,556	317	2	194
All other fields	644	198	112	40	130	45	26	27	—	66
No information	4,848	1,195	424	787	1,125	483	204	53	6	571

[1] South America, Mexico, Central America, and Caribbean areas.
[2] Bermuda, Canada, Greenland, and St. Pierre and Miquelon.

SOURCE: Institute of International Education, *Open Doors, 1969*.

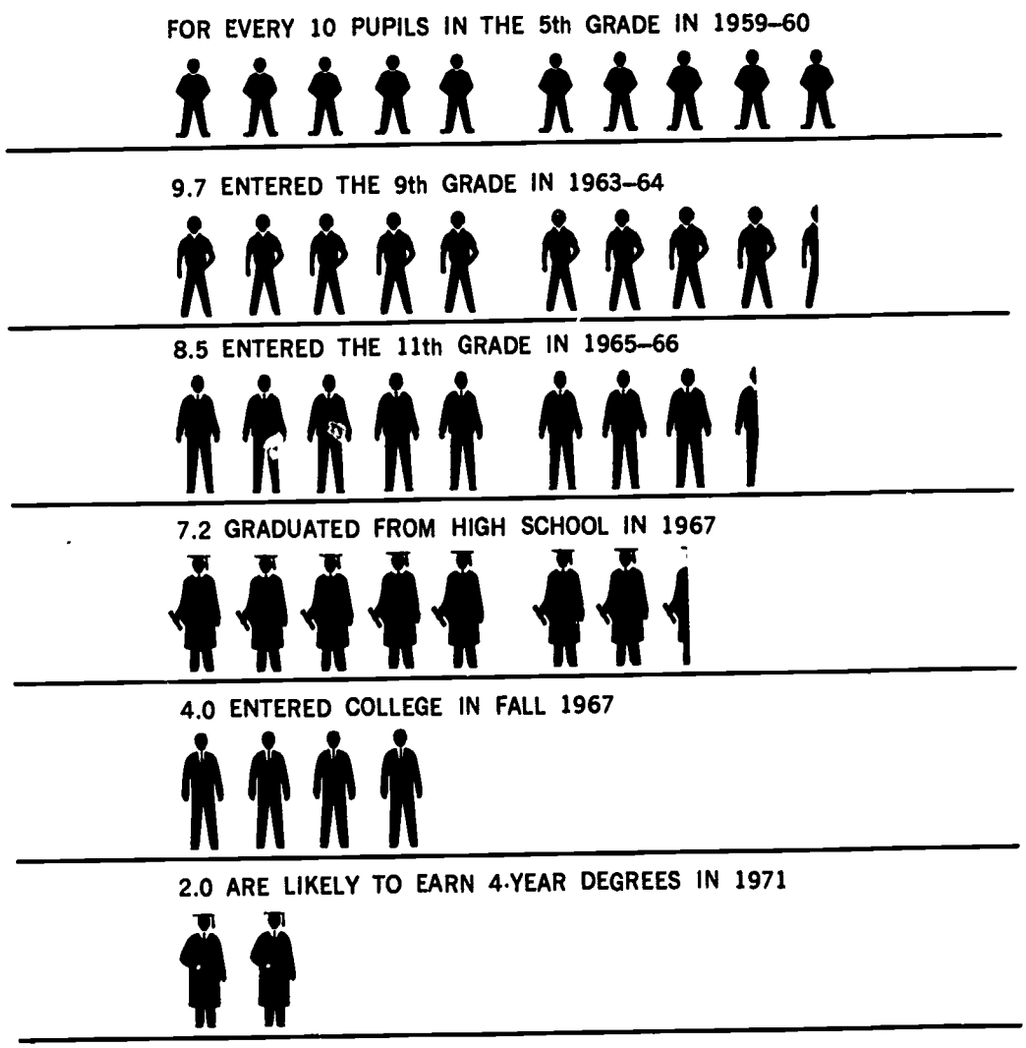
THE STRUCTURE OF EDUCATION IN THE UNITED STATES



SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *"Digest of Educational Statistics"* 1969.

FIGURE 1.

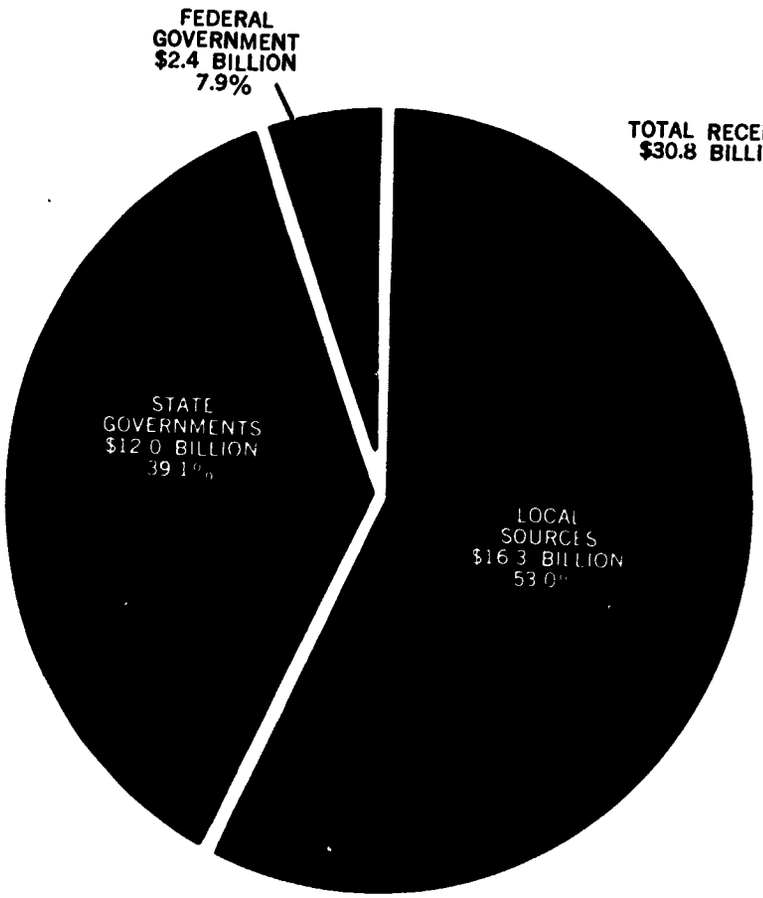
ESTIMATED RETENTION RATES, FIFTH GRADE THROUGH COLLEGE GRADUATION: UNITED STATES, 1959 TO 1971



SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics* 1969.

Figure 2.

ESTIMATED RECEIPTS FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, BY SOURCE: UNITED STATES, 1967–68

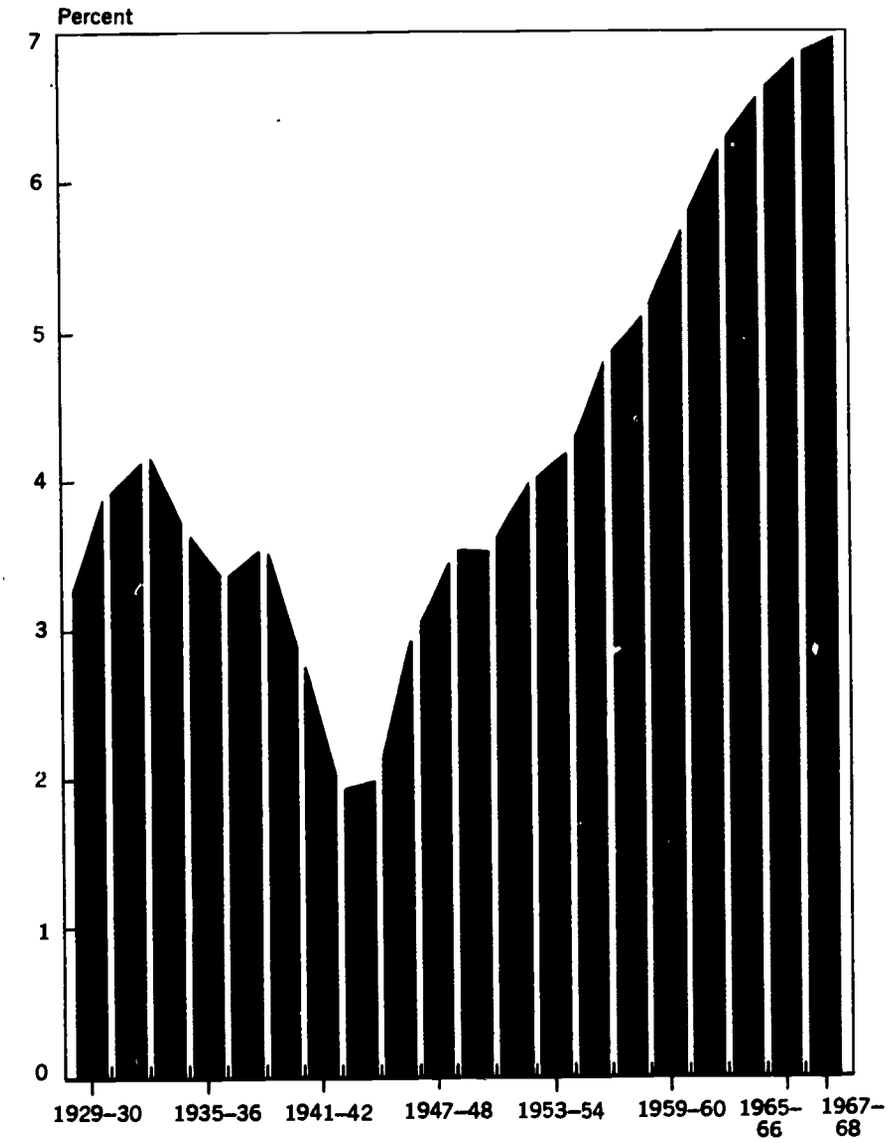


NOTE—With each receipt item rounded to the nearest 10th, the actual total is less than $30.8 billion.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics* 1969.

Figure 3.

TOTAL EXPENDITURES FOR EDUCATION AS A PERCENTAGE OF GROSS NATIONAL PRODUCT: UNITED STATES, 1929–30 TO 1967–68



SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Digest of Educational Statistics* 1969.

Figure 4.

Part III

The Professional Development of Teachers

The education of teachers and related staff is a major professional activity in the United States. There are more than 300,000 "teachers of teachers"—men and women employed as full-time instructional staff in accredited colleges and universities.

For the school year 1968–69, an estimated 2 million people were working as full-time and part-time staff in public and private elementary and secondary schools.[1] The 2 million included classroom teachers; principals; special teachers for subject areas such as physical education, music, and art who are directly engaged in teaching; and supervisory and auxiliary personnel who provide special health, psychological, and social services. There are more women than men in the teaching profession at the elementary and secondary levels. The number of men entering the teaching profession at these two levels, however, is increasing. In 1968–69, men accounted for an estimated 31.9 percent of the teaching staff and in 1958–59, only 27.3 percent.

PREPARING FOR THE PROFESSION

The preparation of the prospective teacher in the United States combines courses in growth and development of children and the research findings related to the learning process with the history, development, philosophy, and traditions of American education. The number and nature of these courses vary widely depending upon the institution and the requirements for State certification of teachers. As an integral part of teacher education, a student "practice teaches" in a school under an experienced teacher's supervision. The teacher education program is accompanied by general courses in arts and sciences and intensive study in the student's major subjects.

Standards

Professional leaders and associations concerned with education in cooperation with State and local educational authorities have gradually determined standards for teacher education in the United States. No single agency, either public or private, is vested with supervision or control of teacher education. In the States a teacher's professional competence is determined by teacher certification, a procedure based upon requirements generally accepted for professional status. Local school districts and professional associations cooperate with the State educational agency in establishing certification requirements.

To prepare for the teaching profession in the United States, a student must have satisfactorily completed 12 years of elementary and secondary education and 4 years of higher education. For beginning secondary school teachers, all States require a bachelor's degree from a 4-year college or university; for beginning elementary school teachers, all but five states require a bachelor's degree. Those entering the teaching profes-

[1] National Education Association, Committee on Educational Finance, *Financial Status of the Public schools*, 1969. Washington, D.C.: The Association, 1969.

sion at postsecondary levels generally must have additional preparation: Junior colleges usually prefer faculty members with a master's degree which requires 5 years or more of academic work at a college or university, and 4-year colleges and universities seek faculty members who have doctoral degrees or are working toward them.

The level of professional teacher preparation in the United States has risen steadily over the past decade. The completion of a bachelor's degree with emphasis on teacher preparation is now widely accepted as the minimum requirement for an effective teacher. A master's degree which requires more than 4 years at the college or university level is becoming the minimum requirement for teachers who are to be considered fully qualified.

These trends are easily seen by the following comparison:[2]

Percent of teachers whose highest degree was . . .

	None	*Bachelor's*	*Master's or higher*
1947–48	40.6	43.3	15.1
1967–68	4.7	67.4	27.9

Persons who teach in the public schools, as a rule, have more professional preparation than those who teach in private schools. There has been no substantial change in these proportions in the last 5 years.

Career development opportunities are provided extensively by colleges and universities, by local school districts, by professional associations, by philanthropic foundations, and by governmental agencies at both State and national levels. More than one-third of the colleges and universities that educate teachers offer advanced study programs beyond the 4-year bachelor's degree. Most teachers continue their formal study from time to time during their careers.

The number of programs which enable teachers to return to a university for retraining and further education continues to increase. Such programs include experienced teacher fellowship programs, generally leading to a master's degree, summer institutes for advanced study, and various training projects to increase teaching competency. Most State educational agencies have curriculum and academic specialists who provide training programs for the teachers in State and local school systems. Many school systems provide a salary increment commensurate with the level of education achieved.

About 15 percent of all teachers in the United States are engaged in further study in higher education institutions, usually on a part-time or summer basis. More secondary than elementary teachers are continuing their studies and their number has grown larger each year. Most school systems carry out extensive inservice training programs.

There are some differences between the course content of the prospective elementary school teacher and that of the prospective secondary school teacher. In general the prospective elementary teacher spends one-fourth of the 4-year period learning about children, the school's role in the community, and materials of instruction; the prospective secondary school teacher usually spends less

[2] National Education Association, Research Division, *Teacher Supply and Demand in Public Schools, 1968*. Washington, D.C.: The Association, 1969.

than one-fifth of the period in these professional studies. The elementary school teacher studies several subject fields (because he may be called upon to teach a variety of subjects at one grade level); the secondary school teacher usually majors in a single subject or group of related subjects. A prospective teacher for either level generally spends approximately one-third to one-half of his time in the study of general or liberal education courses.

Teacher Shortages

Over the past two decades, the United States has had persistent shortages of qualified personnel in the teaching profession. Serious shortages exist in specified subject fields such as industrial arts, mathematics, non-Western languages and area studies, physical science, special education, women's physical education, and some vocational-technical subjects.

In order to meet the present shortage of qualified teachers, some local systems employ teachers on a provisional certificate. Such teachers are usually paid a lower salary and must seek professional training to achieve certification.

Young people choose professions other than teaching or leave the field for a number of reasons. These include greater opportunities in business, industry, and Federal or State Government agencies, the low salaries and lack of benefits in some localities, the geographical location of many teaching vacancies, and the military service obligation for young men.

From 1970–1975, continued growth of the secondary school-age population will require additional staff for secondary schools. During that period enrollment at the elementary level is not expected to increase since birth rates have declined in recent years. Full-time staff in U.S. schools must be increased by an estimated 500,000 persons to meet the expanded enrollments projected by 1975. In addition, more teachers will be required to replace those who leave the profession and those who lack minimum qualifications.

Potential elementary and secondary school teachers come from college graduates receiving bachelor's or master's degrees. Of the total number of students receiving bachelor's degrees, approximately 30 percent meet certification requirements for teaching. This pool of potential teachers is expected to grow proportionately with the rise in the number of 18- to 24-year-olds expected to attend colleges or universities in the next 5 years. In addition, there are a number of people reentering the teaching profession—largely women who return to their careers after their homemaking responsibilities have diminished. This prospective increase in the supply of new teachers could help reduce the present shortages in certain subject areas. It could also offer opportunities to improve educational services to the disadvantaged and to implement educational innovations.

IMPROVING TEACHER EDUCATION—ISSUES AND PROBLEMS

Teacher education institutions in the United States face stiff competition with

other professional institutions for the inspired, intelligent, and innovative person who is able to prepare today's child to be tomorrow's citizen. The interpersonal and communicative skills required in the teaching professions are precisely those which can command higher salaries and, in some cases, greater prestige in other professions.

Potential candidates for teaching are often discouraged from considering the profession because of rigorous educational requirements, the accreditation process, and adverse teaching conditions. Experienced teachers who are graduates of traditional teacher education institutions often find themselves unable to cope with inner-city school systems, and those graduated from innovative teacher education institutions often are frustrated by assignment to schools with outmoded curriculum and methods of instruction.

These factors, plus the belief that increments in salaries over the years do not compare favorably with other professions, tend to reduce motivations toward the development of career plans that stress achievement, recognition, or responsibility. Consequently, qualified teachers leave the classroom for administrative or supervisory positions, or leave the profession.

Nevertheless college and university students today show considerable interest in entering the teaching profession. The desire to become involved with domestic, social, and political issues is a contributing factor. Another is the increase in the salary levels and the prestige of the teaching profession. New approaches in teaching and new content in teacher programs have also had a favorable impact. The ferment in teacher education in the United States promises to change many existing programs and practices within the next decade.

Quality of Teaching in Colleges and Universities

A basic part of the ferment in teacher education in the United States is concern not only with the preparation of prospective teachers for elementary and secondary levels but also with the preparation of the "teachers of teachers"—the teacher educators. There is a growing demand for colleges and universities to provide more leadership in this field. This demand has been accompanied by a realization that programs which improve the quality of teacher educators will in turn improve the quality of the many teachers they educate.

Examining the problem of educating teacher educators leads to examining the structure, purpose, and function of the university that does it. The growth of 2-year community colleges throughout the country and the increased demands being placed upon 4-year colleges and universities have raised questions concerning the present requirement that training by higher education institutions is necessary for classroom teaching.

Many educators are now challenging several basic assumptions heretofore prevalent in higher education. Since the number of persons receiving doctoral degrees is less than one-fortieth of the total conferred each year, and the number of teachers needed for new college and university programs and activi-

ties is high, educators are suggesting that a doctoral degree may not be essential to good teaching at the college or university level. They also are scrutinizing another practice, common in many colleges and universities—the relative isolation of the university graduate school (where most teacher educators are prepared) from the mainstream not only of social involvement but also of teaching as opposed to research. Education research often tends to be pure research as opposed to applied research.

There is also a growing realization that the education of teacher educators requires the resources of the total university to be related more closely with the needs of the school system where the teacher serves. If teacher educators are out of touch with the reality of the schoolroom they cannot adequately prepare their students to teach in the schoolroom. In addition, the "teachers of teachers" are found not only in the university classrooms, but in the schools themselves, where librarians, educational media specialists, school administrators, and other classroom teachers may be actively engaged in training "teachers of teachers." There is now a conscious attempt to use the knowledge and experience of all these people to improve the quality of the entire system.

Some educators have also criticized reforms in teacher education over the past decade for concentrating on subject matter presentation as opposed to teaching methods. Preparing a teacher in one or more disciplines is essential to producing effective teachers, but it is only relevant when the teacher can apply his knowledge in a classroom. The distinction, therefore, between the formal education that prospective teachers receive prior to their entry into the teaching profession (preservice education) and the educational experiences, both formal and informal, which they undergo while actively engaged in the profession (inservice education) is no longer a valid one. Both types of education need to be seen as a continuum. This viewpoint emphasizes the need to coordinate teacher training in the university with teacher training in the schools.

Increased attention is being given to understanding the nature of the learner and how change occurs within the learning situation. The effects of social, cultural, and economic conditions on the ways in which children learn and respond are being studied so as to incorporate the results of this research into the curriculum of graduate schools of education and thus relate subject matter of academic disciplines to educational concepts.

Restructuring Teacher Education

Although teacher education is an integral part of higher education in the United States, only recently have colleges of education moved away from the concept of single-purpose teacher education institutions. The more common institutional pattern in the United States today is either a college of education within a university or a comprehensive liberal arts college which offers undergraduate degree work in education as well as in other disciplines. Teachers colleges, which developed rapidly after the turn of the 20th century (replacing the normal schools) have declined rapidly in number. Most former teach-

ers colleges have become comprehensive colleges or universities because enrollment pressures have required them to expand their curriculum and provide higher education for students interested in a field other than education. A few outstanding institutions have retained the title of teachers college, but even these often have close ties with neighboring universities.

The comprehensive liberal arts colleges vary in size and in the number of programs offered. Many have extensive programs in teacher preparation for both elementary and secondary education.

Many universities have, in addition to a school of education, other colleges which prepare students to teach in specialized areas. Among these areas are the arts and humanities, home economics education, natural sciences, and physical education. Separately organized colleges within the university structure usually conduct teacher education programs in cooperation with other departments. The college of education is responsible for the professional education and coordinates its program with that of the major departments.

It has been estimated that universities supply approximately one-third of the new teachers for the schools. Through advanced study programs, universities also prepare other personnel, such as guidance counselors, school principals, and superintendents.

Approximately 1,200 accredited higher education institutions in the United States are concerned with teacher preparation. The quality of their programs varies considerably. The outstanding institutions are those which have benefited from the innovative efforts of eminent educators who have attracted and held competent faculty, developed sound programs, and enhanced the prestige and effectiveness of their institutions.

Colleges of education within the university framework or departments of education in comprehensive liberal arts colleges have not always had the same prestige that other colleges or departments have in the academic world. In part, this situation stemmed from the recent evolution of the teacher education institutions from nondegree granting institutions to accredited, degree granting 4-year colleges and universities. Today, professionally sound colleges or departments of education are accorded full and equal recognition with other colleges or departments within the framework of a higher education institution.

New developments in curricular materials for public schools have also caused a reexamining of the relationship between colleges of education or departments of education and other academic disciplines. For the most part, these materials have been developed by subject area specialists in academic disciplines. In some cases, colleges or departments of education have taken part in the curriculum reform; in others, teachers in the profession have been asked to contribute to designing the curriculum in a special field.

Over the past decade, a great number of new curriculums have been developed in fields as diverse as English, mathematics, the natural sciences, the social studies, and, more recently, the humanities. While new developments in the curriculum field have undoubtedly strengthened the resources available for the teacher in primary and secondary schools, they have been criticized not only by

educators in colleges and departments of education but also by teachers in the schools. They maintain that too many of the new curriculums are designed to be "teacher proof" by presenting the whole sequences of programed material, allowing little room for the teacher to experiment or to innovate according to the immediate needs of the classroom. Other educators have pointed out that specific subject areas are fragmented and that the new curriculums fail to indicate the interrelationship between various disciplines. Still another criticism has been that the curriculum materials fail to take into account the individual differences of the learner and require a learning situation where all students advance at the same pace.

Many educators maintain that colleges and departments of education must be brought into the process of curriculum development at an early stage if the programed instruction is to be useful to the teacher in the classroom and if prospective teachers are to acquire a sufficient understanding of new developments in the curriculum field. This, of course, requires close cooperation between all concerned with curriculum development.

The role of the college of education within the university structure is to provide an academic climate with major emphasis upon teaching as a career. The institution in order to be effective must also maintain a close relationship with the public schools and the community which it serves. In such a setting prospective teachers have an opportunity not only to focus upon their academic preparation but also to engage in practical teaching experience.

The transition in teacher education institutions from teachers colleges to comprehensive liberal arts colleges and universities has tended to blur the relationships between teacher education institutions and the schools they serve. Many large universities maintain laboratory schools where new ideas and concepts are tested and evaluated. Yet many educators feel that the laboratory school with a student population drawn from the children of the institution's faculty is not representative of public schools throughout the country. There is in addition a growing belief among faculty and students alike that universities and teacher education institutions need to be drawn more closely into the realities of life in the communities they serve, particularly in areas which have relatively large numbers of socially disadvantaged people in the population. This is a controversial issue in American higher education today, and one which is likely to influence the development of teacher education in the United States for some time to come.

Accreditation of Institutions

The concept of a national professional accrediting process as a desirable alternative to Government control of the profession is unique to the United States. It stems historically from our colonial experience when almost all higher education institutions were privately controlled and financed. Efforts to establish Government controls were vigorously resisted. Voluntary self-regulation by the education professions is an example of the democratic process.

Under the U.S. Constitution, control over education is reserved for the various States and local communities. Each State is responsible for insuring an adequate supply of qualified teachers for its public schools. As this function developed over the years, it included exerting a measure of control over the quality of teacher education programs in higher education institutions. Accreditation of teacher education become a partnership function, jointly and cooperatively exercised by the States and the professional associations.

All States have direct or implied authority, through State constitutions or statutory provision, to approve both public and private teacher education institutions and programs. Some States accredit teacher education institutions directly through the State board of education. Some States do not have specific authority to accredit institutions but have authority to certify teachers; in such cases, the certifying of teachers is interpreted as approval of the teacher education programs in which they were trained. In some States, the major State university participates indirectly in accreditation through giving or withholding its recognition of the programs and graduates of other institutions within the State.

State departments of education carry unique and continuing responsibilities for accreditation. By examining the transcripts of applicants for teacher certification, the State board of education can evaluate the adequacy of teacher education programs. State boards of education often are the first to examine plans, facilities, and programs of teacher education institutions and to offer initial certification. Professional associations often wait until a program is in force and graduates appear. State boards of education also can examine teacher education programs with greater frequency and in more detail to insure that quality is maintained. Cooperation between the legal groups involved in teacher education, the professional associations of educators, and the institutions themselves is the rule in the accrediting process today.

The evolution of this cooperative process has not been easy. Since education in the United States has traditionally been a function of local governments, attempts to dictate standards of preparation and licensure of practitioners of the education professions were for a long time vigorously resisted. Until the 20th century, institutions preparing teachers developed programs on an individual basis with minimal interference by the States. Despite their constitutional authority to regulate, the States tended toward minimal involvement in the affairs of private teacher education institutions. Until the 19th century, licensing or certification of teachers remained an almost exclusive prerogative of local school boards or county governments. Changes came about only because the school population increased and additional qualified teachers were required.

The first regional association of colleges and secondary schools in New England was founded in 1885 for accreditation purposes. rapidly followed by the creation of other regional associations. Regional associations usually concentrate on accreditation of the institution rather than of its individual colleges or departments. Accreditations serve as guides to overall quality of a higher educa-

tion institution but do not provide precise evaluations of the quality of its professional schools or departments.

National professional accrediting associations came into being around the turn of the 20th century. They developed mainly because the professions wanted to insure that anyone entering them had received a sound professional education. The American Association of Teachers Colleges (AATC) was the first organization that attempted to apply national standards to teacher education institutions. It concentrated its efforts on teachers colleges, most of which were single purpose educational institutions. Shortly after the Association began its accrediting process, however, teachers colleges started to become general comprehensive liberal arts colleges and universities. In 1948, the AATC merged with other professional associations into the American Association of Colleges for Teacher Education (AACTE).

Professional accreditation in the field of education—a comparatively recent phenomenon—reflects the struggle of teacher education colleges to attain professional standing within the academic world. Many existing multipurpose colleges and universities with colleges and departments of education resisted the idea that teaching was a profession and that specialized preparation for it was necessary. The institutional accrediting associations and the institutions themselves, however, maintained that teacher education, with its generous liberal arts component, was no different from a liberal arts education and thus should come within the framework of the regional accrediting associations.

The National Council for the Accreditation of Teacher Education (NCATE) was formed in 1952 and began its accrediting activities 2 years later. The idea behind the Council was that education as a profession should be governed by standards established by the three main groups most directly concerned with education—the educators (as practitioners of the profession), the State education legal authorities (as those most directly responsible for educational quality within the States), and the teacher education institutions (as those responsible for preparing professional educators). From the outset, the NCATE was opposed by various institutions and accrediting agencies. Some criticized it because its membership was public; others suggested that it would be a captive of the professional organizations, without sufficient independence to carry out its assigned functions; and still others criticized the fact that initially more public than private institutions were represented.

To meet these criticisms, the NCATE went through several reorganizations in the first 10 years of its existence. Now recognized as the national professional accrediting agency for colleges of teacher education, NCATE has established sound accrediting practices and principles for teacher education on a nationwide basis. The process may be expected to be a slow one, however, since the NCATE operates on a voluntary basis, evaluating for accreditation only when an institution so requests. Of the 1,200 institutions of teacher education in the United States, 470 are accredited by the NCATE. These 470 institutions prepare more than 75 percent of the teachers in the United States.

Accreditation by State departments of education presents yet another problem for teacher education. Although all of the 1,200 teacher education institutions are accredited by their various States, there are significant differences in the procedures and standards applied in the various States. Some States adopted the criteria developed by the regional accrediting associations or the NCATE. Some States use professionals in an advisory capacity to the State boards of education, and others assign accrediting responsibility to one or more members of the board of education. There have been recent efforts to promote uniform criteria on the part of the National Association of State Directors of Teacher Education and Certification (NASDTEC) and thereby to insure reciprocity in certification among the States for teachers who have completed a degree program of teacher education in an accredited institution. As of 1967, a total of 29 States had adopted formal standards for accrediting teacher education colleges. Some States are in the process of developing formal standards and still others are using standards developed by the NCATE.

Certification of Teachers

Only the States certify teachers. The practice of local certification gradually disappeared around the end of the 19th century as States began to recognize the need for uniform standards. From the beginning of the certification process on the State level, however, the States have sought in one way or another to enlist the cooperation of the teaching profession in the public schools and in the colleges of education in adopting fair rules and procedures. This practice is compatible with the prevailing concept that the professions should exercise broad and discretionary powers over their own affairs and should guarantee the competency of their membership.

Many State departments of education have established advisory councils on teacher education and certification. These councils consist of members from the professional associations, practicing teachers, and respresentatives of teacher education institutions. They not only insure that the standards established by the State boards of education are in keeping with the principles and the development of the profession, but also that minimum standards, once established, are not lowered in times of low educational budgets.

Another recent development in teacher certification is the approved program approach. This approach allows the colleges of teacher education wide latitude in developing programs and reduces the State's active role in prescribing standards, rules, and regulations. An applicant is certified when an approved teacher education institution asserts that he has fulfilled the minimum required standards for teacher preparation prescribed by the State and is qualified to teach in an elementary or secondary school. A concomitant of this approach is that the State board of education evaluates and approves the program of teacher education given in the institution concerned.

A more recent development, spurred by the professional associations in education, is the enactment of State legislation concerning professional practices that affect teachers.

These laws establish commissions and boards which are authorized to act as advisory bodies to the chief State ed ion authorities. The Boards, composed of professional educators, bring to bear the knowledge and experience of the profession in establishing standards of preparation and of practice to insure competent and ethical practitioners. These boards develop professional requirements and policies to govern teacher education college accreditation, issuing and revoking certificates, assigning of personnel, and improving such activities.

The most persistent problem of teacher certification is reciprocity among the States. Since each State has the authority and responsibility for determining standards for effective teacher preparation, the requirements of various States may differ considerably. Because the population of the United States has become increasingly mobile in the past two decades, teacher mobility has become a significant factor in the struggle to raise the quality of education as a whole. The key problem is to define a qualified teacher and generally acceptable qualifications.

Several attempts have been made by the States to insure reciprocity. From time to time individual States have recognized diplomas from other States if the requirements from the other States were basically the same. At one point, there was a move for regional reciprocity between groups of various States.

Now that almost all States require a bachelor's degree from a 4-year college as the minimum preparation for initial certification, establishing a workable system of reciprocity has begun to take on a new importance. The National Association of State Directors of Teacher Education and Certification (NASDTEC) has adopted a recommendation which states:

> A graduate of a college or university which at the time of the applicant's graduation is fully accredited by the National Council for the Accreditation of Teacher Education should be eligible for a regular teacher's certificate covering the area or level of teaching for which the candidate is recommended by his preparing institution and which is supported by the transcript provided by the institution.
>
> It should be assumed that this policy applies only to an applicant who has graduated from a regularly approved teacher education program that is specifically accredited by NCATE. It should be assumed that this policy will not apply to statutory provisions that are in effect in some States relating to such requirements as audiovisual education and conservation, State history, and government.

As of 1964, only 27 States had adopted this provision, but by 1967, a total of 37 States reported that they were using NCATE accreditation to facilitate the movement of qualified teachers across State lines.

The obstacles to achieving complete parity in certification are considerable. The lack of a universally accepted national accrediting process has resulted too often in resistance to complete reciprocity by teacher education institutions. Significant differences in the course content required by States in teacher preparation hamper mobility of qualified teachers and mutual acceptance of certification among the States. Many States, for example, still require specialized courses, particularly in the area of professional prepara-

tion, which other States do not require. Strict adherence to these requirements without a degree of administrative flexibility results in hampering the acceptance of certification from another State. Special requirements, such as courses in State history or State political science or constitution are another inhibiting factor. Many States have had to resort to the issuance of emergency certificates, representing less than minimum standards in teacher preparation to meet temporary shortages of personnel. In some cases, these certificates are given to otherwise qualified teachers who have met the minimum standards in their own States but not in the State to which they have moved.

Teaching the Disadvantaged

Mounting concern in the United States with social problems arising from poverty—inner city and rural—has focused attention upon the kind of education needed to enable culturally disadvantaged children to compete successfully in today's complex society. The close relationship between conditions of poverty, lack of educational development, and poor academic performance have long been apparent. Poverty produces an environment which often prevents children from taking full advantage of the educational facilities provided. Often their home environment hinders them from adjusting readily to ordinary educational programs. Environmental conditions and inadequate educational programs—rather than lack of basic mental aptitude—are responsible for the failure of these children to perform adequately in the school system.

It has become equally apparent that new techniques, methods, and materials can improve the education of disadvantaged children. School districts which most need changes in their schools are least able to provide the necessary financial support. Public schools in the United States are financed chiefly by taxes levied on the property owners in a local community. Although Federal and State programs of financial aid are beginning to bring some relief to the schools located in culturally disadvantaged areas, much remains to be done to raise the quality of education and to break the chain of poverty which binds the disadvantaged.

Schools in poverty areas usually have the least experienced teachers. As teachers gain seniority, they frequently have the right to ask for another assignment. More often than not, they ask to be assigned to schools in more attractive areas where wages and living conditions are better. Hence, schools in culturally disadvantaged areas have large turnovers in their teaching staffs and do not attract the best qualified teachers.

Educators serving disadvantaged populations find there is little community understanding and support. Parents, many of whom are undereducated or illiterate, have difficulty understanding the goals of educational programs and are therefore unable to judge the quality of their children's education.

Perhaps one of the most penetrating observations on the education of children in poverty areas was made by an inner-city public school principal:

> . . . It is after the first grade that the great disparities between our children and the children of the middle class start showing up. As our children grow older, their lives get worse and, simultaneously their responsibilities increase. They have more younger brothers and sisters to take care of, and their mothers are forced to become more distant as their problems increase. In the fifth and sixth grades there are more children of broken families than there are in the kindergarten and the first grade. It gets harder and harder for the fathers to find employment that will bring in enough money and will also keep their egos intact. And precisely because the fathers do have self-respect, they begin to disappear.

Within this educational environment, the personality and competence of the teacher assumes a key role in improving the quality of education and reaching the culturally disadvantaged child. Many educators have stated that colleges and universities have been preparing teachers only for middle-class schools. Now more attention is focused on preparing teachers specifically for the disadvantaged population. Teacher education programs are introducing studies of family structure, languages of minority groups, and the culture of the disadvantaged. Teachers in culturally disadvantaged areas need more direct experience with social structures peculiar to poverty-blighted communities. Closer relationships need to be developed between the school and other agencies that operate within the framework of the community. To prepare prospective teachers for culturally disadvantaged communities and children some teacher education institutions are seeking teachers who have been successful in poverty area schools to supervise teacher trainees or to serve as master teachers in demonstration classrooms. Although disdvantaged schools hereby lose needed, experienced personnel, student teachers benefit and thus become effective teachers for disdvantaged children.

PROGRAMS FOR TEACHER DEVELOPMENT

Program Planning

Recruitment for the teaching profession is carried out in a number of ways. In general, the profession recruits its own new members. New Federal legislation, notably the Education Professions Development Act, is designed to assist in this task by sponsoring cooperative programs held by Federal, State and local educational authorities. Most newly recruited elementary and secondary school teachers are either recent graduates of teacher education institutions or former teachers seeking to reenter the profession.

Teacher recruitment may begin as early as the secondary school level. A student may become interested in teaching as a career through his admiration for particular teachers, personal conferences with individual teachers, newspaper and magazine articles on the advantages of teaching as a career, opportunities to assist teachers in the classroom, or through reflection on satisfying classroom experiences.

The Future Teachers of America (FTA) provides a school club activity at the secondary level to promote students' interest in teaching. As a rule, the FTA clubs provide a forum for students who have already indicated a strong interest in teaching. The clubs

encourage students to study and identify the aptitudes and qualities basic or related to successful teaching; to learn about the development and objectives of the public schools and their contribution to democratic society.

The Student National Education Association is a higher education organization of students enrolled in teacher education programs in colleges or universities. It provides its members with opportunities for personal and professional growth and for development of leadership skills. Its prime objective is to deepen the interest of capable students in teaching as a career and thereby add to the supply of high quality teachers.

Teaching is increasingly more popular as a career because it offers personal satisfaction and human involvement to the socially concerned young people attending colleges and universities. Consequently, despite some drawbacks in the teaching profession, more and more young Americans are turning to it. Through student associations, they are making known their desires for a higher quality of instruction in colleges of education.

Legislation

The U.S. Office of Education, the agency with the primary Federal role in the Nation's educational endeavors, has become increasingly active over the past decade in administering new programs of assistance to the States in partnership with State and local education authorities. This assistance emerges from awareness that a sound education is prerequisite to national economic and social progress and that many local school districts have inadequate funds to improve educational quality. The National Defense Education Act (NDEA) was enacted in 1958 when Congress authorized assistance to States and to local school districts to strengthen curricular offerings in the natural sciences, mathematics, and foreign languages. NDEA made a multi-faceted contribution to teacher education.

During the decade after 1958, Congress passed more legislation to support education than in all previous years. The laws stressed national concern for education while safeguarding the authority of the States, local school systems, and higher education institutions. The Higher Education Facilities Act of 1963 provided funds for classrooms in higher education institutions, including teacher education colleges. The Elementary and Secondary Education Act of 1965 reflected the desire of the Congress to improve the quality of education in deprived areas and to strengthen, generally, the quality of education in the public schools.

The Higher Education Act of 1965 was designed to strengthen the educational resources of colleges and universities and to provide financial assistance for students in postsecondary and higher education.

The 1967 Education Professions Development Act (EPDA) authorized several programs aimed at the same general objectives: the recruitment, preparation, renewal, and utilization of educational personnel of all kinds. The original emphasis in Federal aid was on preparing teachers in critically needed subjects such as mathematics, modern foreign languages, and science, and the range of categories has been expanded. The legisla-

tion provides that the U.S. Office of Education administer grants to colleges and universities for intensive summer training programs, academic year fellowships for both prospective and experienced teachers, and teacher leadership development.

One of the significant features of EPDA is its requirement that the Commissioner of Education:

> . . . prepare and publish annually a report on the education professions, in which he shall present in detail his views on the state of the education professions and the trends which he discerns with respect to the future complexion of programs of education throughout the Nation and the needs for well-educated personnel to staff such programs.

The first annual assessment of education needs indicated that educational personnel training programs and practices are not sufficient, either quantitatively or qualitatively, to meet current and future needs. The report identified urgent needs and priority programs which have been established to attract, train, and retrain elementary and secondary school personnel. These programs include career opportunities; early childhood education; educational administration; more effective utilization of school personnel; special education; educational support personnel, including media specialists and skilled pupil personnel services; trainers of teacher trainers; and vocational-technical education.

The *Career Opportunities* program has been developed to attract more new teachers who are willing to serve in culturally deprived areas. Its projects are designed and operated with appropriate participation from the school systems, higher education institutions, community organizations, and State educational agencies concerned. Project participants combine classroom experience as teacher aides with academic study oriented to particular school needs in low-income areas. Persons from low-income families are sought for placement and training in the schools, where they may advance to the teacher level as their skills and academic qualifications improve. Experienced teachers provide the training.

Some pilot projects which help children from disadvantaged families to participate in the mainstream of American life have demonstrated the tremendous importance of a child's early educational development. Educators, psychologists, and researchers are working together in this field. The *Early Childhood Education* program is designed to apply research findings at the same time as it prepares personnel to work in programs with young children. This program will increase the supply of qualified teacher trainers, supervisors, and curriculum specialists and improve the quality of programs now being offered by colleges and universities for teachers active in the profession.

Projects in the EPDA *Educational Administration* program are designed to identify, recruit, and train new talent for administrative positions and to increase the flexibility and capability of institutions training school administrators. Emphasis is placed on studying problems affecting culturally deprived communities and experimenting with interdisciplinary approaches to training administrators. This program recognizes the leadership potential of educators, not only within

the schools, but in the communities they serve and in the organizations that provide their support.

Many American communities are experimenting with new roles for teachers and new ways of using personnel. The EPDA provides some support under the *School Personnel Utilization* program for projects which recruit and train new personnel or retrain experienced personnel for new roles. Emphasis is placed on developing programs that enable schools to have staffing plans that provide more effective instruction and make maximum use of available community talent.

Training teachers for handicapped children is emphasized under EPDA, to enable handicapped children not enrolled in special classes to receive a better education. Institutions are encouraged to develop projects designed to prepare or retrain school personnel who deal directly with children from low-income families. Teacher educators are encouraged to integrate an understanding of special education into the regular teacher preparation programs. The projects planned will provide educational opportunities in the techniques of special education for school administrators, school psychologists, counselors, educational-media specialists, teachers, and teacher aides who serve regular educational programs. About 60 percent of all handicapped children are educated in regular classes; only 40 percent of the handicapped can be handled in special classes.

Higher education institutions and State and local education authorities are being encouraged with Federal assistance to develop projects to aid elementary and secondary school teachers in developing and using new media in the classroom. These projects include working groups of school administrators, teachers of basic subjects, and media specialists. Acivities include training in guidance service personnel (in counseling, testing, student records, and other personnel service). Projects for the education of psychologists, mental health workers, social services, and health educators are being undertaken to increase the supply of well-qualified pupil personnel specialists available to serve in the schools.

One of the significant programs developed under the EPDA is the *Trainers of Teacher Trainers* program. Projects developed under this program aim to improve the quality of preservice and inservice education programs of teachers. Planning and implementation is carried out by personnel at all levels of education including colleges of education, liberal arts professors, and the schools themselves. The projects emphasize community participation in the teacher-educator programs.

The *Vocational—Technical Education* program was developed to meet one of the country's most urgent needs. The EPDA provides graduate fellowships to develop leaders in vocational and technical education, and direct inservice training projects to increase skills of instructional staff.

Teacher Corps

The Teacher Corps, provided for under the Education Professions Development Act, illustrates the new approach to teacher education. It is designed to involve communities,

public schools, and universities in a common effort to develop qualified teachers for culturally deprived areas. The purpose of the Teacher Corps, as stated in the enabling legislation, is "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. . . ." To do this, the Teacher Corps attracts and trains "inexperienced teacher-interns who are available for teaching and inservice training in teams led by an experienced teacher."

Teacher Corps teams serve 146 school systems of the country. The trainees are enrolled for study in 77 universities located in 35 States and the District of Columbia. About half of the school systems are located in cities; the remaining, in small towns or rural areas. Many Teacher Corps programs are designed for persons who have completed a 4-year college or university baccalaureate degree. Most interns are recent college graduates who majored in liberal arts, business, or science, but older persons seeking a second career may also join the Corps. In the 1-to 2-year graduate-level programs, a college graduate earns a master's degree and a teaching certificate. The nature of the degree and the length of service vary from one program to another.

In Teacher Corps programs for undergraduate students, most interns come from the communities they will serve—the inner cities, Mexican-American communities, Indian reservations, and migrant areas. These interns have a chance to get a college education and teacher certification which otherwise might not be financially possible.

Some undergraduate programs cover the third and fourth or the fourth and fifth years of college preparation. A student begins at the secondary school level with a student-pupil tutoring program. He advances to paraprofessional service in a school while enrolled in a community college program of teacher preparation. The program covers part or all of the cost of the last 2 years necessary to qualify for a college degree and a certificate to teach.

Preservice training for the Teacher Corps is conducted in a college or university for a period of 6 to 13 weeks. During the preservice training, interns have provisional status. Those who demonstrate promise for teaching move on to the inservice program.

Usually, the training is conducted close to the schools which have requested Teacher Corps teams. Most training programs are administered by a school or college of education and all programs are approved by the State educational agency. The study programs generally focus on the sociology of poverty and the psychology of learning. Preservice training also includes work in public summer schools, social service agencies, and community programs.

Inservice training for Teacher Corps interns provides opportunities for team teaching using programed and individually prescribed instruction. The intern makes visits to pupils' homes and encourages the parents' involvement in their child's education. The inservice program is carried out mostly in the school classroom and in the community,

with minimum time spent in a college or university class.

The Teacher Corps team leader serves as liaison between the interns and the school, university, and neighborhood. Team leaders supervise from five to eight interns who include student teachers, aides, or provisionally certified teachers.

Team leaders are teachers with several years of working experience with children from low-income families. They act as master teachers, counselors, and clinical professors. Team leaders supervise the intern's preparation, observe his teaching, and counsel him on his performance. They work closely with the school principal, cooperating teachers, and school district coordinators. The team leader's main job is to help the interns find their place in the school and the community.

Research

Increased Federal assistance has been a major factor in developing new programs of educational research. Most research on teaching methodology concerns the professional roles of educators. It focuses on such areas as teaching methods and the teacher's role and effectiveness. The variables studied include teacher traits existing prior to the beginning of teaching and changes observed upon completion of the program (in attitude, empathy, personality, and knowledge of subject field).

Research on the teaching role and methods will have a marked impact on developing new programs for teacher education. The realization that much of what teachers have done in the classroom bears little relation to student learning processes has stimulated considerable discussion about new teacher roles. The more careful delineation of instructional roles, classroom management procedures, social interactions, and productive professional behavior may lead to radically different ways of structuring roles and responsibilities in school settings. Differentiated staffing may become an acceptable concept since it offers the possibility of designing teaching programs so that interns, apprentices, beginning teachers, and aides can experience gradual induction into the profession with help from more experienced colleagues.

Inservice Education

Inservice education is a term used by educators to denote efforts to promote the professional growth and development of educational personnel. These programs may be promoted by local school systems; by county, city, State or national governments; by professional associations and agencies; and by higher education institutions. Inservice education is carried out in a number of ways, ranging from formal education courses to conferences, field trips, staff meetings, teacher exchanges, and reading current literature in the teacher's field.

Academic study remains the most important facet of inservice education. Extension courses offer the teacher an opportunity to become a part-time student receiving instruction on a university- or college-credit basis off campus. Summer schools offer the same opportunity, but are on campus and are generally full-time. For teachers without access to

either extension courses or summer school classes, correspondence courses provide an additional opportunity to obtain inservice education.

Special institutes geared to subject matter specialties have become an important part of the teacher education process. Federal support for both summer and year-round institutes in foreign language, guidance, mathematics, and science resulted in a new impetus for inservice education.

Conferences and workshops are other forms of inservice education. Within the schools, group study of actual school problems, under the guidance of able professional leaders and competent consultants, is now a common practice. Frequently, teachers from more than one school take part in group sessions, a cooperative approach to the solution of individual problems. Teacher exchanges between schools within one system or between schools in different parts of the country are becoming more common. Opportunities for teacher exchanges between the United States and other countries have been encouraged by the Federal Government through travel grants and fellowships.

With the increasing focus on the school's role in the community and on the relationship between instructional staff and the citizens they serve, teachers are urged to become involved with all community agencies affecting the lives and growth of children. Teachers meet with parents and other groups to discuss the school's programs and problems. Teacher education is gradually coming to be regarded as a continuum with little or no distinction between preservice and inservice education.

TRENDS AND INNOVATIONS IN TEACHING

Role of the Professional Associations

In the changing world of education in the United States, the professional associations play an important, if not unique, role. In partnership with colleges and universities who prepare teachers for entry into the profession and with government financial aid for new and innovative programs, professional associations have been looking critically at many of the issues and problems in American education with a view to suggesting new programs and policies.

As voluntary associations of professional people with special concerns for the educational quality, the professional associations have been in the forefront of many innovative trends in teaching. They have played a particularly important role in developing professional standards and upgrading the quality of teacher education. They work for new legislation and are often asked to serve as advisers when policymaking bodies are examining particular problems. As "free communities" of associated scholars, the professional associations serve as open forums for exchanging new ideas as well as discussing basic concepts of the nature and quality of the educational process. They provide teachers with a variety of services, from the sponsorship of seminars, conferences, and workshops to the publication of scholarly journals.

At the State and local levels, a new form of partnership is developing between school districts and local professional associations. As the setting of educational policies and prac-

tices becomes more complex for local school boards, they welcome the advice and experience of professional educators as an important resource.

The National Education Association (NEA), the largest and most comprehensive education association in the United States, has a voluntary membership of more than 800,000 teachers. The National Commission on Teacher Education and Professional Standards (NCTEPS) is both a nationwide movement and an organization affiliated with the NEA. NCTEPS works with groups and individuals concerned with improving teacher education and professional standards, including State teacher associations, commissions on teacher education and professional standards, and local committees. NCTEPS has promoted recruitment of a large number of talented people for the teaching profession. It has effectively advocated higher standards of admission to teacher education programs and improved programs of preparation. NCTEPS activities have been significant in improving standards and procedures for accrediting teacher education programs and obtaining certification regulations that insure competence. In its backing of new methods or techniques, such as differentiated staffing, NCTEPS has been a prominent participant in an effort to make the teacher's job more manageable and more rewarding. It has encouraged establishment of professional practices commissions and professional standards boards in every State. In 1968–69, the NCTEPS held a national conference on "Negotiating for Professionalization" which focused upon decisionmaking for curriculum development, professional standards, staff development, and policy development and application.

The American Association of Colleges for Teacher Education (AACTE) is a voluntary association of universities and colleges engaged in educating teachers. Its purpose is to improve the quality of teacher education. Its membership includes all institutions offering teacher education programs of 4 or more years. An estimated 90 percent of the teachers who earn their bachelor's degrees and nearly all of those who earn their master's or doctor's degrees in teacher education attend institutions affiliated with the AACTE.

AACTE Committees sponsor numerous special conferences. Members are active in areas which reflect the interests of AACTE's institutions, such as faculty for teacher education, instructional media, improvement of instruction, and testing. AACTE conferences and special meetings provide member institutions with an opportunity for representatives from their institutions to concentrate on specific problems. Many visitors from other countries attend these conferences and meetings. The Association's annual reports and its bulletin are useful publications for the profession.

The activities of AACTE and NEA are representative of the activities of many other professional associations in the United States concerned with various aspects of teaching.

Curriculum Revision

The improved quality of school instruction is reflected in curriculum changes in teacher

education institutions. Spanning almost the entire school curriculum, the changes have resulted from the combined efforts of competent scholars and skilled personnel in teacher education colleges. This partnership is now affecting higher education where educators are beginning to play a more important role in curriculum preparation. In addition to providing new subject matter materials, these efforts have improved the quality of instruction and made the classroom a more rewarding place for teacher and student.

Some educators have criticized the new curricular materials for their failure to take into account some of the newer methods of instruction, particularly educational technology. Most American schools have not yet adopted programed materials. Widespread use awaits the flexibility to meet individual needs and specific learning difficulties.

Programed Instruction

Programed instruction—the technique of sequential learning acquisition at the student's own rate of progress—is beginning to find its way into American schools as an effective method for teaching and learning. Programed instructional techniques can be effective for teaching subjects such as modern foreign languages, mathematics, and science. They are also useful for improving the capacity to distinguish between alternative courses of action. The student chooses subject matter and goals and determines his own learning speed. The teacher prescribes the student's rate of advance after testing in accordance with his capabilities. Worksheets are periodically checked by aides as the student proceeds in his course study. As necessary, individual attention can be provided by the teacher.

Utilizing Staff Effectively

New ways have been developed to reduce the encroachment of administrative duties on hours that otherwise can be spent teaching. Team teaching is a technique of cooperative action which brings to bear upon the whole curriculum each teacher's specialized abilities. Teams include teaching aides and other paraprofessionals to insure that there is a maximum amount of individualized instruction. Team teaching and the use of audiovisual media are now fairly widespread in the United States. More and more schools are also beginning to employ as auxiliary staff competent resource personnel who are not teachers. These people can free the teacher for his major responsibility by handling clerical work, operating equipment, and performing a variety of tasks.

There is also an increasing awareness of the value of individual instruction. Concern with equal opportunity in education has led to new programs designed to reach each pupil. More attention is being paid to individual capabilities, problems, preschool interests, and to the effect of children's differences on their learning capability. Thus courses on motivation and learning should be added to teacher education curriculum. As new programs are developed and tested for schools attended by culturally deprived children, new

methods for reaching individual learners will be more widely disseminated.

Quality education is resulting from more flexible staffing patterns, paced instruction geared to the individual needs of the child, the use of media and other resources, teacher's aides, and even from more thoughtfully designed school buildings. Pilot projects financed by government and foundations permit more experimentation to improve the programs of teacher education institutions. An increased number of qualified teachers with a stronger sense of professional responsibility are entering the teaching profession. The rewards of teaching, financial as well as personal, are increasing at a steady pace.

A LOOK AT THE FUTURE

Education in contemporary American society has vastly increased in importance. Schools are being asked to help erase social injustices, to cope with adverse effects of rapid social change, and to improve the quality of educational programs. This formidable mission requires reorienting the resources of the entire educational system.

The education professions in the United States are responding to increasing public demand that education prepare students for suitable roles in a complex technological society. The education professions are providing better teacher education, improved professional standards, and more selective research and innovation. Individual teachers, professional organizations, and government (at all levels) are engaging actively in cooperative endeavors to raise educational quality.

Various programs are already producing better teachers. Subject matter competency is receiving greater emphasis, teachers are learning to educate handicapped children, and still others are being trained to educate teachers through improved programs that are in direct and meaningful contact with communities and schools.

The level of professional teacher preparation in the United States will continue to improve. As research establishes more certainties about how a child learns and about how teachers affect his development, new programs will apply those discoveries. As standards for teachers are raised, teachers entering the profession will have completed 5-year programs in colleges and universities; a higher proportion of new teachers will have obtained not only the bachelor's degree, but also the master's; and teachers will continue professional education throughout their careers.

The problem of teacher shortages probably will ease. A greater number of talented young people are entering the education professions, encouraged by improved teacher education programs, salary and fringe benefit increases in many school districts, and the professions' higher socioeconomic status. New designs in staffing patterns are resulting in extended and more efficient use of talent available in the community, including paraprofessional personnel. Spurred by the mobility of the American population, States are seeking new ways to achieve uniform cer-

tification process and reciprocity of certification. Accreditation accorded teacher education institutions by professional organizations is encouraging them to improve their programs.

Teachers are acquiring progressively realistic concepts of the role technology can play in upgrading the quality of school instruction. Resistance to introducing new educational technology is waning as it becomes evident that teaching devices will supplement, not supplant, the teacher in a classroom. More teachers are learning to use technological innovations effectively, along with curriculum materials specially produced for them.

Teacher education in the 1970's will reflect some of the Office of Education's priority objectives. These include—making the results of educational research readily available to educational institutions, distributing human, material, and financial resources effectively in accord with educational need, eliminating failures in education—particularly the education of the disadvantaged—by insuring every citizen the "Right to Read," and infusing environmental and ecological education throughout the American educational continuum so that citizens will be motivated and trained to solve the interrelated environmental problems of human survival.

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