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ABSTRACT

A statistical composite of the United States' educational system, this report addresses a range of 93 issues over all levels of education. A narrative introduction interprets a table and a chart for each topic. Data on elementary/secondary education include: enrollment trends in public and private schools; number and size of schools and school districts and student-teacher ratios; participation in basic courses, special courses, and programs for exceptional children; school revenues and per student expenditures; student performance assessment, state and local measures for improving performance, and public opinion of school effectiveness. Higher education issues include: enrollment trends; distribution of institutions by level, control and type of degree awarded, and closings of institutions; staffing trends, faculty salaries, and faculty collective bargaining; revenue and expenditures; and outcomes (degrees conferred and employment of recent college graduates). The chapter on vocational and adult education analyzes participation in vocational programs in high school and under the Vocational Education Act, and the characteristics and needs of adult education participants. Topics in teacher preparation include teacher supply and demand trends, teacher education institutions, and characteristics of new and prospective teachers. Appended are an explanation of data sources, a glossary, and a cumulative index to this and 1980 to 1982 editions. (MJL)

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The Condition of Education

1983 Edition

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EA 016 089

A Statistical Report

On The Inside

Elementary/Secondary Education

- Public elementary/secondary school enrollment, approximately 46,100,000 in fall 1971, dropped to about 40,200,000 by fall 1981, a decrease of nearly 13 percent. Mid-Atlantic and North Central States experienced the sharpest declines (entry 1.1).
- Among the four regions, the Northeast showed a higher percentage of seniors who, starting in the 10th grade, had taken at least 2½ years of coursework in each of the following subjects: English, mathematics, science, and history (entry 1.11).
- Nationally, high schools graduated approximately 72 percent of persons of graduating age in the 1979-80 school year. From State to State, the proportion ranged from a low of approximately 57 percent in the District of Columbia to a high of more than 85 percent in Minnesota and Nebraska (entry 1.23).
- Of a selected group of measures to improve academic achievement in high schools, increasing daily attendance was rated of high importance by the greatest percentage of school superintendents. Of all the activities, it was also the most likely to have been recently implemented in all regions (entry 1.28).

Higher Education

- Higher education enrollment, after peaking in 1981, is expected to stabilize in 1982 and 1983 and then decline slightly through 1987. The proportions that are male, full-time, and in 4-year institutions are expected to continue to decrease in the 1980's (entry 2.1).
- Among college-bound seniors, about one in five planned to attend college out of State. This proportion was lowest in the western regions of the country and highest in the eastern seaboard regions (entry 2.5).
- The number of bachelor's degrees awarded reached its peak in 1974 and master's in 1977, fluctuating, as have doctor's degrees, in the ensuing years. Increased numbers of females earning degrees contributed to the rises (entry 2.19).
- The number of first-professional degrees awarded to women rose appreciably from 1970-71 to 1980-81, while those awarded to men began leveling off in 1976-77. Over the period, the number of female degree recipients quadrupled in medicine and increased by nine-fold in law (entry 2.20).
- When adjusted for inflation, average salaries earned by recent bachelor's degree recipients declined in most occupational fields between 1978 and 1981. Graduates working in engineering continued to earn substantially more than their former classmates employed full-time in other fields (entry 2.25).

Vocational and Adult Education

- Almost half of 1980 seniors enrolled in a vocational curriculum expected to be working and one-fifth expected to take vocational education in the year after high school, considerably higher proportions than among seniors in academic or general programs (entry 3.5).
- Office occupations, consumer and homemaking, and trade and industrial programs continued to dominate statistics on federally funded vocational education (VEA) programs in 1981. The percent change in VEA programs from 1975 to 1981 showed increases for most program areas (entry 3.7).
- Over 21 million persons participated in adult education in 1981, 3 million more than in 1978. Participation by all age groups grew in absolute numbers and, with the exception of the 25- to 34-year-old group, increased faster than the general population (entry 3.10).
- Employed persons were much more likely to participate in adult education than the unemployed or persons keeping house. Among occupational groups, professional, technical, and kindred workers had the highest participation rates; about one-third were engaged in adult education in 1981 (entry 3.14).

Teacher Preparation

- In the mid-1980's, the supply of new teacher graduates is expected to approximate the demand for additional teachers, suggesting a more favorable market for new teacher graduates and shortages in some localities and fields (entry 4.2).
- Despite a 39-percent reduction in the number of bachelor's degrees awarded in education, a few specialties, notably special education and pre-elementary, increased their degrees awarded between 1971 and 1981. Reductions in the number of teacher preparation degrees at the bachelor's level were most severe in elementary, art, mathematics, business, and home economics education (entry 4.5).
- According to program heads, most schools/departments of education implemented measures to improve the quality of teacher candidates over the past 5 years. Eighty-five percent indicated that curriculum was made more rigorous and 74 percent said that entrance criteria were raised (entry 4.10).
- The proportion of college freshmen indicating elementary/secondary teaching as their probable career declined throughout the 1970's, dropping to under 5 percent in 1982. (entry 4.20).

The Condition of Education 1983 Edition

Statistical Report
National Center for Education Statistics

Edited by Valena White Plisko

U.S. Department of Education
T.H. Bell, Secretary

Office of Educational Research and Improvement
Donald J. Senese, Assistant Secretary

National Center for Education Statistics
Marie D. Eldridge, Administrator

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National Center for Education Statistics

"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."—Section 406 (b) of the General Education Provisions Act, as amended (20 U.S.C. 1211e-1).

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NCES 83-400

Administrator's Statement

"If we could first know where we are and where we are tending, we could better judge what to do and how to do it".

Abraham Lincoln

The mission, as I see it, for the National Center for Education Statistics is to describe "where we are and where we are tending" in education in the Nation, providing a base of information upon which sound discussion and decisions can be launched. Through its data collection and analysis activities, the Center has attempted to inform, with accurate and timely statistics, the key educational concerns of Federal, State, and local policymakers, educators, and the general public. This report, the ninth in the annual series, is a major response to NCES's mandate "to report full and complete statistics on the conditions of education in the United States . . .", as legislated by the General Education Provisions Act, as amended.

In answering this mandate, the report broadly describes all levels of education, from elementary/secondary through adult education. The basic components—participants, resources, programs, and outcomes—are presented at each level. In keeping with the Federal role of assistance to States and localities, those principally responsible for education in the Nation, this year's report focuses upon conditions in education along State and regional lines. In Chapters 1 and 2, where the data permit, information is provided showing the dimensions and organization of elementary/secondary and higher education in the various States and the adaptations that States have made to different or changing conditions. It should be understood, however, that the purpose of comparison here is not judgmental; rather, it is to describe education in the States within the context of national trends in enrollment, resources, and performance. Chapter 3 provides a description of participants and programs in vocational education and adult education, two sectors increasingly important to the Nation and its people. Concluding the report, Chapter 4 on teacher preparation takes a comprehensive view of developments in education, linking anticipated demands for teachers at the elementary/secondary level with current production of teacher graduates in institutions of higher education.

Throughout the report we have attempted to take a panoramic sweep of conditions in education, yet at the same time highlighting areas of major concern. In Chapter 1,

data are presented, for example, on the instructional use of computers, on participation in high school mathematics and science courses, and on local measures to improve performance, all topics of prime interest to the Federal education program. Chapter 2 provides information on trends in degrees in higher education over the last decade and on the short-term outcomes of a college degree. Chapter 3 presents data on vocational training at both secondary and postsecondary levels and on participation rates in adult education. Chapter 4 addresses the issues of the projected teacher shortage and of the qualifications of new teachers.

Just as the issues are not always clear cut, the statistics are not often simple and may pose more questions than they answer. We have attempted to anticipate the kinds of questions researchers may ask and have provided extensive notes where needed. For the audience not well acquainted with statistics, we have made every effort to set forth, as simply as possible, the best estimates available and our most objective interpretation of the data. When no single statistic is available to adequately describe particular conditions in education, alternate indicators have been developed. In describing emerging trends in the supply of new teachers, for instance, we have provided estimates from various sources and have included additional information on the teaching intentions of college freshmen and high school seniors. Although various numbers are reported, they show a consistent trend, in this case, indicating a shortage in the supply of new teachers in the late 1980's.

The report uses a chartbook format with narrative referring to the data entries. Each entry on a topic consists of a table and a chart, which are presented together. The data highlighted in the chart, and briefly described in a statement accompanying the chart, are extracted from the facing table. Data used in the chart appear in boldface type in the table, which may be readily consulted for further information.

In this report, an effort was made to address a broad range of significant issues at all levels of education. Many of the statistics presented here relate to issues not included in previous editions of the report. To aid readers desiring statistics on other topics or more data on a particular issue, a cumulative index lists topics and data shown in the 1980, 1981, and 1982 editions, as well as in the present edition.

Marie D. Eldridge

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Table of Contents

Page

Introduction

by Lance Ferderer	3
Elementary/Secondary Education	3
Higher Education	3
Vocational and Adult Education	4
Teacher Preparation	4

1. Elementary/Secondary Education

by George H. Wade and Charles H. Hammer with Forrest W. Harrison	5
Enrollment	5
Schools and Staffing	6
Curriculum	7
Finance	9
Performance	10

2. Higher Education

by Valena White Plisko and Nancy B. Dearman	72
Enrollment	72
Institutions	74
Staff	75
Finance	76
Outcomes	77

3. Vocational and Adult Education

by Richard E. Whalen and Evelyn R. Kay	131
Vocational Education	131
Adult Education	133

4. Teacher Preparation

by Valena White Plisko	172
Teacher Supply and Demand for Additional Teachers	172
Supply of Newly Qualified Teachers	173
Teacher Preparation Institutions	174
New Teachers and Prospective Teachers	176

Appendix

Data Sources	224
Definitions of Selected Terms	244

Cumulative Index	254
------------------------	-----

Table of Entries

Page

Chapter 1: Elementary/Secondary Education

Enrollment

1.1	Percent Change in Public Elementary/Secondary School Enrollment Between 1971 and 1981, by State	15
1.2	Private School Enrollment as Percent of Total Elementary/Secondary School Enrollment, by State	17
1.3	Private Elementary/Secondary School Enrollment, by Affiliation	19
1.4	Public Preprimary Enrollment Compared to First Grade Enrollment	21
1.5	Minority Enrollment as Percent of Public Elementary/Secondary School Enrollment, by State	23
1.6	Handicapped and Limited-English Proficient Students as Percent of Public Elementary/Secondary School Enrollment, by State	25

Schools and Staffing

1.7	Percent Change in Number of Public Elementary/Secondary Schools Between 1971 and 1981, by State	27
1.8	Enrollment Size Distribution of Operating Local School Districts	29
1.9	Student-Teacher Ratios in Public and Private Elementary/Secondary Schools	31

Curriculum

1.10	Public Elementary/Secondary School Students Participating in Programs for Exceptional Children	33
1.11	Years of Coursework Completed in Selected Courses by High School Seniors, by Region	35
1.12	Curricular Programs Taken by High School Seniors	37
1.13	Remedial and Advanced Programs Taken by High School Seniors	39
1.14	Percent of Public Elementary/Secondary Schools With Microcomputers, by Grade Level and Major Use of Microcomputers	41

Finance

1.15	State Share of Public Elementary/Secondary School Revenues	43
1.16	Average Annual Percent Change in State Tax Revenues Compared With Consumer Price Index: School Year 1979-80 to 1981-82	45
1.17	Distribution of Public Elementary/Secondary School Students, by the Core Current Expenditures Per Student in Their School District	47
1.18	Public Elementary/Secondary School Expenditures Per Student, by Function	49
1.19	Public Opinion on Cost-Cutting Measures to Reduce Public School Costs	51

Performance

1.20	Average Reading Performance, by Race and Region: 1971 and 1980	53
1.21	Average Reading Performance of Selected Hispanic Student Subgroups Compared to National Average	55
1.22	Distribution of Students in Lowest and Highest Reading Achievement Groups, by Region	57
1.23	High School Graduates as Percent of Age Group, by State	59
1.24	GED Recipients as Percent of Public High School Completions	61
1.25	Reported Disciplinary Actions as Percent of Public Elementary/Secondary School Enrollment	63
1.26	Minimum Competency Testing for High School Graduation	65
1.27	Competency-Based Teacher Certification Provisions	67
1.28	Importance to School District Policy and Implementation of Selected Activities for Improving Academic Achievement in High Schools	69
1.29	Public Opinion Ratings of Public Schools Locally and Nationally	71

Table of Entries (Continued)

Page

Chapter 2: Higher Education

Enrollment

2.1	Total Enrollment in Institutions of Higher Education and Percent of Total, by Student and Institutional Characteristics	81
2.2	Average Annual Percent Change in Full-Time-Equivalent Enrollment, 1970 to 1981, by State	83
2.3	Higher Education Enrollment Characteristics, by State	85
2.4	Minority Enrollment as Percent of Total Enrollment in Higher Education, by State	87
2.5	Intentions of College-Bound Seniors to Attend In-State or Out-of-State Schools, by Region	89
2.6	Percent Migration of First-Time Freshmen Into and Out of State, by State	91

Institutions

2.7	Level and Control of Institutions of Higher Education, by State	93
2.8	Distribution of Institutions of Higher Education, by New Institutional Classification and Control	95
2.9	Closings of Institutions of Higher Education	97

Staff

2.10	Instructional Staff in Institutions of Higher Education and Estimated Demand: 1970 to 1990	99
2.11	Annual Percent Change in Average Salaries of Full-Time Instructional Faculty in Higher Education	101
2.12	Average Salaries of Full-Time Professors on 9-Month Contracts, by Region	103
2.13	Number of Faculty Collective Bargaining Agreements	105
2.14	Faculty Collective Bargaining Agreements in Institutions of Higher Education, by State	107

Finance

2.15	Sources of Current Funds Revenues for Institutions of Higher Education	109
2.16	State/Local Revenues as Percent of Total Current Funds Revenues for Public Higher Education Institutions	111
2.17	Higher Education Current Funds Expenditures Per Full-Time-Equivalent Student	113
2.18	Instruction Expenditures as Percent of Educational and General Expenditures, by Type and Control of Institution	115

Outcomes

2.19	Earned Degrees Conferred, by Level and Sex	117
2.20	First-Professional Degrees Conferred, by Sex	119
2.21	Percent of Total Earned Degrees Conferred at Bachelor's Level and by Public Institutions, by State	121
2.22	Distribution of Associate Degrees Conferred by Institutions of Higher Education, by Type of Curricular Program	123
2.23	Labor Force Status of Recent Bachelor's Degree Recipients, by Major Field of Study	125
2.24	Percent of Recent Bachelor's Recipients Who Are Employed Full-Time in Closely Related Fields and Percent Employed in Non-Professional Jobs	127
2.25	Average Annual Salaries of Recent Bachelor's Degree Recipients, by Occupation	129

Chapter 3: Vocational and Adult Education

Vocational Education

3.1	Providers of Vocational Education	139
3.2	Estimated Enrollments in Vocational Education	141

Table of Entries (Continued)

Page

Chapter 3: Vocational and Adult Education (continued)

Vocational Education (continued)

3.3	Participation in Vocational Education Curricular Programs by 1980 High School Seniors	143
3.4	Percent of High School Seniors Who Took Vocational Courses That Prepared Them for Beginning Job, by Sex.....	145
3.5	Expected Activities After Graduation of 1980 High School Seniors, by Curricular Program	147
3.6	Average Hourly Wage Earned by 1972 High School Graduates in Initial Job	149
3.7	Percentage Distribution and Percent Change in Vocational Education Enrollments (VEA)	151
3.8	Total State/Local Dollars Spent for Each Federal Dollar Under Vocational Education Act (VEA)	153
3.9	Minority Enrollment as Percent of Total Vocational Education Enrollment (VEA)	155

Adult Education

3.10	Participants in Adult Education, by Age Group	157
3.11	Participants in Adult Education, by Sex and Racial/Ethnic Group	159
3.12	Participants in Adult Education, by Educational Attainment	161
3.13	Participants in Adult Education and Percent Female, by Family Income	163
3.14	Participants in Adult Education, by Labor Force Status	165
3.15	Courses Taken by Adult Education Participants, by Field	167
3.16	Reason and Objectives for Taking Adult Education Courses	169
3.17	Provider of Instruction and Major Source of Funding for Adult Education Courses	171

Chapter 4: Teacher Preparation

Teacher Supply and Demand for Additional Teachers

4.1	Elementary/Secondary Classroom Teachers, by Level	181
4.2	Estimated Supply of New Teacher Graduates and Estimated Total Demand for Additional Teachers	183

Supply of Newly Qualified Teachers

4.3	Earned Degrees Conferred in Education and in All Disciplines	185
4.4	Earned Degrees Conferred in Education, by Level	187
4.5	Percent Change in Bachelor's Degrees Conferred in Selected Education Specialties	189
4.6	Elementary/Secondary Teaching Status of Recent Bachelor's Degree Recipients Newly Qualified to Teach: May 1981	191

Teacher Preparation Institutions

4.7	Education Degrees Conferred by Institutions of Higher Education	193
4.8	Higher Education Institutions Conferring Degrees in Education, by Type of Institution	195
4.9	Higher Education Institutions Conferring Degrees in Education, by Highest Education Degree Conferred	197
4.10	Measures to Improve Teacher Candidate Quality and Curriculum in Schools/Departments of Education	199
4.11	Possible Adverse Effect of Raising Standards Significantly on Schools/Departments of Education, by Past Degree Decline in Program	201

New Teachers and Prospective Teachers

4.12	Years of Full-Time Teaching Experience Completed by Public School Teachers	203
4.13	Sex and Racial/Ethnic Distribution of Recent Bachelor's Recipients, Those Newly Qualified to Teach, and Those Teaching Full-Time	205

Table of Entries (Continued)

Page

Chapter 4: Teacher Preparation (continued)

New Teachers and Prospective Teachers (continued)

4.14 Certification of New Full-Time Elementary/Secondary School Teachers, by Field Currently Teaching	207
4.15 Relation of College Study to Job of New Full-Time Elementary/Secondary School Teachers, by Field Currently Teaching	209
4.16 Certification in Principal Field Currently Teaching of New Full-Time Elementary/Secondary School Teachers, by Level and Control of School Currently Teaching	211
4.17 Relation of College Study to Job of New Full-Time Elementary/Secondary School Teachers, by Level and Control of School Currently Teaching	213
4.18 Bachelor's Recipients Newly Qualified to Teach in 1979-80 Who Were Not Teaching in May 1981, by Whether They Applied to Teach and by Current Labor Force Status	215
4.19 Reason for Not Applying for Teaching Job and Opinion on Teacher Market	217
4.20 College Freshmen Indicating Teaching as Probable Career	219
4.21 Percent of College-Bound Seniors Intending Education Majors, by Sex and Racial/Ethnic Group	221
4.22 Vocabulary, Reading, and Mathematics Test Scores of Seniors Intending Education Majors Compared With Other Intended Majors	223

The Condition of Education

Education is often referred to in imprecise terms, with little notice of the seams and segments that comprise the whole. We see references, for example, to an "education policy" and must pause to realize this is made up of dozens of different policies on dozens of different aspects of education. These aspects may range from how a rise in the number of working mothers affects preprimary enrollment to how much access handicapped students have to education facilities. As these examples suggest, certain facets of education may appear to have no relation to each other. Yet, we still tend to lump them together into that broad concept—"education."

This edition of *The Condition of Education* focuses on the diversity of education. Specifically, it offers a broader range of State data than previous editions. The data serve to illustrate to what degree certain conditions exist within some States that may not exist at all in others. To some extent they also show how States and localities respond differently to like situations. While the information presented here cannot reveal the thinking behind the choices made by State and local officials, it often does show the multiplicity of choices available to them.

In his 1982 report to the Congress, Department of Education Secretary Terrel H. Bell noted the necessity of maintaining the diversity of our education systems through State and local control if excellence in education is to be achieved. Toward that end, he set down three specific goals for the Federal government:

- Strengthen education by returning the resources and the responsibility for education decision making to the States and local communities and by eliminating the prescriptive administration of Federal programs;
- Assist local educators in renewing our Nation's commitment to excellence and achievement in education at the local level by promoting identification, development, and communication of effective practice;
- Assist local school boards to give policy guidance and leadership in setting high standards of academic achievement, and to focus school board policy development on motivation and reward for excellence among teachers and students.

These goals would be difficult to achieve lacking effective data with which to track progress and make decisions. *The Condition of Education* offers a statistical composite of our education system against which progress can be tracked.

Elementary/Secondary Education

The challenge of changing enrollments and resources has become a constant in most localities. Equally persistent have been the questions of student performance—where can it improve, how, and at what cost? Chapter 1 deals with these and other developments by exploring the basic components of elementary/secondary education—students, schools, staff, curriculum, finance, and performance. State breakdowns offer detailed comparisons, and, when available, projections and historical scans are included.

The data in this chapter hold some curiosities. One concern is the public's view of its public schools. While various groups differed in how they rated public schools, all groups rated their local public schools higher than public schools in general. While this view is not necessarily positive for local schools, it does show that a gap exists between the general perception of public schools and perhaps a more specific knowledge based on experience. In other words, the Nation's public schools may be better than we think. If this is so, a new challenge—closing this perception gap—presents itself to educators.

Higher Education

Institutions of higher education differ by control, level, size, and many other characteristics. The effects of various developments on these institutions differ correspondingly. Chapter 2 explores some of these differences and illustrates enrollment, staffing, and financial characteristics of higher education in each State. The chapter concludes with a description of academic and occupational outcomes of higher education.

One difference apparent in several of the data items in this chapter is how well public and private institutions are thriving. In a strictly material sense, private institutions are not faring as well as public. Between 1960 and 1981,

240 schools closed their doors for good, most of them private 4-year institutions. While revenues have been rising for both sectors, private institutions received almost half their funds from student charges. With enrollments expected to stop growing and then decline for the next 5 years, income from student charges may drop accordingly. Private institutions will thus be pressed further to make up this revenue shortfall.

The financial setbacks suffered generally by private—and even public—institutions over the years have by no means been universal. Nor have they necessarily lowered the quality of the program offered in these institutions. But the struggle to maintain and even strengthen an institution's resources is keenly felt in all sectors, from the staff to the student to the wider community that ultimately benefits from the student's learning.

Vocational and Adult Education

The importance our society has accorded vocational and adult education can be seen in a number of factors. One is participation rates, which rose steadily in the 1970's. Another is the level of financial support, which has also continued to rise for vocational education and most likely for adult education, where such measurements are more difficult to make. Other factors include the span of courses offered, who offers them, and who takes them. Chapter 3 examines these elements and others in these expanding sectors of education.

That more people are extending their education indicates a belief that something can be gained by doing so. Setting aside for a moment adult education courses taken for pleasure, many employers long ago equated job advancement with additional education. Employees have increasingly responded to the inducement: most adult education courses are taken for job-related reasons. Adult

education courses are also taken by some to acquire basic skills and literacy, necessary for work and full participation in American life.

Teacher Preparation

The past decade has been a troubled time for prospective teachers and teacher preparation programs. The availability of teaching jobs declined in the 1970's as elementary/secondary enrollments dropped. Lower demand and tighter school budgets often meant less attractive salaries for prospective teachers. College students responded by choosing other fields. Those who did plan to teach may not have been among the most academically qualified.

Chapter 4 traces some of the developments of this troubled time and, to a degree, projects what the future may bring. Included here are supply and demand figures showing comparisons over time. Specific breakdowns show the likelihood that teacher graduates in various degree fields went into teaching. The composition and credentials of beginning teachers are also presented.

On the whole, job prospects for new teachers should improve in the decade. With enrollments picking up in the mid-1980's, demand should take an upswing. Furthermore, education department heads have seen some movement underway to improve teacher preparation programs. Various initiatives have been introduced at the Federal, State and local levels to attract and retain capable teachers. Proposals have emphasized recruiting or retraining teaching personnel to fill fields such as science and mathematics where current shortages are perceived. For the moment, then, teacher preparation is in a transition. Whether or not this shift is to something more positive is for future editions of *The Condition of Education* to explore.

Chapter 1

Elementary/Secondary Education

Declining enrollments, tighter financing, and rising demand for services to special students have greatly affected schooling and school systems in various areas of the Nation. The "back to basics" movement and the more recent initiatives to provide excellence in education have also influenced school programs. States and localities have responded to these developments in a variety of ways. This chapter focuses on the basic components of elementary/secondary education—students, schools and staffing, curriculum, finance, and performance—in the States and regions, and, where data are available, looks at these features over time.

Enrollment

Public school enrollment

In recent years, enrollment in elementary/secondary schools has declined significantly. From fall 1971 to fall 1981, public school enrollment declined from 46.1 million students to 40.2 million, a decrease of 5.9 million or 13 percent (entry 1.J). Overall enrollment decreases were experienced by 42 States and the District of Columbia, with the latter experiencing the greatest decrease, 33 percent. The next largest decreases were in Delaware (30 percent), Rhode Island (25 percent), Connecticut (24 percent), and South Dakota (24 percent). Declines in enrollment were greater at the elementary than at the secondary level, 15 percent compared to 7 percent, respectively. Four States with overall reductions in enrollment during the decade continued to experience increases at the secondary level (Hawaii, Louisiana, New Hampshire, and South Carolina). Growth in enrollment was experienced by Idaho, Wyoming, Utah, Nevada, Arizona, Texas, Florida, and Alaska. All of these States except Idaho showed increases at both the elementary and secondary levels.

Private school enrollment

In fall 1980, the most recent year in which data were available for both public and private school enrollment, nearly 5 million private elementary/secondary school students combined with public school enrollment to produce a total national enrollment of almost 46 million (entry 1.2). Overall, private school enrollment accounted

for 11 percent of total enrollment. States varied considerably in the proportion of students enrolled in private schools, ranging from a high of 19 percent in Delaware to a low of under 2 percent in Utah. Other States with relatively high private school enrollments included Hawaii, the District of Columbia, Pennsylvania, Louisiana, New York, and Rhode Island. In addition to Utah, States with low percentages were Oklahoma, Idaho, Wyoming, and West Virginia.

Of the 5 million private school students, the great majority, 84 percent, were in religiously affiliated schools (entry 1.3). In 13 States, those schools held more than 90 percent of the private school enrollment. Of these 13 States, 10 were located in the Midwest or West. Those States with the highest percentages of private school enrollments in religiously affiliated schools were Iowa (98 percent) and Nebraska and Wisconsin (96 percent).

Only two States, Mississippi and Georgia, had less than 50 percent of their private school enrollment in religiously affiliated schools. Students in Catholic schools accounted for the majority of private school students in the United States (63 percent) and they constituted three-fourths of the total number attending religiously affiliated schools. A greater proportion of private school students in Ohio and Rhode Island attended Catholic schools than in any other State. On the other hand, South Carolina, Georgia, North Carolina, Tennessee, and Mississippi reported proportions of Catholic affiliated enrollments in private schools below 23 percent.

Growth of public preprimary enrollment

Another changing aspect of enrollment is the growth of preprimary programs in public schools. To view this growth in relation to elementary/secondary enrollment, preprimary enrollment is expressed as a percent of first grade enrollment. In fall 1981, approximately 2.7 million students were enrolled in public school preprimary programs nationally, equalling 92 percent of public school first grade enrollment (entry 1.4). This degree of participation in preprimary programs compares with a figure of 70 percent in fall 1971, indicating a considerable increase in the rate of preprimary participation over the period. This increase reflects, in addition, the expan-

sion of preprimary programs in some States to include prekindergarten. In fact, in 16 States, the rate of preprimary participation was greater than 100 percent (preprimary enrollment exceeded the number of first grade students), 12 of which, including Hawaii, were in the West or Midwest. The participation of children in preprimary programs relative to first grade enrollments increased in all but four States from 1971 to 1981. Among those States with increased rates of preprimary participation, the increase for some was quite dramatic. Eleven States, 8 of which were in the Southeast, showed increases of 50 percentage points or more over the period. Arkansas (3 percent in 1971 and 83 percent in 1981), and North Carolina (10 percent in 1971 and 88 percent in 1981) experienced the largest increases.

Minority enrollment in public schools

The racial/ethnic composition of enrollment is the next view taken of the enrollment picture. Racial/ethnic minorities comprised 27 percent of total public elementary/secondary school enrollment in fall 1980 (entry 1.5). Three States and the District of Columbia had greater than 50 percent minority enrollment: Mississippi (52 percent), New Mexico (57 percent), Hawaii (75 percent), and the District of Columbia (96 percent).

Black students accounted for 16 percent of total public school enrollment nationally and constituted large proportions of the total public school enrollment in the District of Columbia (93 percent) and in five Southern States, Mississippi (51 percent), South Carolina (43 percent), Louisiana (42 percent), Georgia (34 percent), and Alabama (33 percent). While constituting 8 percent of total enrollment nationally, Hispanic students accounted for much larger proportions of total enrollment in a number of Western and Southwestern States: New Mexico (46 percent), Texas (30 percent), California (25 percent), Arizona (24 percent), and Colorado (15 percent). The only other State with more than 10 percent Hispanic enrollment was New York with 12 percent. American Indians/Alaskan Natives made up less than one percent of the Nation's enrollment and had a large concentration in Alaska where they comprised 21 percent of total enrollment. Less than 2 percent of total national enrollment

was comprised of Asians or Pacific Islanders. Many of these students were concentrated in Hawaii, where they made up 71 percent of Hawaii's student enrollment, and in California (7 percent of student enrollment).

Special populations in public schools

Two groups of students whose special needs have received attention in recent years by the public schools are the handicapped and the limited-English-proficient. Nationwide, in fall 1980, 8 percent of children enrolled in public elementary/secondary schools were classified as handicapped and 2 percent were classified as limited in English proficiency, according to a U.S. Office for Civil Rights survey (entry 1.6). The variation among States in the proportion of students that were reported as handicapped ranged from 14 percent in Delaware to 3 percent in the District of Columbia. This variation may be due in large measure to differences in diagnostic and classification procedures. There were no clear-cut geographic concentrations of handicapped students in the Nation.

There was, however, a clearly discernible geographic pattern of distribution in the case of children classified as having limited-English proficiency. The States bordering on Mexico had the highest relative concentrations of limited-English-proficient students in fall 1980—New Mexico (10 percent), California (9 percent), Texas (8 percent), and Arizona (5 percent). A relatively high concentration of limited-English-proficient students was also found in Alaska (6 percent).

Schools and Staffing

Number and size of public schools

In addition to enrollment characteristics, other indicators bearing on the condition of elementary/secondary schools, for which recent national data are available, are the number and size of schools and school districts, and the student-teacher ratio. The number of public elementary/secondary schools decreased nationally by more than 3,600 from 1971 to 1981, a decline of 4 percent during the decade (entry 1.7). The 13-percent decline in enrollment during that time contributed to some school closings, while continued consolidation also resulted in

fewer schools. States that registered decreases in the number of schools greater than the national average decrease of 4 percent were located primarily in the Northeast and North Central regions. Altogether, 33 States and the District of Columbia experienced decreases in the number of schools. The largest reduction took place in South Dakota (27 percent), followed by Massachusetts (23 percent) and Rhode Island (21 percent). On the other hand, 16 States showed gains in the number of schools during this period. With few exceptions, including Alaska and Hawaii, States that registered increases in the number of public elementary/secondary schools between 1971 and 1981 were clustered in the Southwest and the Southeast. Alaska had by far the largest relative gain, 42 percent. Four other States had increases of over 10 percent—Nevada, Arizona, Louisiana, and Hawaii.

Although the average enrollment size of elementary and secondary schools has been increasing for a considerable period, many relatively small schools still operated. For example, nationwide, 36 percent of the schools reported an enrollment of fewer than 300 students, and only 8 percent had enrollments of more than 1,000. Four Northern Plains States and Alaska had the highest proportions of schools with enrollments under 300.

Number and size of local school districts

As in the case of schools, the number of operating local school districts also declined during the period 1971-72 to 1981-82 (entry 1.8). The drop was from 16,768 at the beginning of the decade to 15,538 at the end, a decrease of 1,230 districts or 7 percent. This decline is the continuation of a trend that has been going on for several decades. Decreases in the number of districts occurred in 34 States; Nebraska alone, with a reduction of 327 districts, accounted for more than a fourth of the total decline nationwide. The decrease in Nebraska itself was 25 percent. Other States with a decrease of one quarter or more were Arizona, Delaware, and Wyoming, although both Delaware and Wyoming had only small numbers of districts at the beginning of the decade (26 and 79 respectively). Four States—Alabama, Alaska, New Hampshire, and New Jersey—all showed increases in the number of school districts and 13 others had no net

change. In school year 1981-82, States varied considerably in the size distribution of their school districts. The District of Columbia and Hawaii (each a single school district), together with Maryland, West Virginia, and Louisiana, all had no school districts with less than 1,000 students. In contrast, six States—Nebraska, North Dakota, Montana, Vermont, South Dakota, and Oklahoma—had 80 percent or more of their districts enrolling less than 1,000.

Student-teacher ratios

In fall 1980, the student-teacher ratio nationally was 18.1 for public and private elementary/secondary schools combined (entry 1.9). For public schools, the ratio was 18.9; for private schools the figure was somewhat lower, 17.9. For 11 States, however, the student-teacher ratios were larger for private than public schools. Utah reported the largest public school student-teacher ratio, 25.1. Hawaii, California, and Michigan all had ratios between 22.0 and 23.0 students per teacher. Overall, States with public school student-teacher ratios above the national average included the Western States and most of the Southeastern States.

Curriculum

School curricula and programs are core concerns of education policymakers, teachers, and parents alike. Concerns are shared not only over how schools teach all students basic skills, but also over how schools prepare students in advanced skills and new technologies and offer opportunities to excel. Participation in a variety of programs and coursework is examined here.

Programs for exceptional children

Among five classifications of handicapped students, programs for the specific learning disabled enrolled the greatest percentage of handicapped children in the Nation (3 percent) and in all but 8 States (entry 1.10). In Delaware, Maryland, Rhode Island, and Alaska, program participants represented more than 5 percent of the total public school enrollment. Programs for the speech impaired had the next largest rate of participation of the categories of handicapped students, 2 percent.

There are various ways of defining those who are gifted and talented, but when a broad definition is taken, participation in programs for these students is relatively small, under 3 percent. In only two States, Nebraska and North Carolina, did participation in gifted and talented programs represent at least 5 percent of total enrollment.

Basic courses

Discussion of the quality of education obtained by high school graduates in the United States frequently revolves around the issue of basic education. An examination of total years of coursework completed from the 10th through 12th grade in certain basic subject matter areas reveals some interesting patterns. Nationwide, the subject matter area in which the largest proportion of 1980 high school seniors had completed more than 3 years of coursework was English (including literature), 26 percent (entry 1.11). Next was history or social studies, 10 percent, followed by mathematics, 8 percent, and science, 6 percent. The Northeast had the largest percentage of seniors who completed more than 3 years of coursework in each of the areas of English, mathematics, science, and history. The West and Midwest both showed relatively low levels of coursework completion in mathematics—about one-third of high school seniors in these two regions had completed only 1 year or less of mathematics from the 10th through 12th grade. For the other subject areas, there was no clear-cut pattern by region with regard to levels of coursework completion.

The participation of 1980 high school seniors nationally in three broad curricular areas breaks down as follows: academic—38 percent; general—37 percent; and vocational—25 percent (entry 1.12). The Northeast had the largest percentage of high school seniors participating in academic programs, 51 percent. In the other three regions, West, Midwest, and South, approximately one-third of students were enrolled in academic programs. In vocational education, the South had the highest proportion, 28 percent, and the West the lowest, 20 percent.

Special courses

Among a variety of special programs taken by high school seniors in 1980, a wide range existed in the

percentages of those who participated in the various programs. Programs in remedial English and remedial mathematics each had participation rates of slightly more than 30 percent nationwide. Participation in advanced or honors programs in English and in mathematics had somewhat lower participation rates nationally (27 percent and 23 percent, respectively) (entry 1.13). Family life or sex education programs had the highest rate of participation of the special programs examined, and included about 48 percent of high school seniors. In the case of alcohol or drug abuse education programs, the degree of participation was nearly 40 percent, manifesting the concern given to these problems in the Nation's schools.

Regionally, a few patterns were identifiable. The Northeast was lowest in both remedial English and mathematics program participation. Participation in family life and sex education and in alcohol and drug abuse programs was lowest in the South, and highest in the Northeast and West.

The use of microcomputers in the Nation's public schools is becoming so widespread that many high schools are now offering courses in computer science and computer literacy (introduction to computer concepts). The number of personal computers available for instructional use by public school students tripled between fall 1980 and spring 1982. The number of computers in public schools is expected to increase rapidly—by more than 40 percent from school year 1981-82 to 1982-83. Teaching computer literacy was the most prevalent major instructional application of microcomputers, whereas teaching computer science was the most common major use of terminals (entry 1.14). One-third of the schools with microcomputers reported computer literacy as a major use; one-third of the schools with terminals reported computer science. Variations in usage also occurred by grade level: About half of the senior high schools using microcomputers cited computer science as a major use, while 40 percent cited computer literacy. At the elementary level, microcomputers were used with equal frequency for teaching computer literacy and basic skills. In senior high schools with terminals, computer science was the most prevalent major instructional use. Of the senior highs with computers, 64 percent offered credit courses

in computer science, and 51 percent offered credit in computer literacy.

Finance Revenues

The proportion of total public elementary/secondary school revenues from State sources continued to increase in 1979-80 (entry 1.15). While the national average rate was 47 percent of revenues from State sources, there was great variation in the ratio—85 percent in Hawaii to 8 percent in New Hampshire (Hawaii showed no revenues from local or intermediate sources and the District of Columbia showed no State sources of funds). The average Federal share of funds for local public schools remained less than 10 percent—ranging from less than 6 percent in Wisconsin, Wyoming, and Minnesota to 25 percent in Mississippi. Funds from local sources remained relatively high, ranging from 19 percent in Alaska and Mississippi to 85 percent in New Hampshire.

School finance equalization efforts and measures to limit local property taxes have had some effect in increasing the State role in elementary/secondary school financing. Given that the States now contribute the largest share, the growth rate of State tax revenue is of importance here (entry 1.16). State tax collections from which school revenues are derived have failed to keep up with the inflation rate over the recent past. The average annual growth of all State tax revenues was 9 percent for 1979-80 to 1981-82, and the most recent of these 3 years showed an increase of only 8 percent for all the States. At the same time, the average annual increase in the Consumer Price Index was 11 percent, with an increase of 9 percent in the most recent school year. The average annual growth rate in tax revenues varied widely among the States, from 1 percent in Michigan to 46 percent in Alaska; a fourth of the States were in the 10- to 20-percent range. The variation in 1981-82 was even greater. The slow growth in the most recent year is evidenced in 22 States, with smaller increases in 1981-82 than the average for the 3-year period. The national average growth rate for the 3-year period was 2 percent less than inflation, but in 30 States the rate was less than the U.S. average. These States included some that were primarily

urban and industrial as well as others that were primarily rural. Most of the States where the growth of State tax revenues has exceeded the inflation rate have severance taxes on natural resources that produced large amounts of revenue. Of course, changing economic conditions have had a great influence on the State tax growth rate, but changes in tax laws were also important. Sales taxes normally increase in step with the Consumer Price Index, but have failed to keep up recently.

Expenditures

Variations in the cost of living and in the availability of funds from States and other sources led to wide ranges in the average core current expenditures spent per student by local school systems. Core current expenditures, by excluding food service and transportation expenditures and direct State or intermediate agency expenditures, reflect the more direct costs of instructing students (entry 1.17). Still, it should be kept in mind that cross-State comparisons are often confounded by large cost-of-living differences. Also involved are differing needs and variations in the ability or willingness to support public schools. For the school year 1979-80, core current expenditures per student varied from under \$1,000 (in districts representing 3 percent of students) to over \$2,900 (in districts representing 5 percent of students), with the majority of students in districts spending over \$1,600 per student.

Expenditure ranges are typically greater in States with large numbers of districts; however, the range is often narrowed when the proportion of funds from State sources increases, as has happened in California in recent years. In 1979-80, the State average total expenditures per student for all purposes (current expenditures, capital outlay, and interest) continued to vary greatly—from \$5,077 in Alaska to \$1,699 in Alabama (entry 1.18). Southern States typically were well under the national average. Interest remained a small portion of the total, and capital outlay was only 7 percent of the total, but was an important factor in the Western States where much growth is taking place. Current expenditures continued at over 91 percent of the average total expenditure per student.

When presented with options for cost-cutting in public schools, public opinion shows great reluctance to cut expenditures for direct pupil services. In a Gallup Poll of the public's attitudes toward the public schools conducted in spring 1982, only 3 percent of the public indicated that they would favor cost-cutting measures that would reduce instruction in the basics and 11 percent favored measures that would reduce special services (entry 1.19). The public was unwilling to cut back on teachers also; only 17 percent responded favorably to prospective cuts in teacher salaries, and only 18 percent favored reducing the number of teachers by increasing class size. On the other hand, when forced to choose among cost-cutting measures, 71 percent favored a reduction in the number of administrative personnel. Except for the option of reducing the number of teachers by increasing class size, there were no statistically significant differences between parents of public and private school children. On this issue, 13 percent of parents with children in public schools favored reducing the numbers of teachers compared with 29 percent of parents with children in private schools.

Performance

The performance of elementary/secondary school students and measures to improve performance are examined in this section from a number of different perspectives. These perspectives include reading performance, high school completion rates, activities for improving academic achievement, and public opinion.

Assessments of student performance

Assessments of reading performance of 9-, 13-, and 17-year-old students, measured as the average percent correct on sets of reading exercises, were made as part of the National Assessment of Educational Progress (NAEP) in 1971, 1975, and 1980. These assessments showed that 9-year-olds in 1980 performed significantly higher than did 9-year-olds in 1971—an average of 64 percent correct in 1971 contrasted with 68 percent correct in 1980, an increase of 4 percentage points (entry 1.20). No significant change was found, however, for 13- and 17-year-olds during the same period, 1971 to 1980. Both white

and black 9-year-old students made performance gains between 1971 and 1980, with black students making a considerably larger gain. White students' performance increased from 66 to 69 percent correct, a gain of 3 percentage points, while black students during the same time period went from 50 to 60 percent correct, an increase of 10 points. White students performed higher than black students for all three age groups, although not to the same degree. The difference between white and black students was most pronounced among 17-year-olds, less so among 13-year-olds, and least among 9-year-olds.

Among Hispanic students, reading performance on the NAEP exercises for 9-year-olds in 1980, although still below national levels, was significantly better than that of their 9-year-old counterparts in 1975 (entry 1.21). This group improved by 5 percentage points, from 55 percent correct in 1975 to 60 percent correct in 1980. Within this age group of Hispanics, significant gains were recorded by females, students in big cities, children in their modal grade, and students who had at least one parent with some postsecondary education. A significant feature of the data on these Hispanic 9-year-olds is that students in their appropriate (modal) grade for their age (grade 4) in 1980 performed about as well as all 9-year-olds nationally. No significant gains were registered by 13- or 17-year-old Hispanic students over the time period.

In another look at reading performance as measured by the NAEP study, comparisons of 9-, 13-, and 17-year-old students in the lowest and highest achievement groups for reading assessments at three time periods showed differences by region, sex, racial/ethnic group, and parental education. Based on performance on reading assessment items, students nationwide were partitioned into four achievement classes of equal size, each class representing 25 percent of the students. Sex, racial/ethnic, or regional groups with over 25 percent within a class indicate that those groups were over-represented within that achievement class; under 25 percent, that they were under-represented. There were large differences between the regions in 1971, but these had diminished considerably by 1980 (entry 1.22). For example, in the 1971 assessment, the Southeast had the largest proportion (36

percent) of 9-year-old students in the lowest achievement group, and the Central States had the smallest proportion (19 percent), a difference of 17 percentage points. On the 1980 assessment, the Southeast still had the largest proportion in the lowest achievement group (30 percent) and the Northeast had the smallest (21 percent), but the difference had decreased to 8 percentage points. Similar findings exist for the 13- and 17-year-old students.

Other measures of student performance

In school year 1979-80, the total number of high school graduates, public and private combined, numbered more than 3 million (entry 1.23). Nationally, these graduates comprised 72 percent of their age group (the average of all 17- and 18-year-olds), and ranged from a high of 86 percent in Minnesota to a low of 57 percent in the District of Columbia. Public high school graduates constituted more than 90 percent of the total number of graduates. Overall, there were slightly more female than male public high school graduates.

For those students who do not graduate with their classes, the high school equivalency (GED) certificate offers an alternative means for satisfying secondary school requirements. GED certificate recipients constitute an important segment of the total number of public high school completions each year in the United States. In school year 1979-80, GED recipients amounted to 15 percent of this total, or more than 1 out of every 7 high school completions (entry 1.24). Every State and the District of Columbia reported GED recipients in 1979-80, with a national total approaching a half million. Alaska reported the highest percentage of high school equivalency certificates as a percentage of total public high school completions (32 percent) and Utah reported the lowest percentage (2 percent). Other States with high percentages were Kentucky, Florida, and Oregon. In addition to Utah, States with relatively low percentages of GED's as a proportion of high school completions were California, Ohio, Idaho, Connecticut, and South Carolina.

A non-academic measure of student performance is the number of disciplinary actions reported as a percent of

total enrollment. In public elementary/secondary schools in fall 1980, this number comprised a small proportion of the number of students enrolled (entry 1.25). National percentages for three categories of actions were as follows: suspensions, 5 percent; corporal punishment, 4 percent; and expulsions, less than 1 percent. Except for California, all States above the national percentage for suspensions were east of the Mississippi River. For corporal punishment, most States with percentages above the national percentage were in the Southeast and adjacent Southwestern States. State percentages for disciplinary actions involving expulsions were uniformly low across the Nation.

State provisions to improve performance

Concern about the quality of education provided by the public schools has generated a number of measures to improve performance and delivery. By 1982, 39 States had adopted provisions requiring minimum competency testing of students in their public school systems to assure that students were gaining basic skills and knowledge (entry 1.26). Standards for test performance were set or expected to be set at the State level in 21 of these States, at the local level in 9 States, and at both State and local levels in 7 States. A greater emphasis was put on testing in the upper grades, although there was also considerable testing in lower grades. Twenty-six States tested children below the fifth grade level, and nearly all 39 States reported testing above the eighth grade level. About half the States expected to use testing as part of high school graduation requirements, to identify students for remediation or for other purposes. Three States expected to use it in decisions about grade promotion and two States expected to use it in early exit procedures. Twelve States had already begun testing their graduating classes and five more had plans to do so.

Another effort to improve the quality of education has been the introduction of competency-based teacher examinations, begun in a few States in the late seventies. The adoption of such examinations has continued to expand among the States, with the most recent additions being Colorado, Connecticut, and Delaware in 1982 (entry 1.27). Twenty States now have adopted requirements

that applicants for teacher certification be tested for competency, either for subject matter knowledge, basic skills, teaching knowledge, or some combination of these. These requirements have become effective in all but a few of these States.

Certification provisions were authorized by the State legislature in half the States and by the State board of education in the other half. Seven States used the National Teacher Examination and 14 used State-developed tests (South Carolina used both). Most States that have adopted provisions for competency-based teacher certification were in the southern part of the country, stretching from coast to coast. New York, Connecticut, Delaware, and Colorado were the exceptions.

Local initiatives to improve performance

Local initiatives have also been taken to improve school performance. In a sample survey taken in 1982 by the National Center for Education Statistics, school districts rated eight activities intended to improve academic achievement of students in their degree of importance to district policy (entry 1.28). Officials were also asked to indicate whether they had implemented such an activity during school years 1979-80 and 1980-81 or planned to do so by the school year 1984-85. Nationally, "increase daily attendance" was rated "high" by the largest proportion of school districts (66 percent). Other activities rated "high" by large proportions of school districts were "increase the units of credit required in core subject areas" and "establish/increase courses to improve students' study skills/habits" (47 percent). Activities receiving low proportions of "high" ratings were "extend the school day or year" (5 percent), "increase amount of homework" (7 percent), and "establish/increase minimum competency tests for teachers" (9 percent).

The proportions of school districts implementing these activities in the 1979-80 and 1980-81 school years generally reflect the officials' ratings of the importance of these activities to district policy. For example, activities to "increase daily attendance" were implemented by the largest proportion of school districts (69 percent), followed by activities to "increase units of credit required in

core subject areas" and "establish/increase courses to improve students' study skills/habits." Proportions of school districts planning these activities by 1984-85 corresponded somewhat to the ratings of importance. A majority of school districts planned activities to "establish/increase courses to improve students' study skills/habits" and "increase daily attendance." By comparison, activities to "extend the school day or the school year" were planned by 8 percent and activities to "establish/increase minimum competency tests for teachers" were planned by 12 percent.

Regionally, the responses to the eight activities were similar, though some differences stood out. Activities to "increase daily attendance" were rated "high" by 57 percent of school districts in the Central States and 62 percent in the Northeast as compared with 77 percent in the Southeast and the West. Activities to "establish/increase minimum competency tests for teachers" were rated "high" by 21 percent in the Southeast, 10 percent in the West, 4 percent in the Central States, and 3 percent in the Northeast. Regional differences were also found in proportions of school districts that implemented activities between 1979-80 and 1980-81 to "increase amount of homework" (in the Northeast, 36 percent; the Central States, 18 percent; the West, 15 percent; and the Southeast, 12 percent).

Public opinion on quality of public schools

Measures of how people feel about the public schools are taken yearly by the Gallup Poll. Trends have shown that parents of public school children rated their community schools higher in 1974 than they have in the past several years, but that the decline in ratings appears to have abated. In 1982, respondents were asked to rate their local public schools and public schools in general. Local public schools received higher marks than public schools in the Nation (entry 1.29). Thirty-seven percent rated the public schools in their community A or B, compared with 22 percent who rated the public schools in the Nation A or B. Public schools in their community were rated differently by respondents with children in public schools, with children in private schools, and with no children in school. Ratings of A or B were given public

schools in their community by 49 percent of parents with children in public schools, 38 percent of parents with children in private schools and only 32 percent of parents

with no children in schools. Corresponding ratings of the schools nationwide were, however, similar among these respondent groups and uniformly lower.

Table 1.1

Public Elementary/Secondary School Enrollment and Percent Change, by Level and State: Fall 1971 and Fall 1981

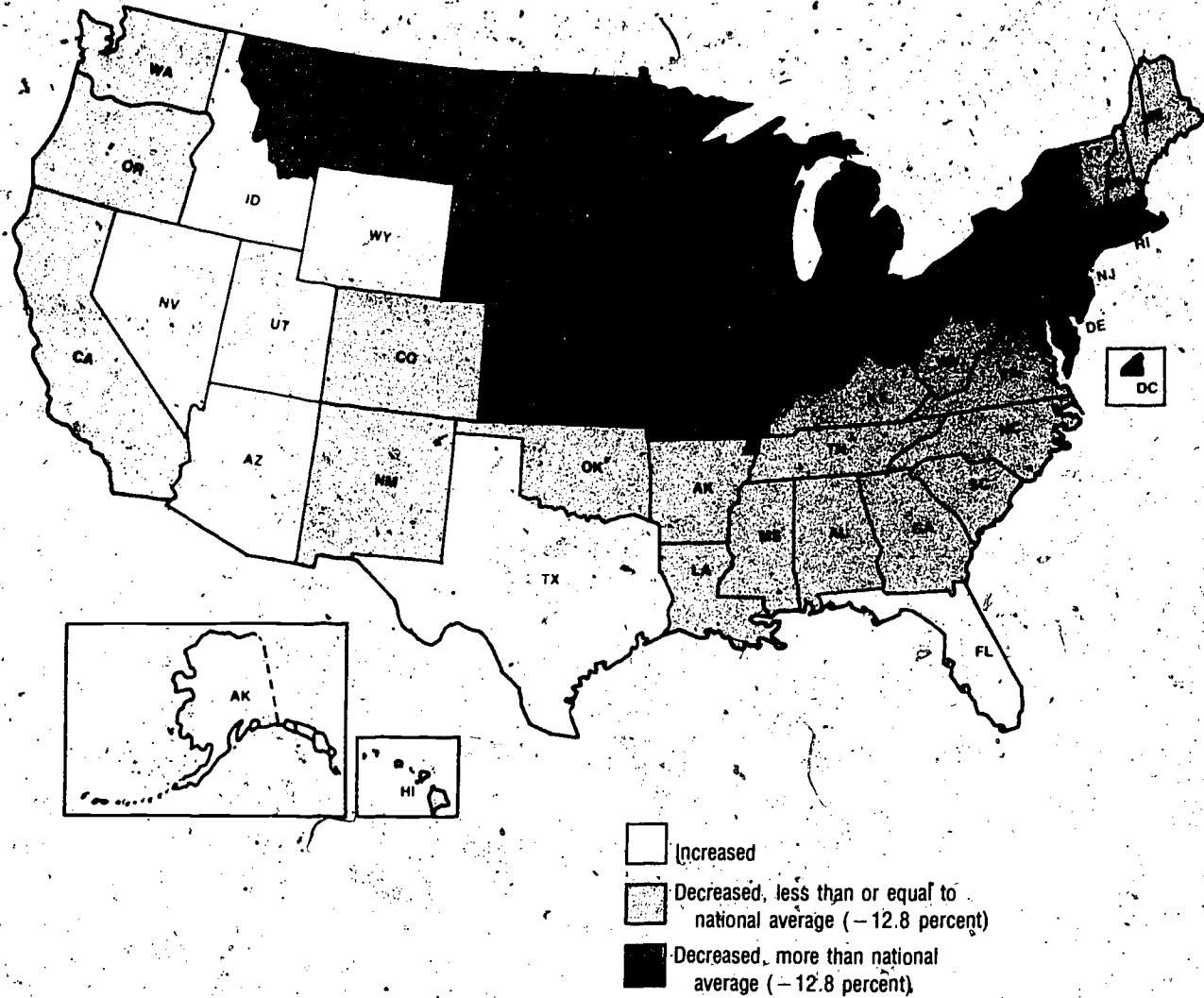
State	Fall 1971			Total	Fall 1981		Total Percent Change Between 1971 and 1981
	Total	Kindergarten to Grade 8	Grade 9 to 12 and Postgraduate		Kindergarten to Grade 8	Grade 9 to 12 and Postgraduate	
50 States and D.C.	46,081,112	32,264,992	13,816,120	40,168,373	27,289,119	12,879,254	-12.8
Alabama	806,315	568,396	237,919	743,448	518,534	224,914	-7.8
Alaska	84,381	61,675	22,706	90,858	63,756	27,102	7.7
Arizona	464,478	331,105	133,373	507,199	355,275	151,924	9.2
Arkansas	461,260	325,969	135,291	437,121	305,030	132,091	-5.2
California	4,601,550	3,166,351	1,435,199	4,046,156	2,769,788	1,276,368	-12.1
Colorado	564,502	395,644	168,858	544,174	376,043	168,131	-3.6
Connecticut	666,867	483,836	183,031	505,386	347,490	157,896	-24.2
Delaware	135,013	94,691	40,322	95,072	60,287	34,785	-29.6
District of Columbia	142,512	109,874	32,638	94,975	67,547	27,428	-33.4
Florida	1,478,504	1,032,505	445,999	1,487,721	1,035,323	452,398	.6
Georgia	1,093,407	769,493	323,914	1,056,117	736,565	319,552	-3.4
Hawaii	183,654	130,289	53,365	162,805	109,272	53,533	-11.4
Idaho	185,114	125,223	59,891	204,524	145,547	58,977	10.5
Illinois	2,379,646	1,699,218	680,428	1,924,084	1,304,192	619,892	-19.1
Indiana	1,230,796	866,813	363,983	1,025,172	690,810	334,362	-16.7
Iowa	652,958	453,678	199,280	516,216	341,218	174,998	-20.9
Kansas	503,403	346,340	157,063	409,909	282,014	127,895	-18.6
Kentucky	720,309	508,932	211,377	658,350	458,781	199,569	-8.6
Louisiana	851,074	619,045	232,029	782,053	543,275	238,778	-8.1
Maine	246,406	177,552	68,854	216,293	148,769	67,524	-12.2
Maryland	922,051	661,928	260,123	721,841	472,288	249,553	-21.7
Massachusetts	1,191,179	838,069	353,110	996,555	645,218	351,337	-16.3
Michigan	2,212,985	1,502,616	710,369	1,803,034	1,182,083	620,951	-18.5
Minnesota	913,955	627,456	286,499	733,741	480,008	253,733	-19.7
Mississippi	529,366	382,949	146,417	471,615	328,016	143,599	-10.9
Missouri	1,023,374	724,917	298,457	818,705	553,012	265,693	-20.0
Montana	178,479	122,033	56,446	153,435	106,235	47,200	-14.0
Nebraska	332,375	230,659	101,716	273,340	186,755	86,585	-17.8
Nevada	130,186	94,042	36,144	151,339	102,635	48,704	16.2
New Hampshire	164,102	116,626	47,476	163,827	109,959	53,868	-2
New Jersey	1,497,841	1,058,768	439,073	1,199,000	787,700	411,300	-20.0
New Mexico	284,948	200,315	84,633	268,091	187,192	80,899	-5.9
New York	3,519,905	2,455,596	1,064,309	2,760,774	1,778,207	982,567	-21.6
North Carolina	1,176,308	820,497	355,811	1,108,960	772,876	336,084	-5.7
North Dakota	144,419	97,557	46,862	117,708	79,579	38,129	-18.5
Ohio	2,438,743	1,697,512	741,231	1,898,501	1,255,096	643,405	-22.2
Oklahoma	625,740	437,612	188,128	582,572	408,579	173,993	-6.9
Oregon	478,502	322,252	156,250	457,165	315,388	141,777	-4.5
Pennsylvania	2,370,665	1,621,816	748,849	1,859,015	1,206,821	652,194	-21.6
Rhode Island	190,696	136,343	54,353	142,815	91,642	51,173	-25.1
South Carolina	648,643	460,481	188,162	609,158	420,664	188,494	-6.1
South Dakota	165,267	113,150	52,117	125,657	85,887	39,770	-24.0
Tennessee	897,598	639,287	258,311	838,297	593,556	244,741	-6.6
Texas	2,811,700	2,006,400	805,300	2,935,547	2,098,126	837,421	4.4
Utah	365,746	212,603	93,143	355,554	261,722	93,832	16.3
Vermont	105,340	76,411	28,929	93,183	64,988	28,195	-11.5
Virginia	1,074,073	764,866	309,207	989,548	690,736	298,812	-7.9
Washington	805,049	556,913	248,136	750,188	513,018	237,170	-6.8
West Virginia	403,377	283,862	119,515	377,772	266,944	110,828	-6.3
Wisconsin	999,921	675,159	324,762	804,262	512,831	291,431	-19.6
Wyoming	86,430	59,668	26,762	99,541	71,842	27,699	15.2

¹ Estimated.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Schools, Fall 1981*, forthcoming.

Chart 1.1

Percent Change in Public Elementary/Secondary School Enrollment Between 1971 and 1981, by State



Public elementary/secondary school enrollment, approximately 46,100,000 in fall 1971, dropped to about 40,200,000 by fall 1981, a decrease of nearly 13 percent. Mid-Atlantic and North Central States experienced the sharpest declines.

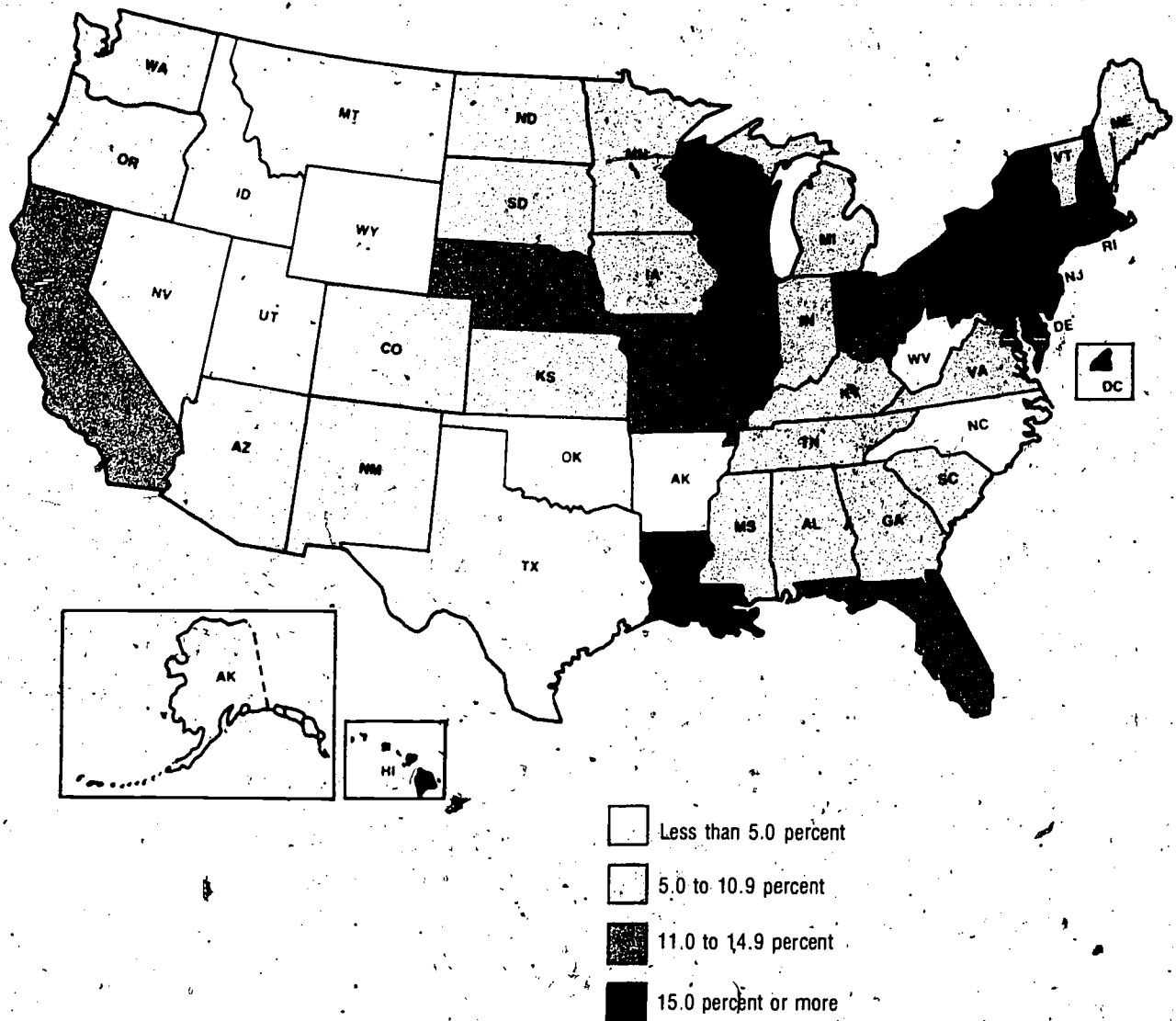
Table 1.2

**Public and Private Elementary/Secondary School Enrollment, by State:
Fall 1980**

State	Total	Public	Private	Percent Public	Percent Private
50 States and D.C.	45,945,848	40,984,093	4,961,755	89.2	10.8
Alabama	821,390	758,721	62,669	92.4	7.6
Alaska	90,314	86,514	3,800	95.8	4.2
Arizona	554,051	513,790	40,261	92.7	7.3
Arkansas	466,123	447,700	18,423	96.0	4.0
California	4,631,731	4,118,022	513,709	88.9	11.1
Colorado	581,283	546,033	35,250	93.9	6.1
Connecticut	619,863	531,459	88,404	85.7	14.3
Delaware	122,777	99,403	23,374	81.0	19.0
District of Columbia	121,252	100,049	21,203	82.5	17.5
Florida	1,715,213	1,510,225	204,988	88.0	12.0
Georgia	1,151,242	1,068,737	82,505	92.8	7.2
Hawaii	202,215	165,068	37,147	81.6	18.4
Idaho	209,086	203,247	5,839	97.2	2.8
Illinois	2,332,926	1,983,463	349,463	85.0	15.0
Indiana	1,155,823	1,055,589	100,234	91.3	8.7
Iowa	589,084	533,857	55,227	90.6	9.4
Kansas	449,180	415,291	33,889	92.5	7.5
Kentucky	739,526	669,798	69,728	90.6	9.4
Louisiana	936,481	777,560	158,921	83.0	17.0
Maine	240,037	222,497	17,540	92.7	7.3
Maryland	857,112	750,665	106,447	87.6	12.4
Massachusetts	1,160,218	1,021,885	138,333	88.1	11.9
Michigan	2,075,290	1,863,419	211,871	89.8	10.2
Minnesota	843,284	754,318	88,966	89.5	10.5
Mississippi	527,175	477,059	50,116	90.5	9.5
Missouri	970,967	844,648	126,319	87.0	13.0
Montana	162,861	155,193	7,668	95.3	4.7
Nebraska	319,004	280,430	38,574	87.9	12.1
Nevada	156,080	149,481	6,599	95.8	4.2
New Hampshire	187,953	167,232	20,721	89.0	11.0
New Jersey	1,475,886	1,246,008	229,878	84.4	15.6
New Mexico	289,225	271,198	18,027	93.8	6.2
New York	3,450,674	2,871,004	579,670	83.2	16.8
North Carolina	1,187,454	1,129,376	58,078	95.1	4.9
North Dakota	127,544	116,885	10,659	91.6	8.4
Ohio	2,225,738	1,957,381	268,357	87.9	12.1
Oklahoma	594,142	577,807	16,335	97.3	2.7
Oregon	492,427	464,599	27,828	94.3	5.7
Pennsylvania	2,311,350	1,909,292	402,058	82.6	17.4
Rhode Island	178,195	148,320	29,875	83.2	16.8
South Carolina	668,842	619,223	49,619	92.6	7.4
South Dakota	139,405	128,507	10,898	92.2	7.8
Tennessee	925,186	853,569	71,617	92.3	7.7
Texas	3,048,607	2,900,073	148,534	95.1	4.9
Utah	349,173	343,618	5,555	98.4	1.6
Vermont	103,370	95,815	7,555	92.7	7.3
Virginia	1,085,440	1,010,371	75,069	93.1	6.9
Washington	813,589	757,639	55,950	93.1	6.9
West Virginia	396,111	383,503	12,608	96.8	3.2
Wisconsin	992,608	830,247	162,361	83.6	16.4
Wyoming	101,341	98,305	3,036	97.0	3.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A Comparison of Selected Characteristics of Private and Public Schools, 1982*, and *Digest of Education Statistics, 1982*.

Private School Enrollment as Percent of Total Elementary/Secondary School Enrollment, by State



About 5 million or nearly 11 percent of elementary/secondary school students were enrolled in private schools in 1980. Private school enrollment made up more than 15 percent of total enrollment in Delaware, Hawaii, Illinois, Louisiana, New Jersey, New York, Pennsylvania, Rhode Island, Wisconsin, and the District of Columbia.

Table 1.3

Private Elementary/Secondary School Enrollment, by Affiliation and State: Fall 1980

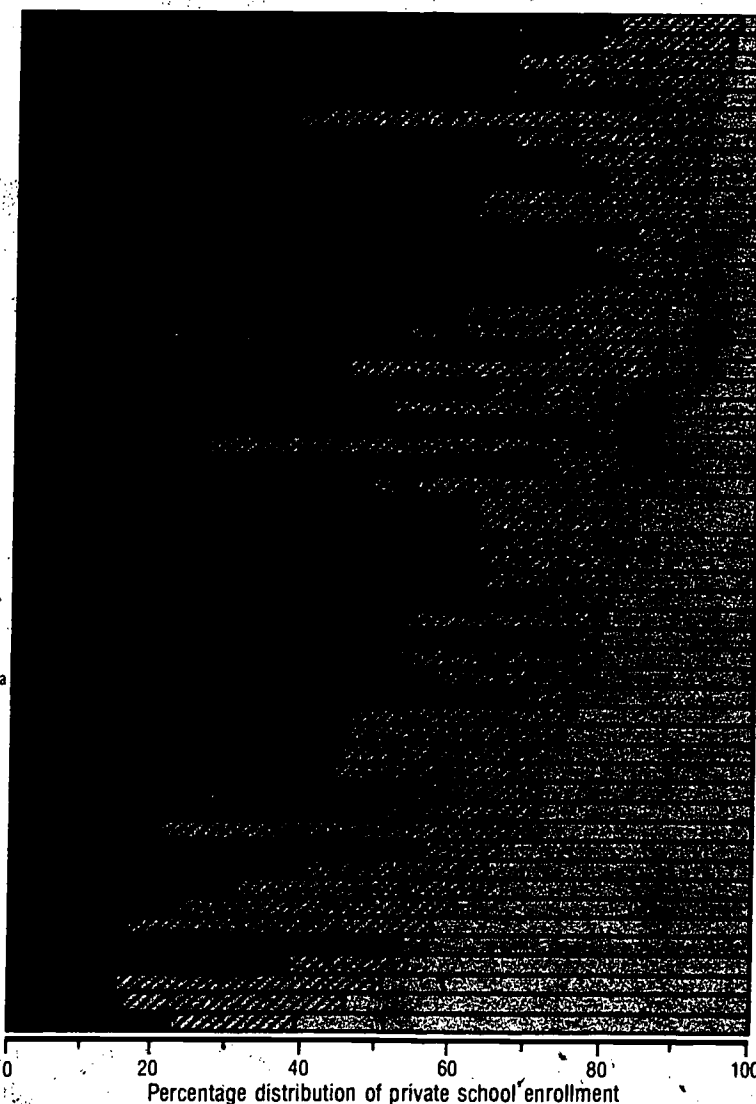
State	Total Enrolled	Total	Not Affiliated	Religiously Affiliated					
				Total	Catholic	Baptist	Lutheran	Christian	Other
	Number			Percentage Distribution					
Total 50 States and D.C.	4,961,755	100.0	16.0	84.0	63.2	4.7	4.4	2.3	9.4
Alabama	62,669	100.0	39.3	60.7	23.5	11.2	2.1	5.1	18.8
Alaska	3,800	100.0	14.9	85.1	27.1	21.8	1.7	19.2	15.2
Arizona	40,261	100.0	27.2	72.8	45.5	3.1	5.1	7.2	11.9
Arkansas	18,423	100.0	28.2	71.8	39.2	7.3	3.4	8	21.1
California	513,709	100.0	20.1	79.9	51.1	5.5	4.7	5.8	12.8
Colorado	35,250	100.0	20.6	79.4	48.6	6.4	7.9	3.1	13.5
Connecticut	88,404	100.0	23.8	76.2	69.9	3	9	4	4.8
Delaware	23,374	100.0	18.6	81.4	63.0	7.3	0	2.4	8.7
District of Columbia	21,203	100.0	21.9	78.1	57.6	7	0	1.0	18.8
Florida	204,988	100.0	24.4	75.6	36.2	15.5	4.6	3.7	15.6
Georgia	82,505	100.0	53.9	46.1	16.1	14.1	5	5.3	10.1
Hawaii	37,147	100.0	35.4	64.6	40.5	6.9	3.6	3.5	10.0
Idaho	5,839	100.0	6.5	93.5	37.5	1.1	10.6	9.0	35.3
Illinois	349,463	100.0	7.4	92.6	79.6	1.3	7.6	8	3.2
Indiana	100,234	100.0	7.4	92.6	63.1	8.6	9.2	2.9	8.8
Iowa	55,227	100.0	2.4	97.6	81.1	1.9	4.8	4	9.4
Kansas	33,889	100.0	10.4	89.6	75.6	9	5.2	3.0	4.9
Kentucky	69,728	100.0	15.8	84.2	72.0	5.7	3	2.5	3.7
Louisiana	158,921	100.0	19.0	81.0	70.5	2.8	1.3	4	6.0
Maine	17,540	100.0	45.6	54.4	38.4	4.9	0	3.4	7.7
Maryland	106,447	100.0	17.7	82.3	64.0	4.5	2.8	1.3	9.6
Massachusetts	138,333	100.0	20.5	79.5	75.7	2	0	3	3.3
Michigan	211,871	100.0	7.5	92.5	61.4	6.3	11.8	9	12.0
Minnesota	88,966	100.0	5.0	95.0	72.4	3.2	12.3	2.1	5.1
Mississippi	50,116	100.0	60.5	39.5	22.6	6.2	0	1.6	9.0
Missouri	126,319	100.0	7.0	93.0	75.4	2.1	9.0	9	5.6
Montana	7,668	100.0	12.1	87.9	61.1	2.6	7.0	2	17.0
Nebraska	38,574	100.0	3.5	96.5	78.2	6	12.8	7	4.1
Nevada	6,599	100.0	14.3	85.7	65.2	4.2	5.0	3.8	7.5
New Hampshire	20,721	100.0	28.4	71.6	54.2	4.0	0	2.7	10.6
New Jersey	229,878	100.0	10.2	89.8	82.6	7	6	0	5.1
New Mexico	18,027	100.0	28.7	71.3	51.1	4.4	1.2	4.1	10.5
New York	579,670	100.0	12.2	87.8	73.5	7	1.9	4	11.3
North Carolina	58,078	100.0	42.4	57.6	16.1	28.2	1.4	3.2	8.9
North Dakota	10,659	100.0	14.7	85.3	77.2	0	5.0	0	3.0
Ohio	268,357	100.0	5.3	94.7	84.9	2.4	2.1	2.4	3.0
Oklahoma	16,335	100.0	13.6	86.4	45.2	1.5	4.0	7.4	28.4
Oregon	27,828	100.0	14.6	85.4	51.6	2.8	2.7	7.2	21.1
Pennsylvania	402,058	100.0	9.9	90.1	78.2	1.7	4	2.0	7.7
Rhode Island	29,875	100.0	8.8	91.2	83.7	2	4	1	6.8
South Carolina	49,619	100.0	49.1	50.9	15.2	19.0	1.0	5.9	9.7
South Dakota	10,898	100.0	16.4	83.6	63.1	7	4.7	4.3	10.8
Tennessee	71,617	100.0	29.0	71.0	21.2	19.0	2.2	3.2	25.4
Texas	148,534	100.0	12.1	87.9	53.7	7.5	5.7	2.1	19.0
Utah	5,555	100.0	33.5	66.5	55.0	0	6.7	0	4.8
Vermont	7,555	100.0	43.2	56.8	54.0	9	0	5	1.4
Virginia	75,069	100.0	35.7	64.3	30.7	14.6	2.4	2.7	13.9
Washington	55,950	100.0	15.9	84.1	48.9	5.4	4.3	5.3	20.2
West Virginia	12,608	100.0	6.7	93.3	67.1	14.8	0	6.9	4.4
Wisconsin	162,361	100.0	3.7	96.3	67.8	1.5	23.1	7	3.1
Wyoming	3,036	100.0	25.0	75.0	45.7	17.7	6.9	0	4.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1980-81 Private School Survey, unpublished tabulations (November 1982).

Private Elementary/Secondary School Enrollment, by Affiliation

Ranked high to low on percent religiously affiliated:

- Iowa
- Nebraska
- Wisconsin
- Minnesota
- Ohio
- Idaho
- West Virginia
- Missouri
- Illinois
- Indiana
- Michigan
- Rhode Island
- Pennsylvania
- New Jersey
- Kansas
- Texas
- Montana
- New York
- Oklahoma
- Nevada
- Oregon
- North Dakota
- Alaska
- Kentucky
- Washington
- National average**
- South Dakota
- Maryland
- Delaware
- Louisiana
- California
- Massachusetts
- Colorado
- District of Columbia
- Connecticut
- Florida
- Wyoming
- Arizona
- Arkansas
- New Hampshire
- New Mexico
- Tennessee
- Utah
- Hawaii
- Virginia
- Alabama
- North Carolina
- Vermont
- Maine
- South Carolina
- Georgia
- Mississippi



- Catholic affiliation
- ▨ All other affiliated
- ▩ Not affiliated

Enrollment in religiously affiliated schools represented 84 percent of all private elementary/secondary school enrollment nationally, ranging from 98 percent in Iowa to 40 percent in Mississippi.

Table 1.4

Public Preprimary Enrollment Compared to First Grade Enrollment, by State: Fall 1971 and 1981

State	Fall 1971			Fall 1981		
	Preprimary ¹	First Grade	Preprimary as Percent of First Grade	Preprimary ¹	First Grade	Preprimary as Percent of First Grade
50 States and D.C.	2,483,000	3,570,000	69.6	2,709,177	2,954,798	91.7
Alabama	—	66,730	—	34,970	61,604	56.8
Alaska	5,461	6,819	80.1	7,307	7,415	98.6
Arizona	26,194	37,510	69.8	34,220	38,315	89.3
Arkansas	1,144	43,436	2.6	28,907	34,758	83.2
California	315,805	339,513	93.0	300,239	298,341	100.6
Colorado	35,376	38,680	91.5	38,821	40,466	95.9
Connecticut	53,141	51,448	103.3	35,995	33,501	107.4
Delaware	9,018	10,463	86.2	5,742	6,516	88.1
District of Columbia	11,501	13,416	85.7	8,850	7,545	117.3
Florida	57,385	111,899	51.3	91,722	110,817	82.8
Georgia	13,457	97,640	13.8	63,127	85,226	74.1
Hawaii	13,382	13,896	96.3	12,242	11,737	104.3
Idaho	—	14,666	—	15,408	17,263	89.3
Illinois	185,130	176,854	104.7	149,775	138,918	107.8
Indiana	77,590	95,901	80.9	68,256	76,703	89.0
Iowa	47,601	46,070	103.3	37,951	36,609	103.7
Kansas	34,111	35,506	96.1	31,016	30,610	101.3
Kentucky	5,733	63,084	9.1	40,916	52,901	77.3
Louisiana	29,607	73,693	40.2	51,773	66,575	77.8
Maine	17,527	19,483	90.0	14,574	15,714	92.7
Maryland	64,282	63,506	101.2	47,945	43,951	109.1
Massachusetts	65,455	95,985	68.2	61,648	64,847	95.1
Michigan	163,248	162,600	100.4	124,609	119,175	104.6
Minnesota	63,151	62,057	101.8	54,192	49,410	109.7
Mississippi	828	47,630	1.7	5,126	42,536	12.0
Missouri	67,009	79,595	84.2	55,236	60,108	91.9
Montana	—	—	—	11,063	12,029	92.0
Nebraska	24,223	23,688	102.3	21,504	21,149	101.7
Nevada	8,754	10,578	82.8	9,887	10,710	92.3
New Hampshire	4,889	14,449	33.8	4,107	13,374	30.7
New Jersey	113,478	113,702	99.8	81,000	75,000	108.0
New Mexico	6,160	23,077	26.7	18,737	20,740	90.4
New York	271,601	272,250	99.8	171,969	186,602	92.2
North Carolina	9,752	97,338	10.0	71,254	81,458	87.5
North Dakota	2,290	10,522	21.8	8,258	9,395	87.9
Ohio	169,756	180,537	94.0	138,712	136,221	101.8
Oklahoma	35,198	46,034	76.5	44,545	43,038	103.5
Oregon	9,098	36,068	25.2	21,833	36,506	59.8
Pennsylvania	159,571	180,003	88.6	119,400	124,900	95.6
Rhode Island	14,037	13,489	104.1	8,593	9,290	92.5
South Carolina	10,638	54,801	19.4	34,362	46,667	73.6
South Dakota	9,452	11,165	84.7	9,708	9,751	99.6
Tennessee	19,072	77,377	24.6	53,979	65,892	81.9
Texas	55,500	236,900	23.4	206,703	248,106	83.3
Utah	21,153	21,756	97.2	35,531	31,669	112.2
Vermont	4,167	8,358	49.9	4,901	7,115	68.9
Virginia	27,411	86,083	31.8	64,460	69,757	92.4
Washington	48,946	58,380	83.8	53,053	54,706	97.0
West Virginia	7,768	34,521	22.5	26,362	30,093	87.6
Wisconsin	79,309	70,455	112.6	60,370	50,666	119.2
Wyoming	4,644	6,230	74.5	8,319	8,403	99.0

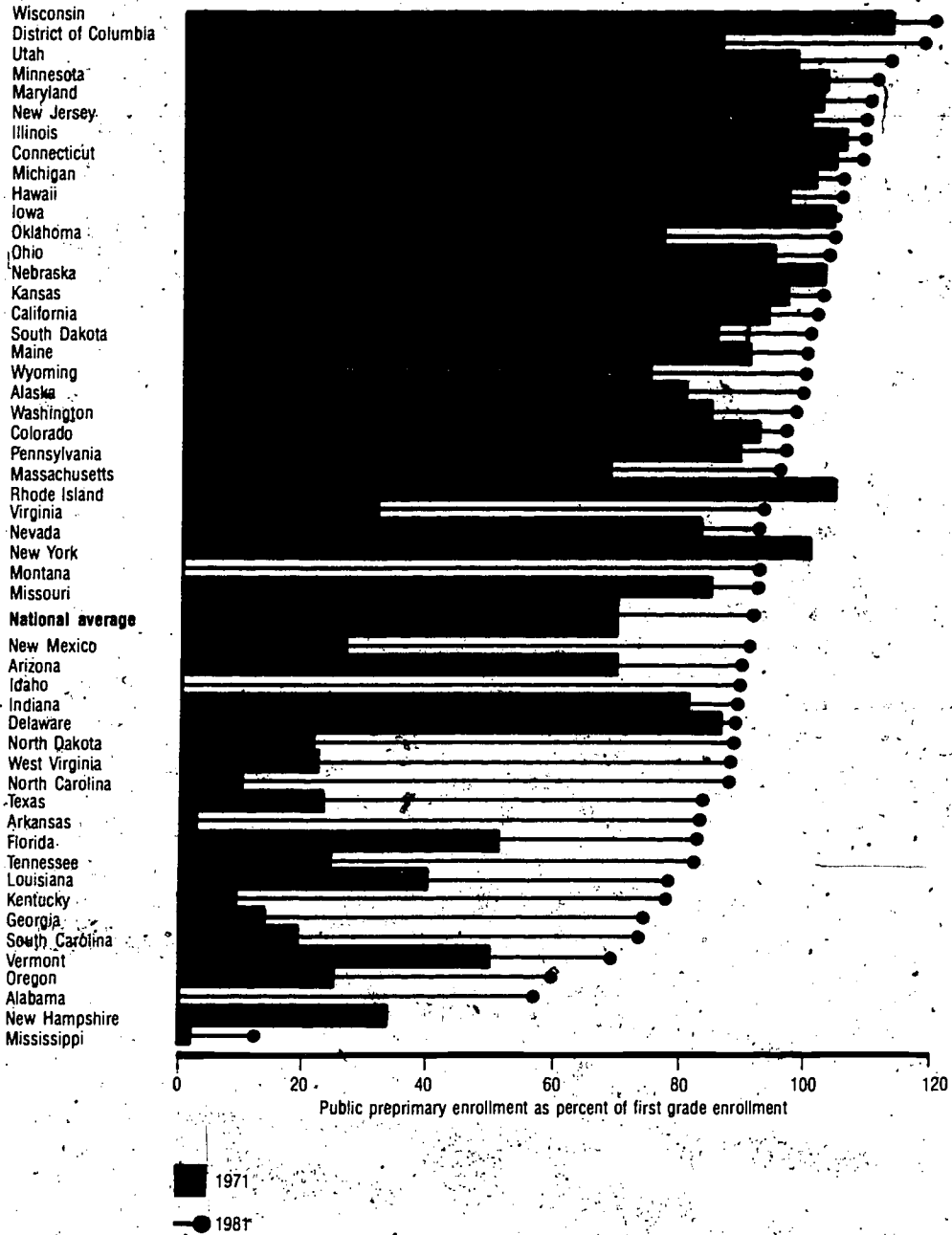
— Not available.

¹ Includes nursery schools and kindergartens operated as part of the regular public school system. Preprimary enrollment can exceed first grade enrollment, as shown in percentages of over 100.0 percent, because it may include nursery school enrollment.

² Includes estimates for nonreporting States.

SOURCE: U.S. Department of Education; National Center for Education Statistics, *Statistics of Public Elementary and Secondary Day Schools: Fall 1971 and Common Core of Data, Part IV—Enrollment: Fall 1981*, unpublished tabulations (November 1982).

Public Preprimary Enrollment Compared to First Grade Enrollment



Preprimary enrollment in the public schools equaled or exceeded first grade enrollment in some States in 1981. Many States with low preprimary enrollments in 1971 greatly expanded their programs over the decade.

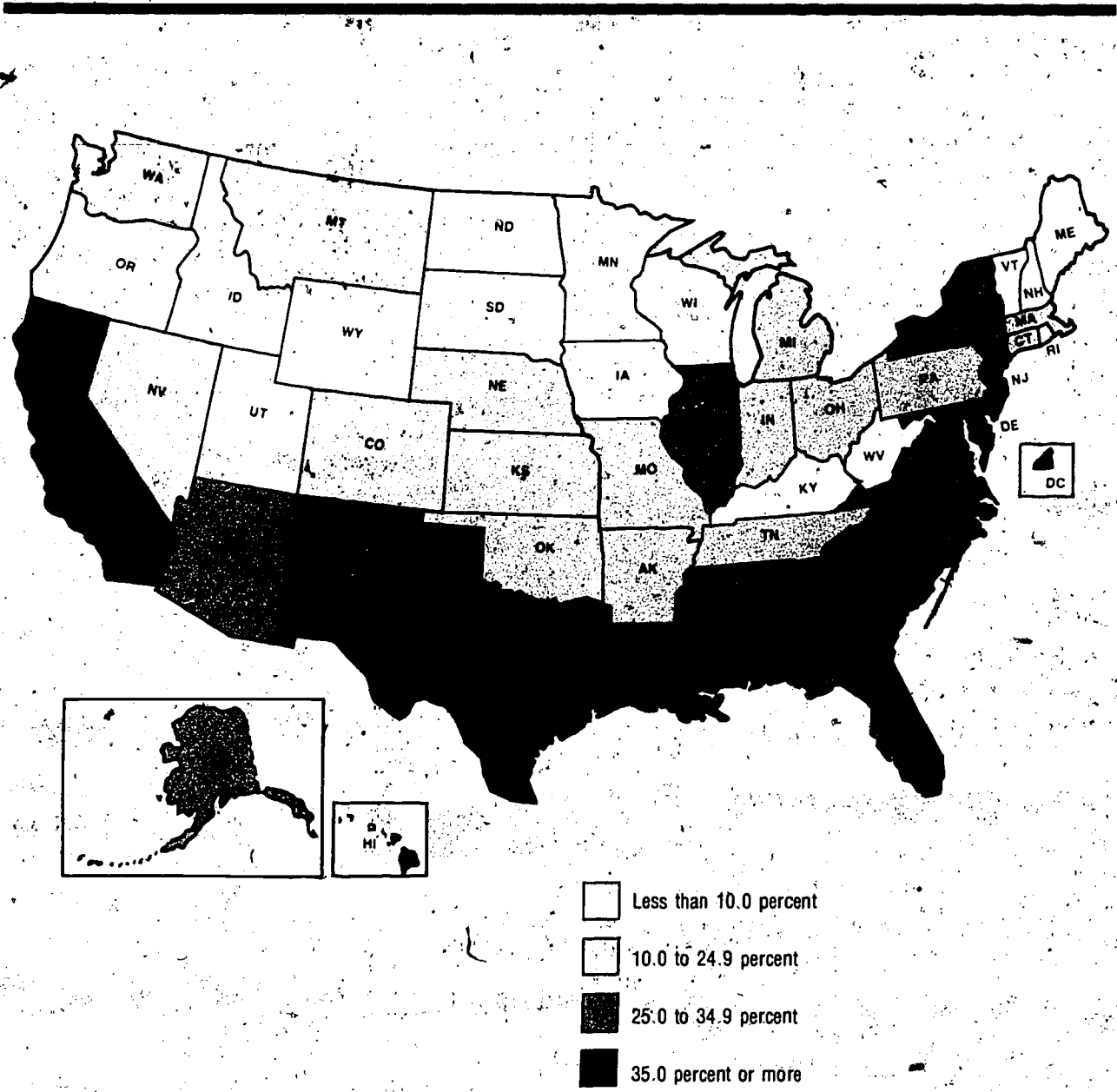
Table 1.5

Racial/Ethnic Distribution of Public Elementary/Secondary School Enrollment, by State: Fall 1980

State	Total	White Non-Hispanic	Minority	Black Non-Hispanic	Hispanic	American Indian/ Alaskan Native	Asian or Pacific Islander
Percentage Distribution							
50 States and D.C.	100.0	73.3	26.7	16.1	8.0	0.8	1.9
Alabama	100.0	66.4	33.6	33.1	1.1	2.2	2.2
Alaska	100.0	71.6	28.4	3.9	1.6	20.6	2.3
Arizona	100.0	66.3	33.7	4.2	24.2	4.1	1.1
Arkansas	100.0	76.5	23.5	22.5	.3	.4	.3
California	100.0	57.1	42.9	10.1	25.3	.8	6.6
Colorado	100.0	77.9	22.1	4.6	15.3	.5	1.7
Connecticut	100.0	83.0	17.0	10.2	5.8	.1	.9
Delaware	100.0	71.2	28.8	25.9	1.8	.1	.9
District of Columbia	100.0	3.6	96.4	93.4	2.0	0	1.0
Florida	100.0	67.8	32.2	23.4	7.9	.1	.8
Georgia	100.0	65.7	34.3	33.5	.3	0	.5
Hawaii	100.0	24.8	75.2	1.4	2.0	.2	71.4
Idaho	100.0	91.8	8.2	5	4.6	2.1	1.0
Illinois	100.0	71.4	28.6	20.9	6.1	.1	1.5
Indiana	100.0	88.0	12.0	9.9	1.5	.1	.5
Iowa	100.0	95.9	4.1	2.2	.8	.2	.9
Kansas	100.0	87.3	12.7	7.8	3.0	.6	1.2
Kentucky	100.0	90.9	9.1	8.7	.1	0	.3
Louisiana	100.0	56.6	43.4	41.5	.8	.4	.8
Maine	100.0	99.1	.9	.3	.1	.2	.3
Maryland	100.0	66.5	33.5	30.6	.9	.2	1.8
Massachusetts	100.0	89.3	10.7	6.2	3.3	.1	1.1
Michigan	100.0	78.7	21.3	17.9	1.8	.8	.8
Minnesota	100.0	94.1	5.9	2.1	.7	1.6	1.5
Mississippi	100.0	48.4	51.6	51.0	.1	.1	.4
Missouri	100.0	85.2	14.8	13.6	.5	.1	.5
Montana	100.0	87.9	12.1	.3	1.2	9.8	.8
Nebraska	100.0	89.5	10.5	5.6	1.9	2.2	.8
Nevada	100.0	81.1	18.9	9.5	5.2	2.0	2.2
New Hampshire	100.0	98.7	1.3	.5	.4	0	.4
New Jersey	100.0	71.6	28.4	18.5	8.0	.1	1.7
New Mexico	100.0	43.0	57.0	2.2	46.5	7.8	.6
New York	100.0	68.0	32.0	17.9	12.0	.2	2.0
North Carolina	100.0	68.1	31.9	29.6	.2	1.6	.4
North Dakota	100.0	96.5	3.5	.5	.5	1.8	.7
Ohio	100.0	85.3	14.7	13.1	1.0	.1	.6
Oklahoma	100.0	79.2	20.8	9.3	1.6	9.1	.8
Oregon	100.0	91.5	8.5	2.1	2.6	1.7	2.2
Pennsylvania	100.0	85.1	14.9	12.4	1.5	.2	.7
Rhode Island	100.0	91.8	8.2	4.7	2.1	.3	1.1
South Carolina	100.0	56.6	43.4	42.8	.2	.1	.4
South Dakota	100.0	92.1	7.9	.2	.2	7.2	.3
Tennessee	100.0	75.5	24.5	24.0	.1	0	.4
Texas	100.0	54.1	45.9	14.4	30.4	.2	1.1
Utah	100.0	92.7	7.3	.5	3.5	1.8	1.5
Vermont	100.0	99.0	1.0	.3	.1	.1	.5
Virginia	100.0	72.5	27.5	25.5	.5	.1	1.4
Washington	100.0	85.9	14.1	3.4	4.0	3.0	3.7
West Virginia	100.0	95.7	4.3	3.9	.1	0	.3
Wisconsin	100.0	90.7	9.3	6.2	1.5	.9	.7
Wyoming	100.0	92.5	7.5	.7	5.3	1.0	.4

SOURCE: U.S. Department of Education, Office for Civil Rights, 1980 Elementary and Secondary Civil Rights Survey, National Summaries, 1982 and State Summaries, 1982, projected data.

Minority Enrollment as Percent of Public Elementary/Secondary School Enrollment, by State



Percent minority enrollment in public elementary/secondary schools was generally greatest in the Southern and Southwestern States and in California. The percent black enrollment was highest in the Southern States while the percent Hispanic enrollment was highest in New Mexico, Texas, California, and Arizona.

Table 1.6

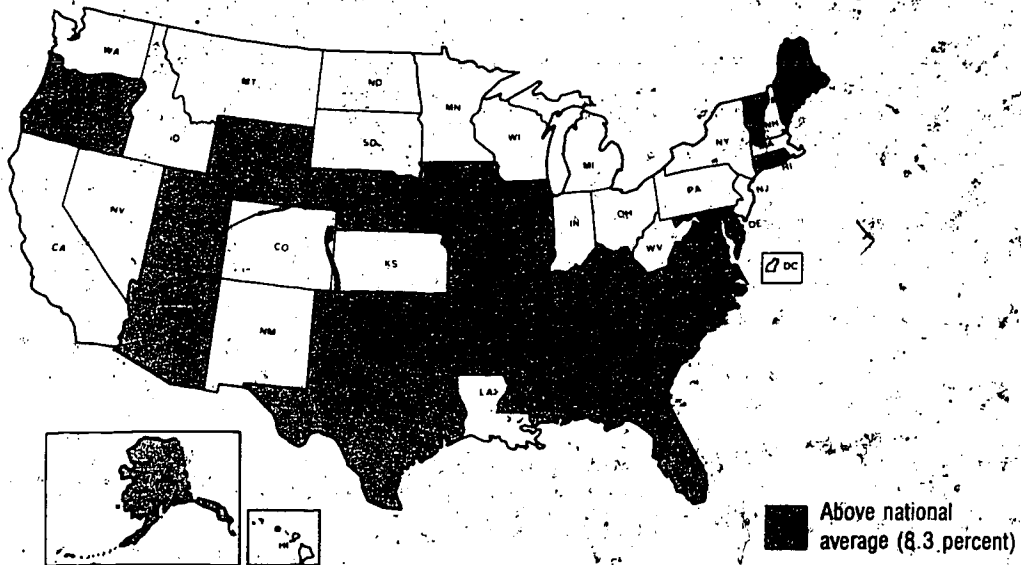
Percent of Public Elementary/Secondary School Enrollment Handicapped and Percent Limited-English Proficient, by State: Fall 1980

State	Handicapped	Limited-English Proficient
Percent of Total Enrollment		
50 States and D.C.	8.3	2.3
Alabama	9.1	.1
Alaska	10.0	5.9
Arizona	9.0	4.8
Arkansas	9.4	.1
California	7.5	8.6
Colorado	7.4	2.2
Connecticut	10.0	2.1
Delaware	13.5	.5
District of Columbia	2.7	2.0
Florida	9.1	2.6
Georgia	9.1	.2
Hawaii	6.1	2.7
Idaho	6.7	.7
Illinois	10.2	2.4
Indiana	7.4	.3
Iowa	8.6	.4
Kansas	7.5	.9
Kentucky	9.9	.1
Louisiana	7.6	.9
Maine	9.1	.1
Maryland	11.0	4.9
Massachusetts	7.8	2.7
Michigan	6.9	1.3
Minnesota	7.4	0
Mississippi	9.1	.1
Missouri	11.0	.1
Montana	7.5	2.3
Nebraska	10.6	.3
Nevada	5.9	1.2
New Hampshire	7.7	.1
New Jersey	8.0	2.8
New Mexico	7.6	10.5
New York	6.0	.5
North Carolina	9.4	.2
North Dakota	7.9	.2
Ohio	8.3	.2
Oklahoma	10.3	.5
Oregon	8.6	1.0
Pennsylvania	7.0	.5
Rhode Island	10.4	2.4
South Carolina	10.4	.1
South Dakota	6.7	.9
Tennessee	10.6	.2
Texas	8.7	8.2
Utah	9.2	1.4
Vermont	11.8	1.9
Virginia	8.5	.4
Washington	7.1	1.7
West Virginia	8.1	.1
Wisconsin	7.6	.8
Wyoming	9.1	1.1

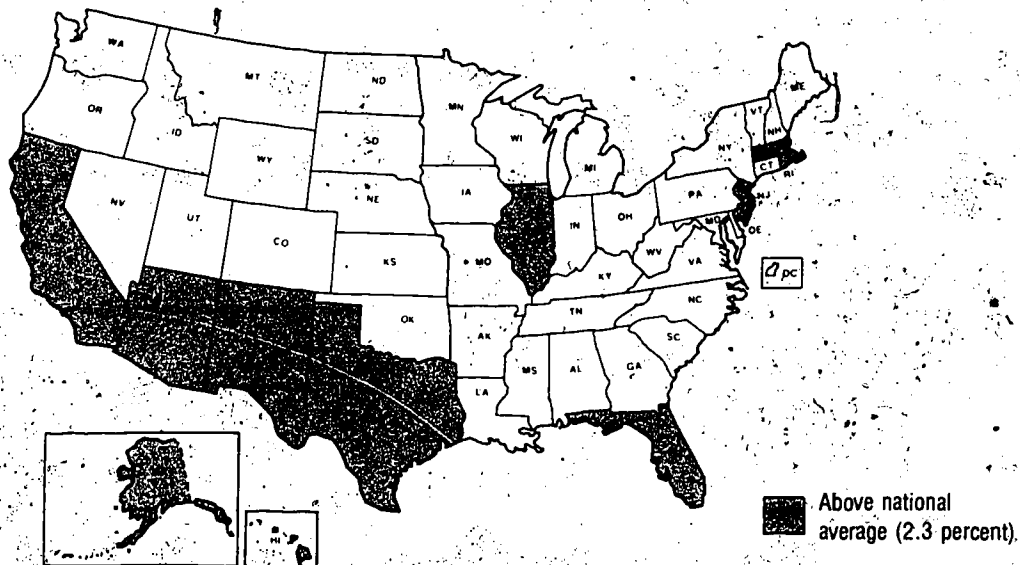
SOURCE: U.S. Department of Education, Office for Civil Rights, 1980 Elementary and Secondary Civil Rights Survey, National Summaries, 1982 and State Summaries, 1982, projected data.

Handicapped and Limited-English Proficient Students as Percent of Public Elementary/Secondary School Enrollment, by State

States With Percent Handicapped Above National Average



States With Percent Limited-English Proficient Above National Average



States with higher-than-average handicapped enrollments were geographically dispersed, while those with proportionally larger limited-English proficient enrollment were, with some exceptions, clustered along the Southern border.

Table 1.7

Number of Public Elementary/Secondary Schools, Fall 1971 and Fall 1981, and Percentage Distribution, by Enrollment Size and by State: Fall 1980

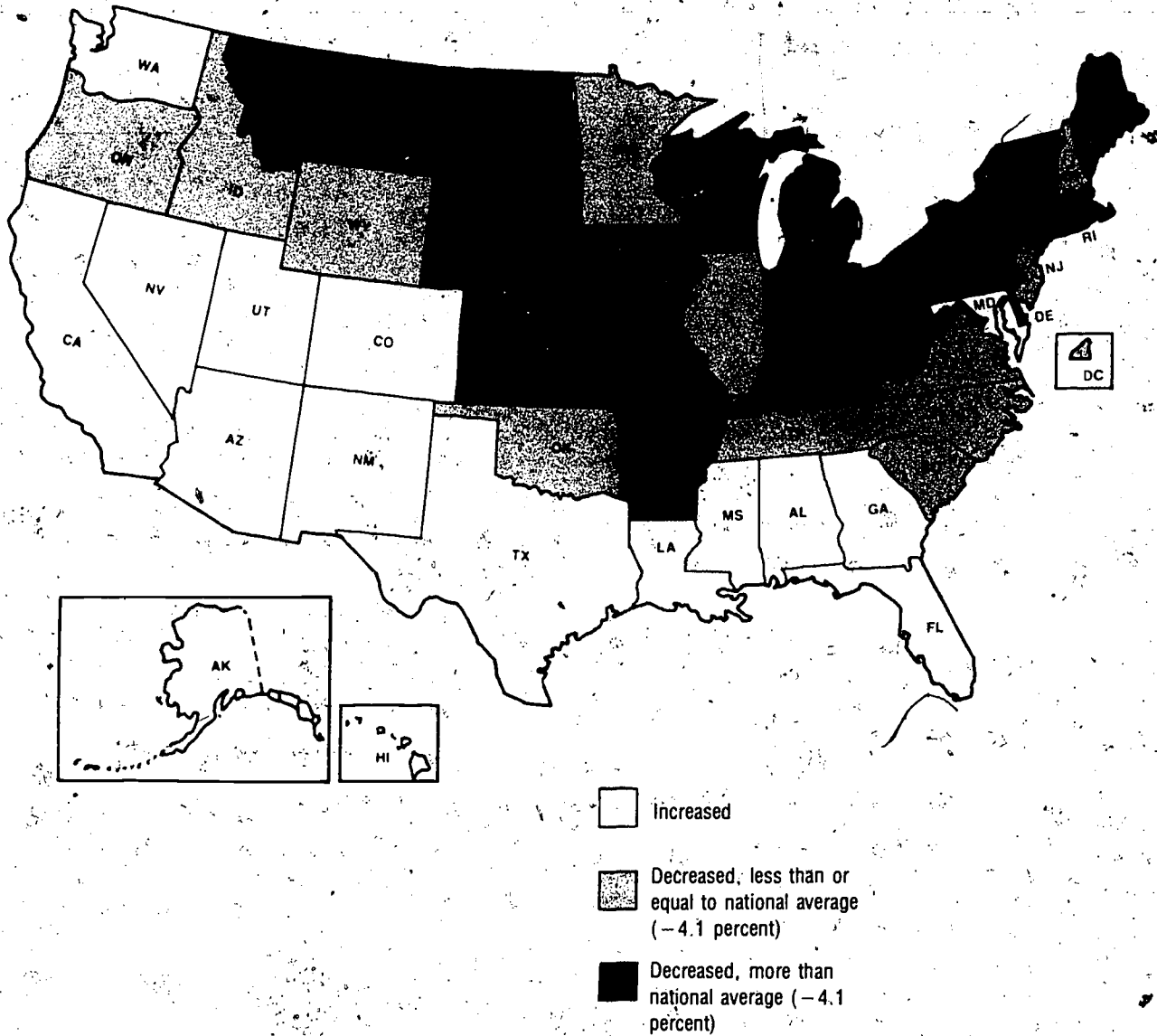
State	Total 1971	Total 1981	Percent Change, 1971 to 1981 ¹	Percentage Distribution in 1980				
				Under 300	300 to 499	500 to 799	800 to 999	1,000 or more
50 States and D.C.	89,372	85,733	-4.1	36.4	28.1	21.9	5.3	8.2
Alabama	1,384	1,465	5.9	25.9	26.4	27.6	8.1	12.0
Alaska	327	466	42.5	75.6	14.7	7.2	.9	1.6
Arizona	757	868	14.7	29.0	22.4	30.3	8.1	10.3
Arkansas	1,251	1,188	-5.0	45.5	30.3	19.0	2.2	3.0
California	6,968	7,440	6.8	29.1	29.0	25.1	5.0	11.8
Colorado	1,181	1,289	9.1	39.4	30.4	19.7	4.7	5.8
Connecticut	1,117	1,030	-7.8	27.0	39.4	19.7	4.2	9.7
Delaware	195	159	-18.5	20.1	32.4	26.8	10.6	10.1
District of Columbia	186	184	-1.1	20.2	32.8	34.4	3.3	9.3
Florida	1,950	2,111	8.3	17.6	18.6	38.3	13.2	18.3
Georgia	1,815	1,823	.4	29.9	23.4	28.5	9.0	9.2
Hawaii	207	230	11.1	15.5	25.7	23.5	13.5	20.9
Idaho	561	551	-1.8	52.5	26.1	15.7	3.0	2.7
Illinois	4,599	4,439	-3.5	39.0	30.4	18.6	3.9	8.1
Indiana	2,198	2,024	-7.9	30.3	31.7	26.4	4.8	6.9
Iowa	2,066	1,751	-15.2	61.6	26.9	8.4	1.0	2.1
Kansas	1,782	1,536	-13.8	67.8	21.6	7.0	1.6	2.0
Kentucky	1,544	1,388	-10.1	30.7	29.8	26.5	6.6	6.3
Louisiana	1,410	1,568	11.2	23.4	32.8	28.2	6.5	9.2
Maine	896	819	-8.6	62.6	21.9	12.0	1.1	2.4
Maryland	1,306	1,322	1.2	20.5	35.1	25.1	6.5	12.8
Massachusetts	2,490	1,919	-22.9	41.1	28.5	17.5	5.2	7.8
Michigan	3,905	3,567	-8.7	28.5	35.2	23.0	4.9	8.4
Minnesota	1,871	1,851	-1.1	41.3	26.9	21.9	3.7	6.3
Mississippi	1,059	1,060	.1	24.4	27.9	30.8	6.6	10.2
Missouri	2,327	2,173	-6.6	47.4	28.5	16.4	3.2	4.6
Montana	(²)	782	-	76.6	17.0	3.9	.9	1.6
Nebraska	2,015	1,677	-16.8	82.5	10.8	4.3	.8	1.5
Nevada	245	284	15.9	35.1	15.2	33.3	5.1	11.2
New Hampshire	468	457	-2.4	53.5	25.7	13.3	2.0	5.5
New Jersey	2,454	2,363	-3.7	33.1	30.4	18.6	6.4	11.4
New Mexico	625	634	1.4	43.9	33.5	13.8	3.6	5.2
New York	4,411	4,074	-7.6	14.6	27.8	32.0	9.7	15.8
North Carolina	2,025	2,023	-.1	17.6	32.6	32.0	9.8	8.1
North Dakota	825	717	-13.1	85.5	9.0	3.3	1.1	1.0
Ohio	4,225	3,925	-7.1	25.4	37.5	24.8	5.4	6.9
Oklahoma	1,937	1,912	-1.3	61.4	22.4	11.1	2.0	3.1
Oregon	1,295	1,289	-.5	48.1	32.8	12.0	2.7	4.4
Pennsylvania	4,379	3,700	-15.5	32.5	27.3	23.5	6.5	10.1
Rhode Island	383	302	-21.1	40.4	31.5	12.6	5.0	10.4
South Carolina	1,181	1,148	-2.8	23.2	30.4	29.3	7.9	9.2
South Dakota	1,021	742	-27.3	82.0	12.6	3.9	.7	.8
Tennessee	1,797	1,733	-3.6	31.8	28.3	26.5	6.2	7.2
Texas	5,240	5,593	6.7	33.2	25.1	25.0	6.9	9.8
Utah	561	603	7.5	29.6	23.0	33.6	5.2	8.5
Vermont	426	384	-9.9	72.7	15.2	7.5	1.8	2.8
Virginia	1,788	1,776	-.7	25.3	27.9	29.1	6.6	11.2
Washington	1,693	1,765	4.3	33.7	34.8	21.4	3.8	6.3
West Virginia	1,375	1,145	-16.7	52.0	28.1	14.7	2.6	2.5
Wisconsin	2,360	2,092	-11.4	46.8	30.1	14.7	3.5	4.9
Wyoming	397	392	-1.3	65.0	21.3	8.9	1.8	2.9

¹ Total includes estimate for Montana, which did not report in 1971.

² Not reported.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Day Schools: Fall 1971, 1973; Statistics of Public Elementary and Secondary School Systems—Schools, Pupils and Staff: Fall 1980, 1982; and Common Core of Data, Part I: Public School Universe, 1981, unpublished tabulations (January 1983).*

Percent Change in Number of Public Elementary/Secondary Schools between 1971 and 1981, by State



With few exceptions, States that registered increases in the number of public elementary/secondary schools between 1971 and 1981 were clustered in the Southwest and the Southeast; decreases occurred in the Northeast and North Central regions.

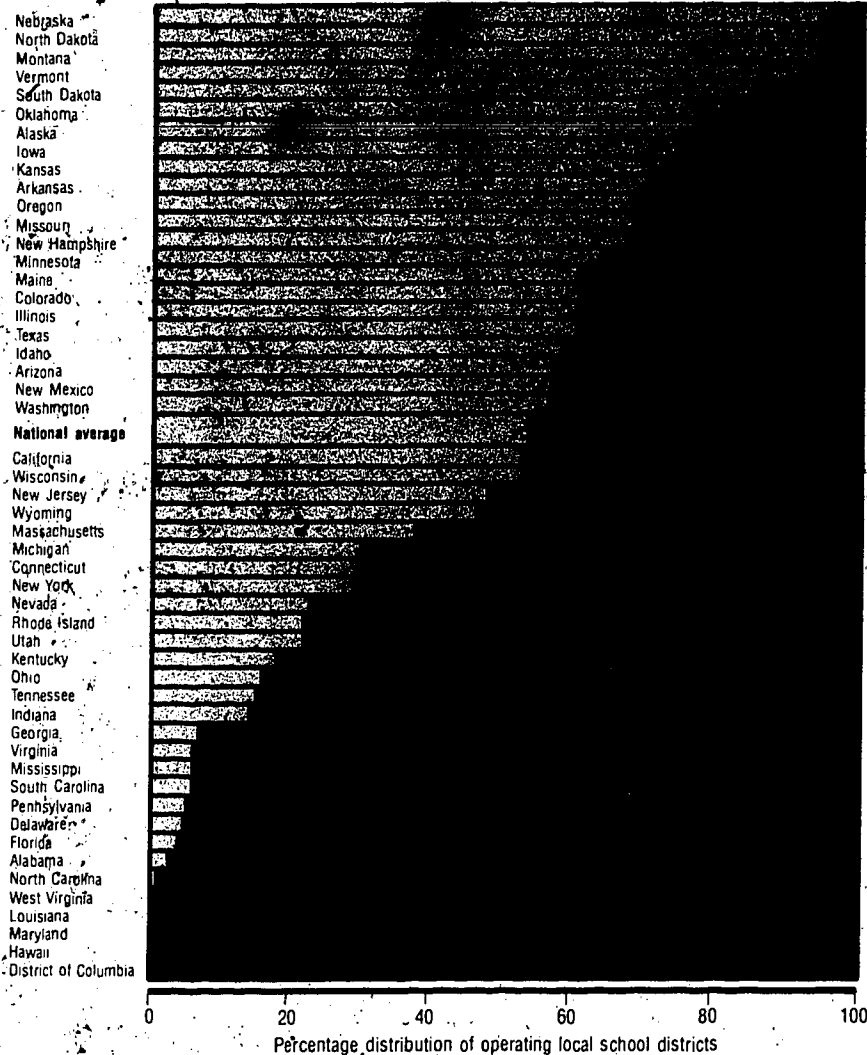
Table 1.8

Number and Enrollment Size of Operating Local School Districts¹, by State: School Year 1971-72 and 1981-82

State	School Year 1971-72				School Year 1981-82			
	Total	Under 1,000	1,000-9,999	10,000 or more	Total	Under 1,000	1,000-9,999	10,000 or more
		Percentage Distribution				Percentage Distribution		
50 States and D.C.	16,768	56.0	39.6	4.4	15,538	54.1	41.9	4.0
Alabama	124	3.2	87.9	8.9	127	3.1	89.8	7.1
Alaska	29	69.0	24.1	6.9	52	76.9	19.2	3.8
Arizona	283	71.0	25.1	3.9	210	57.6	37.6	4.8
Arkansas	384	72.9	26.0	1.0	369	71.5	27.4	1.1
California	1,057	53.6	35.2	11.2	1,041	53.3	37.7	9.0
Colorado	181	64.6	28.2	7.2	181	61.3	30.4	8.3
Connecticut	169	26.0	63.9	10.1	165	30.3	66.1	3.6
Delaware	26	15.4	73.1	11.5	19	5.3	78.9	15.8
District of Columbia	1	0	0	100.0	1	0	0	100.0
Florida	67	4.5	58.2	37.3	67	4.5	56.7	38.8
Georgia	189	8.5	82.5	9.0	187	7.5	84.0	8.6
Hawaii	1	0	0	100.0	1	0	0	100.0
Idaho	115	62.6	34.8	2.6	115	59.1	38.3	2.6
Illinois	1,142	61.4	36.8	1.8	1,010	61.0	37.4	1.6
Indiana	315	17.5	75.6	7.0	304	14.8	79.3	5.9
Iowa	452	66.2	32.3	1.5	441	75.7	22.7	1.6
Kansas	311	70.7	28.0	1.3	306	72.9	25.8	1.3
Kentucky	190	17.4	79.5	3.2	180	18.9	77.8	3.3
Louisiana	66	0	71.2	28.8	66	0	68.2	31.8
Maine	242	63.6	36.0	0	226	61.9	38.1	0
Maryland	24	0	37.5	62.5	24	0	37.5	62.5
Massachusetts	373	39.9	54.7	5.4	346	38.4	58.7	2.9
Michigan	615	34.1	61.0	4.9	573	30.7	65.3	4.0
Minnesota	442	60.6	35.5	3.8	434	64.7	32.9	2.3
Mississippi	155	9.0	88.4	2.6	153	6.5	92.2	1.3
Missouri	629	70.6	26.7	2.7	548	69.2	28.6	2.2
Montana	684	95.3	4.4	0	561	94.8	5.2	0
Nebraska	1,321	96.8	3.0	0	994	96.3	3.4	0
Nevada	17	35.3	52.9	11.8	17	23.5	64.7	11.8
New Hampshire	156	73.1	25.6	1.3	157	68.2	30.6	1.3
New Jersey	578	42.0	54.3	3.6	584	48.5	49.1	2.4
New Mexico	89	52.8	40.4	6.7	89	57.3	38.2	4.5
New York	736	27.9	66.3	5.8	715	29.8	67.3	2.9
North Carolina	152	7	80.3	19.1	143	1.4	77.6	21.0
North Dakota	349	95.1	4.0	0	290	95.2	4.8	0
Ohio	625	15.2	80.0	4.8	615	16.6	80.2	3.3
Oklahoma	653	84.7	14.5	0	619	82.2	16.6	1.1
Oregon	340	72.4	26.5	1.2	310	69.4	29.0	1.6
Pennsylvania	511	4.5	89.6	5.9	500	5.6	92.6	1.8
Rhode Island	40	22.5	65.0	12.5	40	22.5	70.0	7.5
South Carolina	93	4.3	78.5	17.2	92	6.5	73.9	19.6
South Dakota	222	86.0	13.1	0	187	86.6	12.3	1.1
Tennessee	147	15.6	76.2	8.2	146	15.8	75.3	8.9
Texas	1,147	66.4	29.6	4.0	1,074	60.8	33.5	5.7
Utah	40	27.5	55.0	17.5	40	22.5	55.0	22.5
Vermont	250	89.6	10.4	0	247	92.3	7.7	0
Virginia	135	5.2	78.5	16.3	135	6.7	77.0	16.3
Washington	318	62.3	32.7	5.0	300	57.0	36.7	6.3
West Virginia	55	0	80.0	20.0	55	0	78.2	21.8
Wisconsin	449	50.8	46.1	3.1	433	53.3	44.8	1.8
Wyoming	79	70.9	26.6	2.5	49	46.9	49.0	4.1

¹ "Operating school district" refers to a self-contained local public school system having its own decision-making board of control, operating a school or board providing general elementary/secondary education, including vocational/technical education. A nonoperating system does not operate schools, but pays tuition to other operating systems for the education of children residing within its boundaries. SOURCE: U.S. Department of Education, National Center for Education Statistics, Elementary and Secondary General Information Survey IV, Part D—Universe of Operating and Nonoperating Local Public School Systems, 1971-72, unpublished tabulations (November 1982); and Common Core of Data, Part I—Universe of Local Education Agencies, 1981-82, unpublished tabulations (November 1982).

Enrollment Size Distribution of Operating Local School Districts



For the Nation as a whole and in 24 States, school districts of under 1,000 students represented the majority of districts in 1981-82.

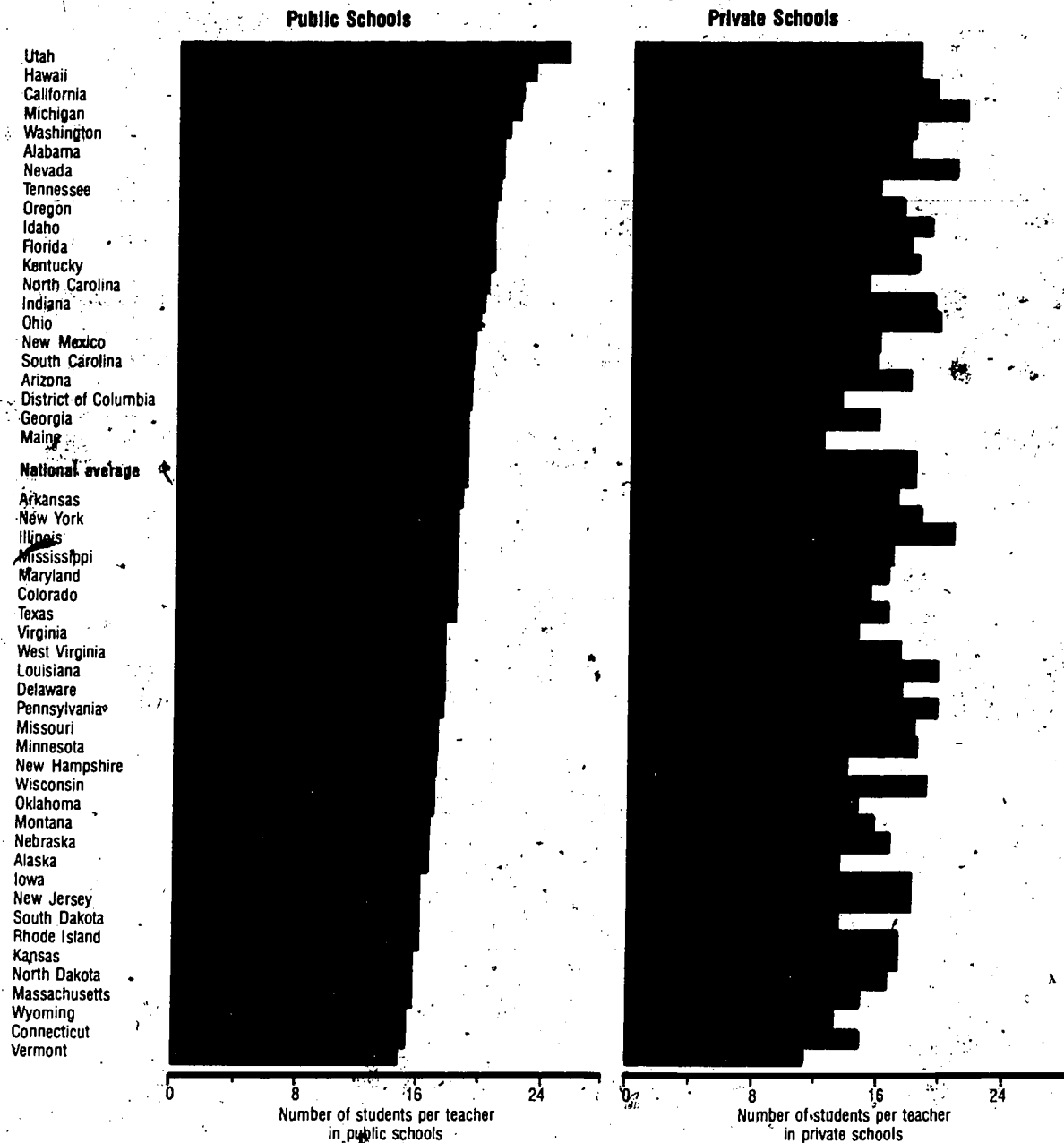
Table 1.9

Student-Teacher Ratios and Teachers per 1,000 Students in Public and Private Elementary/Secondary Schools, by State: Fall 1980

State	Student-Teacher Ratio			Teachers per 1,000 Students		
	Total	Public	Private	Total	Public	Private
50 States and D.C.	18.1	18.9	17.9	55.2	52.9	55.9
Alabama	20.6	21.0	17.3	48.5	47.6	57.8
Alaska	16.4	16.6	13.4	61.0	60.2	74.6
Arizona	21.2	19.2	17.6	47.2	52.1	56.8
Arkansas	18.5	18.6	16.5	54.1	53.8	60.6
California	21.9	22.3	19.1	45.7	44.8	52.4
Colorado	18.1	18.3	15.1	55.2	54.6	66.2
Connecticut	15.3	15.4	15.0	65.4	64.9	66.7
Delaware	17.6	17.7	17.2	56.8	56.5	58.1
District of Columbia	17.7	19.1	13.1	56.5	52.4	76.3
Florida	20.0	20.4	17.4	50.0	49.0	57.5
Georgia	18.6	18.9	15.6	53.8	52.9	64.1
Hawaii	21.9	22.9	18.1	45.7	43.7	55.2
Idaho	20.4	20.5	18.7	49.0	48.8	53.5
Illinois	18.6	18.4	20.4	53.8	54.3	49.0
Indiana	19.8	19.9	19.0	50.5	50.3	52.6
Iowa	16.5	16.3	18.1	60.6	61.3	55.2
Kansas	15.8	15.8	17.0	63.3	63.3	58.8
Kentucky	20.1	20.4	18.1	49.8	49.0	55.2
Louisiana	18.0	17.7	19.4	55.6	56.5	51.5
Maine	18.1	18.9	12.0	55.2	52.9	83.3
Maryland	18.1	18.4	16.3	55.2	54.3	61.3
Massachusetts	15.6	15.7	14.8	64.1	63.7	67.6
Michigan	22.0	22.1	21.1	45.5	45.2	47.4
Minnesota	17.4	17.3	18.2	57.5	57.8	54.9
Mississippi	18.2	18.4	16.5	54.9	54.3	60.6
Missouri	17.4	17.3	17.9	57.5	57.8	55.9
Montana	16.7	16.8	15.6	59.9	59.5	64.1
Nebraska	16.7	16.7	16.6	59.9	59.9	60.2
Nevada	20.9	20.9	20.9	47.8	47.8	47.8
New Hampshire	16.8	17.2	13.8	59.5	58.1	72.5
New Jersey	16.5	16.2	18.0	60.6	61.7	55.6
New Mexico	18.9	19.2	15.5	52.9	52.1	64.5
New York	18.5	18.5	18.3	54.1	54.1	54.6
North Carolina	19.7	20.1	14.8	50.8	49.8	67.6
North Dakota	15.9	15.8	16.5	62.9	63.3	60.6
Ohio	19.5	19.5	19.3	51.3	51.3	51.8
Oklahoma	17.0	17.0	14.5	58.8	58.8	69.0
Oregon	20.3	20.6	17.1	49.3	48.5	58.5
Pennsylvania	17.8	17.5	19.4	56.2	57.1	51.5
Rhode Island	16.3	16.1	17.1	61.3	62.1	58.5
South Carolina	18.9	19.2	15.4	52.9	52.1	64.9
South Dakota	15.9	16.1	13.4	62.9	62.1	74.6
Tennessee	20.2	20.7	15.5	49.5	48.3	64.5
Texas	18.1	18.2	16.1	55.2	54.9	62.1
Utah	24.9	25.1	18.0	40.2	39.8	55.6
Vermont	14.5	14.8	11.3	69.0	67.6	88.5
Virginia	17.4	17.7	14.4	57.5	56.5	69.4
Washington	21.0	21.3	17.7	47.6	46.9	56.5
West Virginia	17.7	17.7	17.0	56.5	56.5	58.8
Wisconsin	17.4	17.1	18.8	57.5	58.5	53.2
Wyoming	15.4	15.5	13.1	64.9	64.5	76.3

Source: U.S. Department of Education, National Center for Education Statistics, *A Comparison of Selected Characteristics of Private and Public Schools, 1982*, and unpublished tabulations (January 1983).

Student-Teacher Ratios in Public and Private Elementary/Secondary Schools



Utah, with the highest student-teacher ratio of 25 students per teacher in its public schools, had 10 more students per teacher than Vermont with the lowest ratio.

Table 1.10

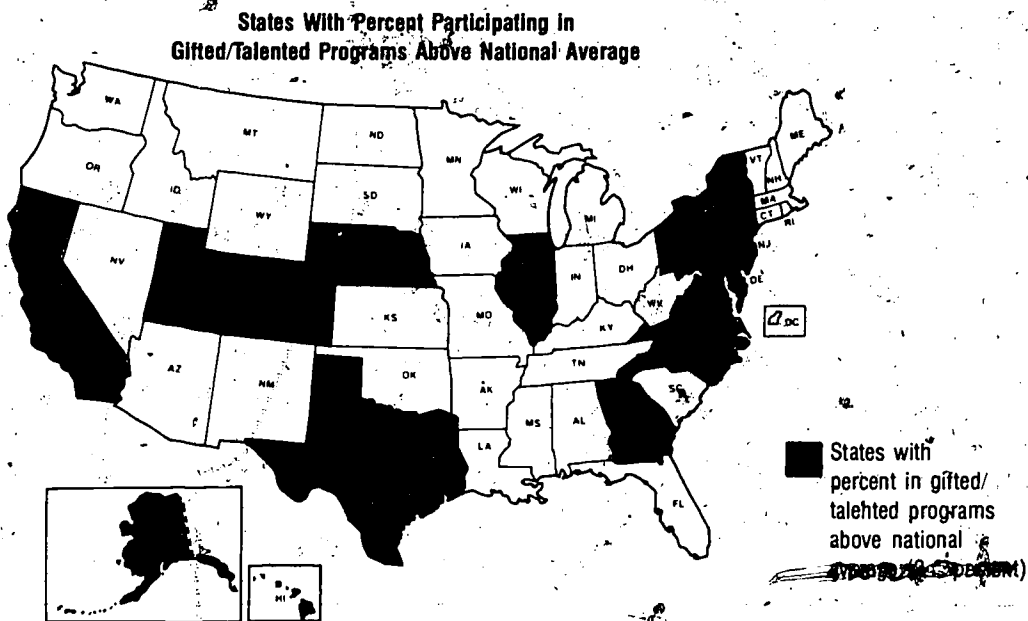
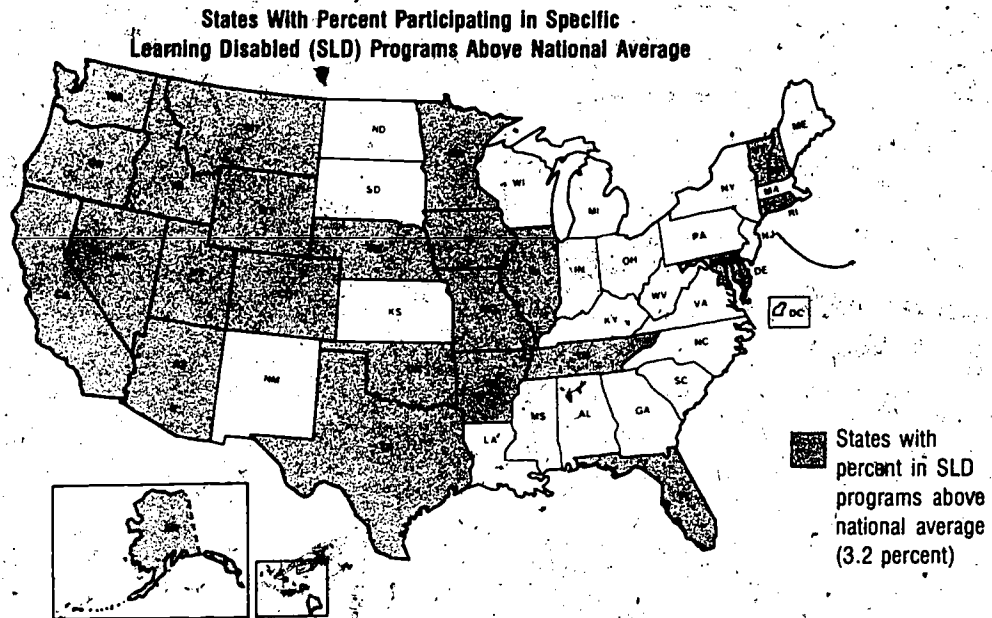
Participation in Programs for Exceptional Children in Public Elementary/Secondary Schools, by Type of Program and State: Fall 1980

State	Educable Mentally Retarded	Trainable Mentally Retarded	Speech Impaired	Seriously Emotionally Disturbed	Specific Learning Disabled	Gifted/Talented
Percent of Total Enrollment						
50 States and D.C.	1.4	0.2	2.3	0.5	3.2	2.8
Alabama	4.0	.4	1.8	.3	2.2	1.2
Alaska	.8	.1	2.6	.2	5.6	3.8
Arizona	.9	.3	2.3	.8	4.5	2.6
Arkansas	2.9	.3	2.3	.1	3.3	1.0
California	.4	.2	2.1	.2	3.4	4.0
Colorado	.8	.1	1.6	.7	3.6	3.1
Connecticut	.8	.3	2.4	.9	4.9	1.9
Delaware	1.6	.5	2.2	2.4	6.2	2.8
District of Columbia	.2	.7	.3	.2	.9	1.8
Florida	1.2	.3	2.7	.8	3.3	1.8
Georgia	2.1	.4	2.4	1.0	2.9	3.4
Hawaii	.7	.3	.6	.2	4.0	3.4
Idaho	.8	.2	1.8	.1	3.5	1.4
Illinois	1.6	.2	3.1	.6	4.1	3.4
Indiana	1.8	.3	2.9	.2	1.7	1.4
Iowa	1.5	.2	1.3	.4	4.5	1.0
Kansas	1.1	.2	2.6	.3	2.9	1.9
Kentucky	2.7	.4	4.0	.2	2.3	1.8
Louisiana	1.7	.4	2.2	.4	2.5	.9
Maine	1.8	.1	2.2	.9	3.1	.5
Maryland	1.2	.4	2.7	.2	5.7	3.7
Massachusetts	.5	.1	.7	.1	1.5	1.2
Michigan	1.1	.2	1.8	.8	2.5	1.2
Minnesota	1.0	.4	1.9	.3	3.3	2.0
Mississippi	3.2	.4	2.9	.1	2.2	2.4
Missouri	2.2	.1	4.1	.5	3.5	1.1
Montana	.9	.2	2.3	.2	3.5	1.1
Nebraska	1.7	.4	3.2	.5	4.0	5.8
Nevada	.5	.2	1.1	.2	3.4	2.2
New Hampshire	.8	.1	1.4	.3	4.3	1.0
New Jersey	.7	.2	2.9	.6	3.1	4.2
New Mexico	1.0	.4	1.5	.2	2.1	1.5
New York	.8	.2	1.2	.8	1.6	3.8
North Carolina	2.9	.4	2.2	.2	3.2	5.0
North Dakota	1.2	.3	2.8	.2	2.7	.7
Ohio	2.4	(¹)	2.5	.2	2.8	1.5
Oklahoma	1.8	.4	3.1	.1	4.3	1.6
Oregon	.6	.2	2.4	.4	4.3	2.0
Pennsylvania	1.6	.2	2.2	.4	2.1	3.9
Rhode Island	.7	.2	2.3	.4	5.7	.9
South Carolina	3.2	.4	3.0	.6	2.8	1.9
South Dakota	.9	.2	2.9	.1	2.3	.6
Tennessee	2.2	.4	3.1	.2	4.0	.8
Texas	.7	.2	2.2	.4	4.5	2.3
Utah	.7	.1	1.6	.3	3.8	3.2
Vermont	1.2	.4	3.3	3.1	4.4	1.6
Virginia	1.4	.3	2.8	.3	3.0	3.8
Washington	1.0	.3	1.2	.6	3.3	1.8
West Virginia	2.3	.3	2.2	.1	2.6	1.4
Wisconsin	1.3	.2	2.1	.8	2.9	1.7
Wyoming	.9	.2	2.2	.5	4.9	.7

¹ Less than 0.05 percent.

NOTE: Students participating in special education programs, the first five categories shown in the table, were categorized by the program in which they spent the most time and were represented by unduplicated percents. These students could be duplicated in the gifted/talented program, for example, students could participate in the speech impaired program and also the gifted/talented program and be counted in both categories. Data exclude enrollments in school districts of under 300 students. SOURCE: U.S. Department of Education, Office for Civil Rights, 1980 Elementary and Secondary Civil Rights Survey, *National Summaries, 1982 and State Summaries, 1982*, projected data.

Public Elementary/Secondary School Students Participating in Programs for Exceptional Children



For the Nation, 3 percent of students in public elementary/secondary schools participated in programs for the specific learning disabled, with somewhat higher participation generally reported west of the Mississippi. Nationally, slightly under 3 percent participated in gifted and talented programs, with Nebraska and North Carolina reporting participation of at least 5 percent.

Table 1.11

Years of Coursework Completed in Selected Courses by High School Seniors, by Region: 1980

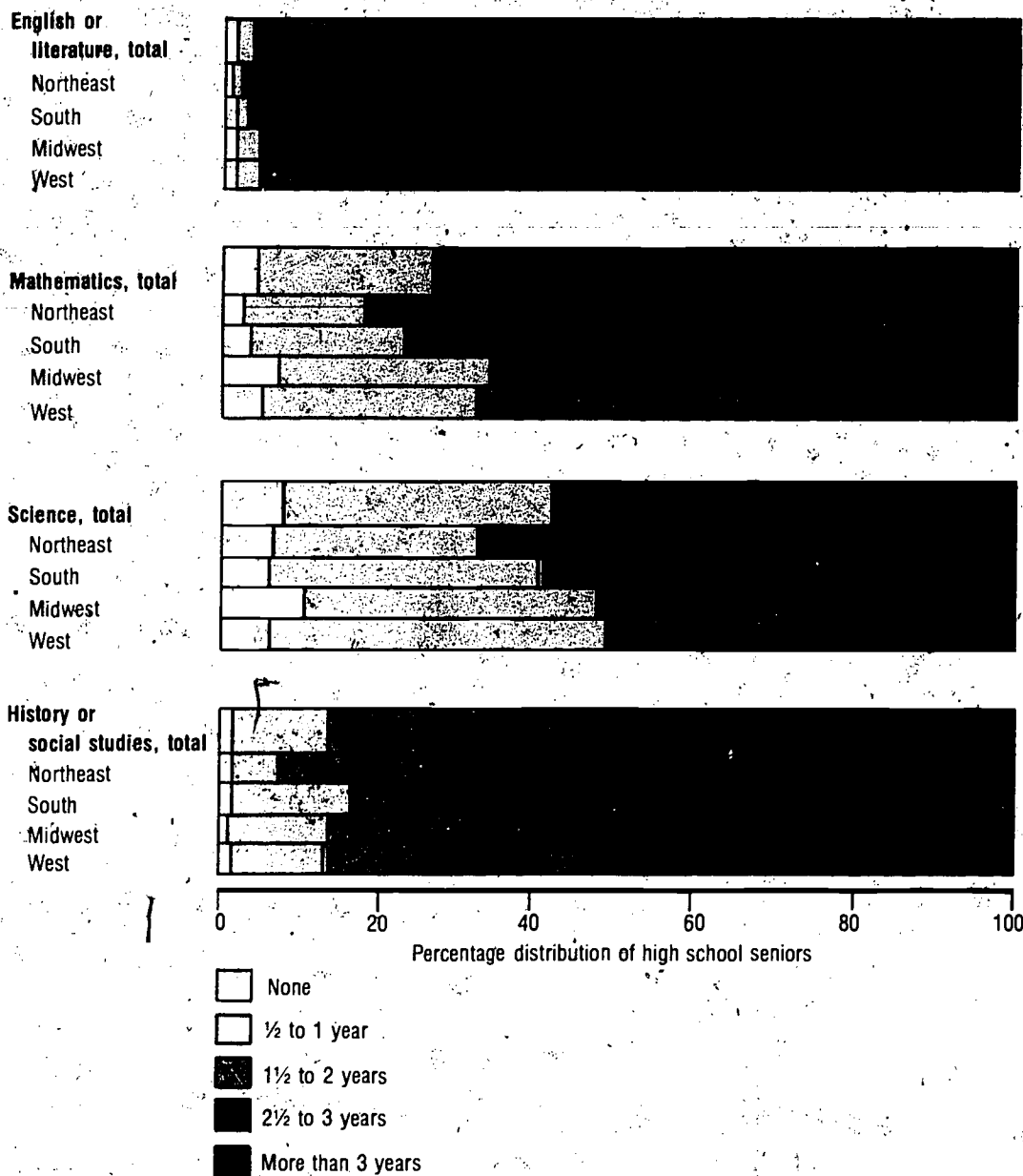
Course and Region ¹	Years of Coursework Completed from the 10th Grade						Sample Size
	Total	None	½ to 1 Year	1½ to 2 Years	2½ to 3 Years	More Than 3 Years	
Percentage Distribution of Seniors							
English or literature, total	100.0	0.5	2.1	10.7	60.7	26.0	27,864
Northeast	100.0	.4	1.0	2.8	67.5	28.3	5,617
South	100.0	.4	1.5	7.3	63.6	27.1	9,165
Midwest	100.0	.5	3.0	17.6	54.1	24.7	8,006
West	100.0	.6	3.1	15.7	57.3	23.2	5,076
Mathematics, total	100.0	4.7	23.5	33.5	29.8	8.5	27,928
Northeast	100.0	3.0	15.8	28.5	39.7	13.0	5,622
South	100.0	3.8	21.9	37.3	29.6	7.5	9,192
Midwest	100.0	6.9	28.0	32.0	25.3	7.8	8,026
West	100.0	4.8	28.9	36.0	24.7	5.7	5,088
Science, total	100.0	8.0	35.0	31.6	19.3	6.1	27,482
Northeast	100.0	7.0	25.0	29.8	29.3	8.8	5,532
South	100.0	6.8	36.0	35.4	16.9	4.9	9,027
Midwest	100.0	11.2	37.1	28.2	17.0	6.4	7,896
West	100.0	6.3	42.5	32.6	14.5	4.0	5,027
History or social studies, total	100.0	.8	12.2	39.2	38.1	9.7	27,724
Northeast	100.0	.9	6.9	35.3	45.0	11.9	5,578
South	100.0	.8	16.4	42.1	33.0	7.6	9,141
Midwest	100.0	.7	12.7	37.8	38.6	10.3	7,957
West	100.0	1.0	11.0	41.4	37.2	9.3	5,048

¹ The regions correspond to Bureau of the Census definitions. See the Definitions of Selected Terms in the Appendix.

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations (September 1982).

Years of Coursework Completed in Selected Courses by High School Seniors, by Region



Among the four regions, the Northeast showed a higher percentage of seniors who took at least 2 1/2 years of coursework from the 10th grade onward in English, mathematics, science, and history.

Table 1,12

Curricular Programs¹ Taken by High School Seniors, by Region: Spring 1980

Region ²	Total	Academic	General	Vocational	Sample Size
		Percentage Distribution of Seniors			
Total.....	100.0	38.0	37.2	24.8	27,784
Northeast.....	100.0	51.4	23.7	24.9	5,587
South.....	100.0	32.8	39.4	27.8	9,142
Midwest.....	100.0	35.3	40.4	24.3	8,003
West.....	100.0	35.5	45.4	20.1	5,052

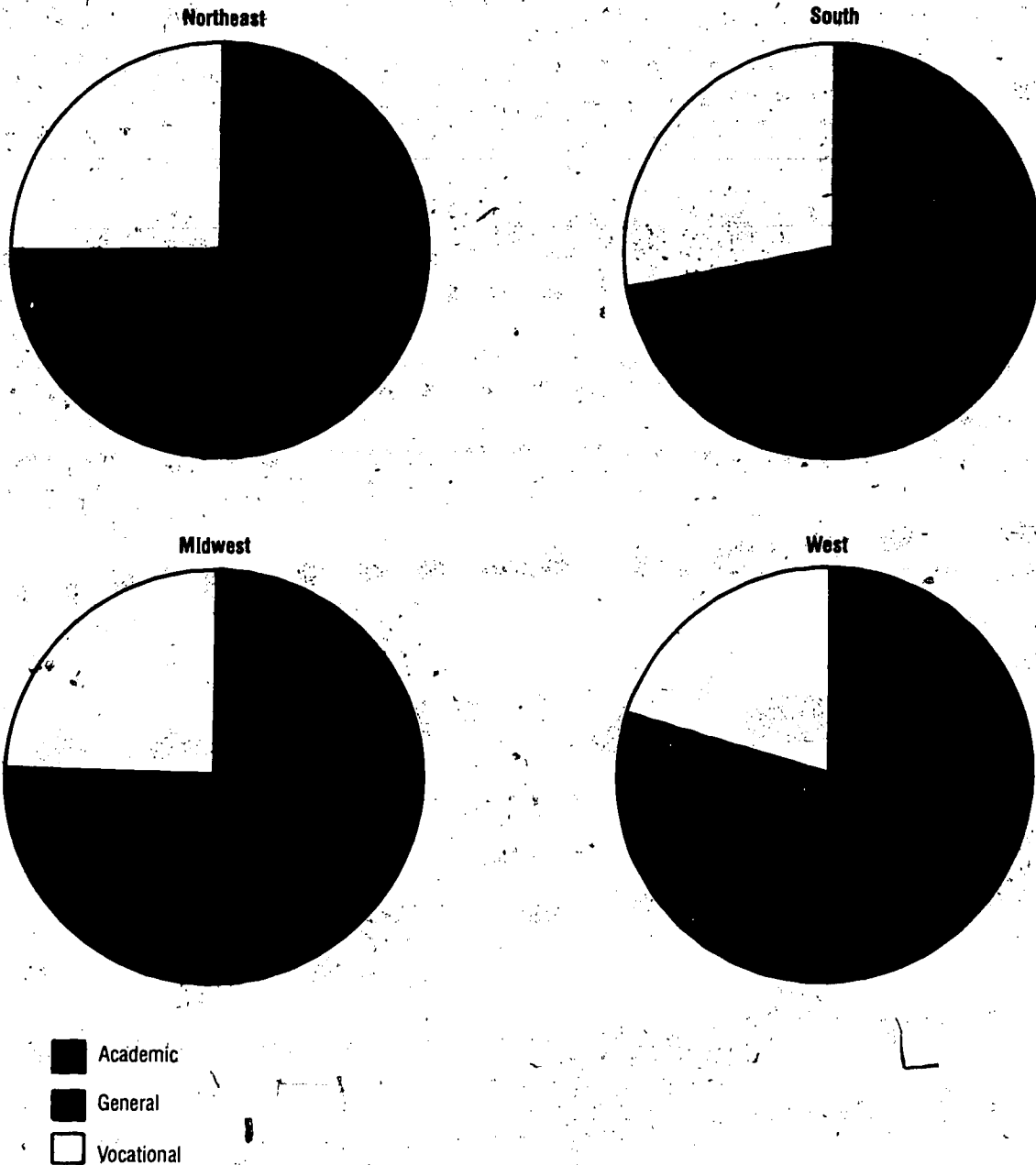
¹ Curricular programs can be generally defined as follows: academic—those preparing students for college; vocational—those preparing students for employment immediately following high school graduation; general—those with students considering themselves to be in neither academic nor vocational programs.

² The regions correspond to Bureau of the Census definitions. See the Definitions of Selected Terms in the Appendix.

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations (September 1982).

Curricular Programs Taken by High School Seniors



More than half of high school seniors in the Northeast were enrolled in academic programs compared with approximately 33 percent in the South, 35 percent in the Midwest, and 36 percent in the West.

Table 1.13

Special Programs Taken by High School Seniors, by Region¹: Spring 1980

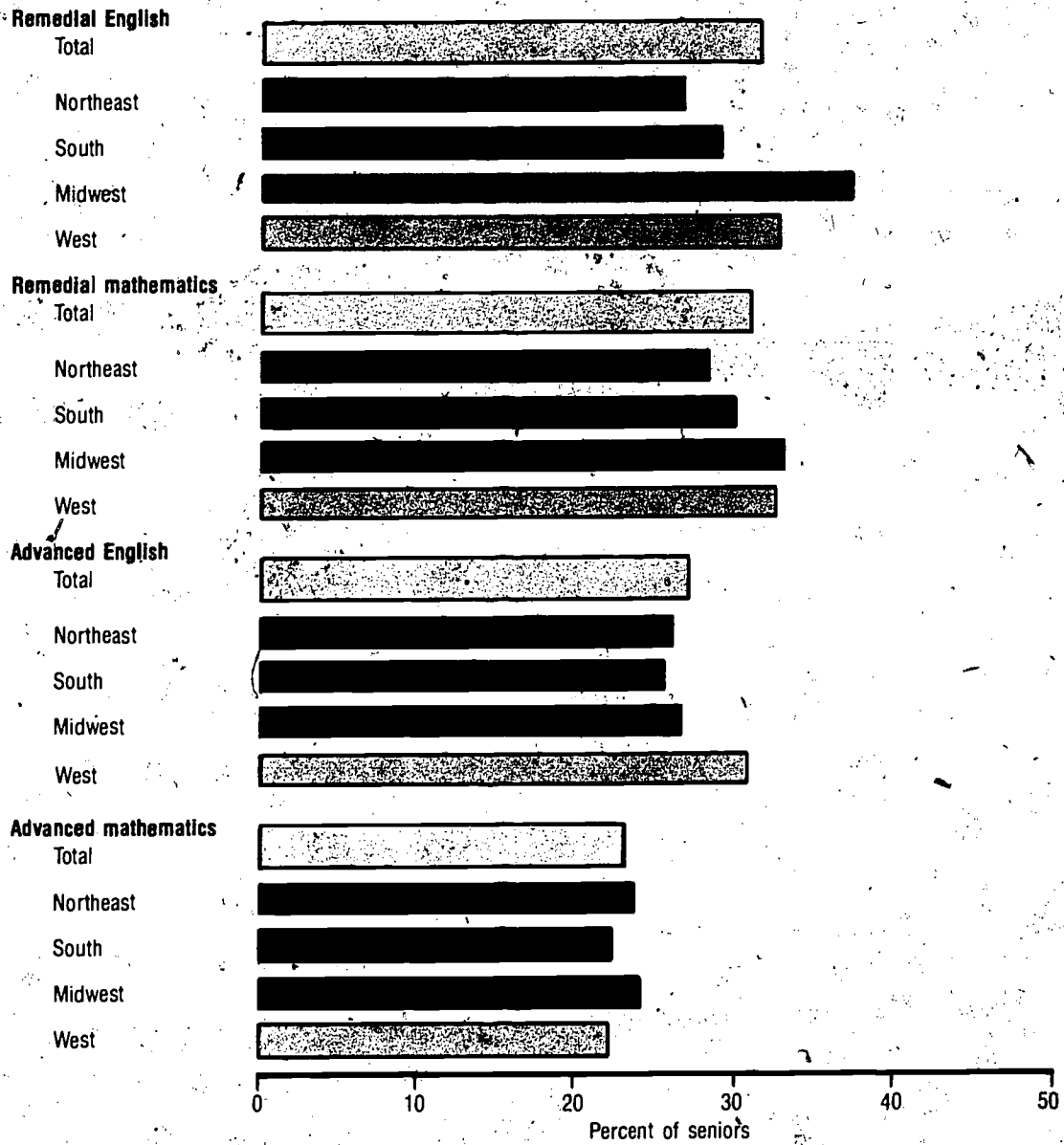
Program	Total	Northeast	South	Midwest	West
		Percent of Seniors			
Remedial English (sometimes called basic or essential).....	31.2	26.0	29.0	36.7	32.9
Remedial mathematics (sometimes called basic or essential).....	30.6	27.3	30.1	32.6	32.2
Advanced or honors program in English.....	26.6	25.9	25.4	26.3	30.1
Advanced or honors program in mathematics.....	22.9	24.2	21.9	23.8	21.6
Bilingual or bicultural program.....	13.0	16.0	9.7	12.1	16.3
Family life or sex education.....	48.3	53.2	38.4	50.9	54.8
Alcohol or drug abuse education.....	38.8	46.6	30.2	37.7	45.3
Special program for the educationally handicapped.....	4.0	3.2	4.1	4.0	4.9
Special program for the physically handicapped.....	3.7	2.9	3.6	3.6	4.8
Sample size.....	27,394	5,503	8,978	7,905	5,008

¹ The regions correspond to Bureau of the Census definitions. See the Definitions of Selected Terms in the Appendix.

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations (September 1982).

Remedial and Advanced Programs Taken by High School Seniors



Nationally, about 31 percent of high school seniors had taken remedial programs in English or mathematics, while 27 percent had taken advanced English and 23 percent had taken advanced mathematics. These proportions differed by, at most, 10 percentage points among the regions.

Table 1.14

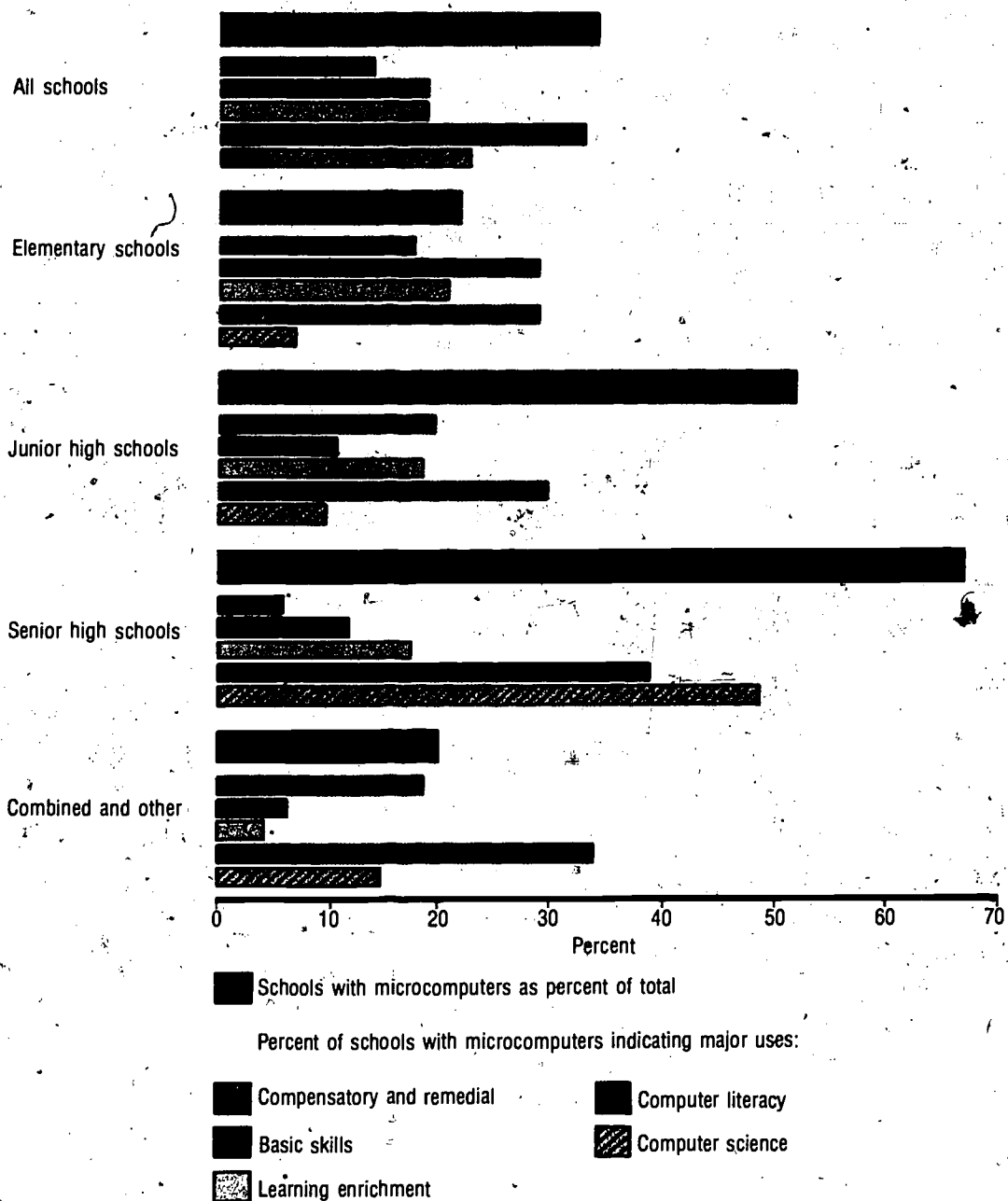
Number of Public Elementary/Secondary Schools With Computers Available for Instruction and Major Uses of Computers, by Grade Level: School Year 1981-82

Item	All Schools	Elementary Schools	Junior High Schools	Senior High Schools	Combined and Other
Total number of schools	81,970	50,800	11,184	14,113	5,874
Schools with computers:					
Number	29,027	11,364	5,822	10,445	1,396
Percent of total	35	22	52	74	24
Schools with microcomputers:					
Number	27,501	11,050	5,774	9,504	1,173
Percent of total	34	22	52	67	20
Percent indicating as major uses:					
Compensatory and remedial	14	18	20	6	19
Basic skills	19	29	11	12	6
Learning enrichment	19	21	19	18	4
Computer literacy	33	29	30	39	34
Computer science	23	7	10	49	15
Schools with terminals:					
Number	5,898	958	978	3,620	343
Percent of total	7	2	9	26	6
Percent indicating as major uses:					
Compensatory and remedial	12	23	28	6	0
Basic skills	13	20	10	13	0
Learning enrichment	24	28	23	21	50
Computer literacy	22	0	23	28	15
Computer science	34	0	14	47	45

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Instructional Use of Computers in Public Schools," early release, 1982.

Chart 1.14

Percent of Public Schools With Microcomputers, by Grade Level and Major Use of Microcomputers



Two-thirds of senior high schools had microcomputers available for instruction, using them most frequently to teach computer science.

Table 1.15

Revenue Receipts of Public Elementary/Secondary Schools, by Source and by State: School Year 1979-80

State	Total	Federal	State	Local and Other ¹	Total	Federal	State	Local and Other ¹
Amount, in Millions of Dollars				Percentage Distribution				
50 States and D.C.	\$96,881	\$9,504	\$45,349	\$42,029	100.0	9.8	46.8	43.4
Alabama	1,210	147	772	291	100.0	12.2	63.8	24.1
Alaska	417	39	300	77	100.0	9.3	72.1	18.6
Arizona	1,213	148	468	597	100.0	12.2	38.5	49.2
Arkansas	693	115	338	240	100.0	16.6	48.8	34.6
California	10,314	1,099	6,839	2,375	100.0	10.7	66.3	23.0
Colorado	1,498	97	609	793	100.0	6.5	40.6	52.9
Connecticut	1,217	86	327	805	100.0	7.0	26.8	66.1
Delaware	296	37	191	68	100.0	12.5	64.5	22.9
District of Columbia	311	68	(²)	242	100.0	22.0	0.0	78.0
Florida	3,265	368	1,836	1,061	100.0	11.3	56.2	32.5
Georgia	1,930	272	1,043	615	100.0	14.1	54.0	31.9
Hawaii	365	56	309	(²)	100.0	15.3	84.7	0.0
Idaho	360	34	208	118	100.0	9.6	57.8	32.6
Illinois	4,614	385	1,756	2,473	100.0	8.3	38.1	53.6
Indiana	1,934	161	1,025	748	100.0	8.3	53.0	38.7
Iowa	1,304	83	509	712	100.0	6.4	39.0	54.6
Kansas	1,043	72	445	527	100.0	6.9	42.6	50.5
Kentucky	1,092	175	701	217	100.0	16.0	64.2	19.8
Louisiana	1,525	223	835	467	100.0	14.6	54.8	30.6
Maine	408	41	183	185	100.0	9.9	44.9	45.2
Maryland	1,991	169	770	1,052	100.0	8.5	38.7	52.8
Massachusetts	3,246	210	1,094	1,942	100.0	6.5	33.7	59.8
Michigan	4,880	349	1,930	2,601	100.0	7.2	39.6	53.3
Minnesota	2,113	124	1,211	778	100.0	5.9	57.3	36.8
Mississippi	729	183	408	138	100.0	25.1	56.0	18.9
Missouri	1,771	188	644	939	100.0	10.6	36.4	53.0
Montana	401	38	193	171	100.0	9.4	48.1	42.6
Nebraska	647	49	108	490	100.0	7.6	16.7	75.7
Nevada	302	20	155	126	100.0	6.7	51.5	41.9
New Hampshire	326	22	27	278	100.0	6.6	8.2	85.1
New Jersey	4,119	271	1,491	2,357	100.0	6.6	36.2	57.2
New Mexico	621	103	395	124	100.0	16.6	63.6	19.9
New York	9,479	777	3,605	5,097	100.0	8.2	38.0	53.8
North Carolina	2,013	278	1,218	517	100.0	13.8	60.5	25.7
North Dakota	270	30	119	121	100.0	11.2	44.1	44.7
D Ohio	4,345	334	1,990	2,020	100.0	7.7	45.8	46.5
Oklahoma	1,246	175	694	377	100.0	14.1	55.7	30.3
Oregon	1,227	118	412	696	100.0	9.6	33.6	56.8
Pennsylvania	5,153	511	2,116	2,526	100.0	9.9	41.1	49.0
Rhode Island	365	38	119	208	100.0	10.3	32.7	57.0
South Carolina	987	176	444	366	100.0	17.8	45.0	37.1
South Dakota	274	42	63	169	100.0	15.4	23.0	61.5
Tennessee	1,274	196	537	540	100.0	15.4	42.2	42.4
Texas	5,862	680	2,878	2,304	100.0	11.6	49.1	39.3
Utah	653	55	340	257	100.0	8.5	52.1	39.4
Vermont	219	19	63	137	100.0	8.8	28.7	62.5
Virginia	2,116	233	838	1,046	100.0	11.0	39.6	49.4
Washington	2,132	192	1,481	459	100.0	9.0	69.5	21.5
West Virginia	736	82	439	221	100.0	11.1	58.9	30.0
Wisconsin	2,109	118	788	1,203	100.0	5.6	37.3	57.0
Wyoming	265	15	90	159	100.0	5.6	34.2	60.2

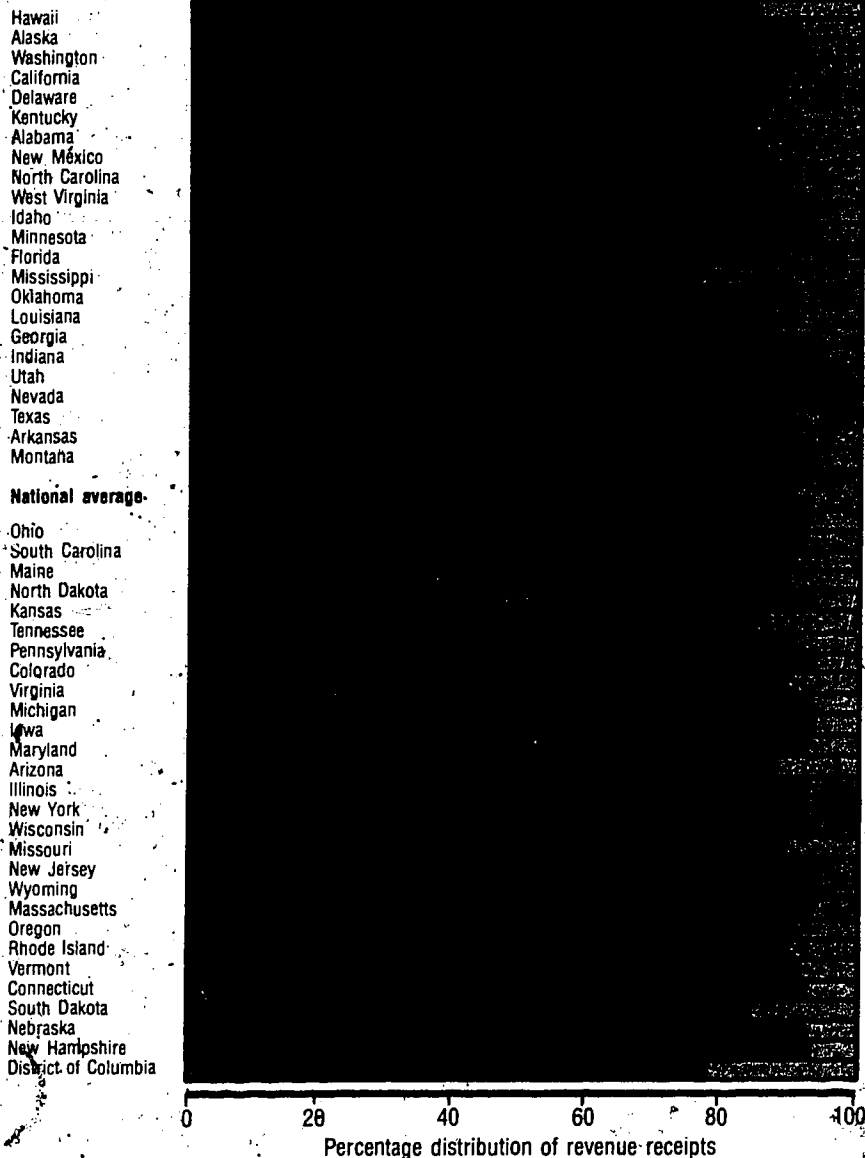
¹ Local and other revenue receipts include revenue receipts from local and intermediate sources, gifts, and tuition and fees from patrons.

² District of Columbia is treated here as a local school system and Hawaii as a State system.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics; *Revenues and Expenditures for Public Elementary and Secondary Education, 1979-80, 1982.*

State Share of Public Elementary/Secondary School Revenues



State sources contributed on the average half of all public elementary/secondary school revenues, but within a wide range—from 85 percent in Hawaii to 8 percent in New Hampshire.

Table 1.16

Average Annual Percent Change in State Tax Revenues, Compared With Consumer Price Index, by State: School Year 1979-80 to 1981-82

Item	Average Annual Percent Change, 1979-80 to 1981-82	Percent Change, 1980-81 to 1981-82
Consumer Price Index.....	11.2	8.7
State tax revenues, 50 States and D.C.....	9.1	8.3
Alabama.....	8.5	10.1
Alaska.....	46.1	10.0
Arizona.....	7.7	7.4
Arkansas.....	8.2	5.9
California.....	10.1	6.5
Colorado.....	5.0	16.7
Connecticut.....	10.8	13.3
Delaware.....	6.6	8.7
District of Columbia.....	10.7	11.8
Florida.....	9.3	5.2
Georgia.....	10.2	8.6
Hawaii.....	6.8	-2.0
Idaho.....	7.4	7.7
Illinois.....	5.5	1.5
Indiana.....	4.6	8.9
Iowa.....	7.6	8.3
Kansas.....	6.8	3.7
Kentucky.....	6.3	9.4
Louisiana.....	12.4	11.5
Maine.....	9.6	7.4
Maryland.....	6.5	8.2
Massachusetts.....	9.9	9.3
Michigan.....	1.1	1.4
Minnesota.....	6.6	11.1
Mississippi.....	8.2	3.5
Missouri.....	4.7	7.9
Montana.....	9.9	12.7
Nebraska.....	5.1	7.5
Nevada.....	16.8	43.5
New Hampshire.....	7.2	21.1
New Jersey.....	14.3	12.0
New Mexico.....	14.1	4.3
New York.....	9.2	5.4
North Carolina.....	9.1	10.5
North Dakota.....	18.1	18.3
Ohio.....	7.8	10.3
Oklahoma.....	21.4	20.4
Oregon.....	3.9	-3.5
Pennsylvania.....	6.5	7.9
Rhode Island.....	8.5	12.9
South Carolina.....	8.7	7.2
South Dakota.....	9.6	9.1
Tennessee.....	5.3	9.9
Texas.....	16.3	14.6
Utah.....	11.1	11.6
Vermont.....	7.3	12.2
Virginia.....	8.5	6.7
Washington.....	8.5	10.7
West Virginia.....	8.4	15.8
Wisconsin.....	6.2	8.0
Wyoming.....	30.1	60.7

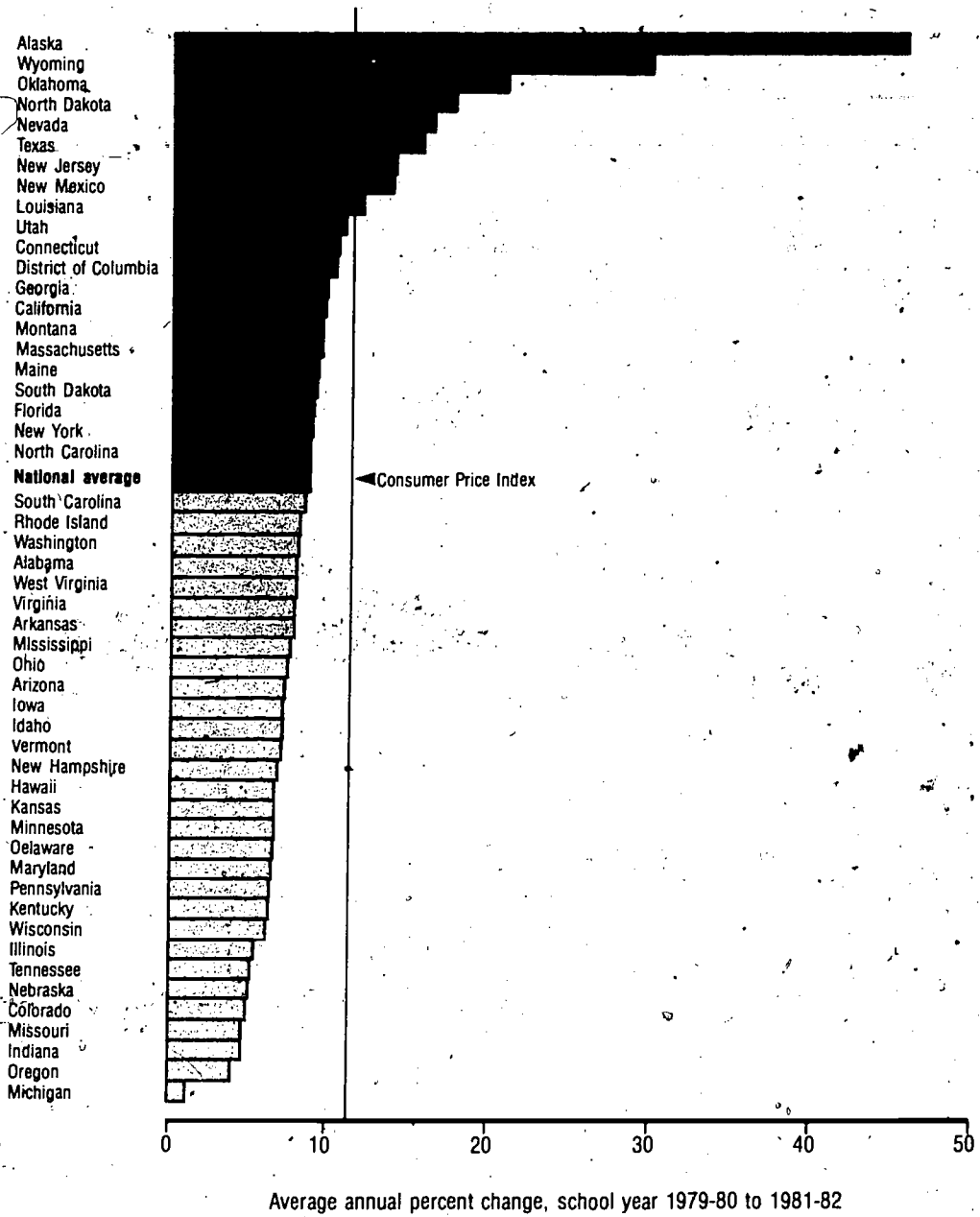
¹ Growth rate calculated with the compound interest formula.

SOURCE: U. S. Department of Commerce, Bureau of the Census, *Quarterly Summary of State and Local Tax Revenue*, GT82, October 1982, and prior years.

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Chart 1.16

Average Annual Percent Change in State Tax Revenues Compared With Consumer Price Index: School Year 1979-80 to 1981-82



Except in nine States, State tax revenues did not keep pace with inflation between 1979-80 and 1981-82.

Table 1.17

Percentage Distribution of Public Elementary/Secondary School Students, by Core¹ Current Expenditures Per Student in Their School District and by State: School Year 1979-80

State	Under \$1,000	\$1,000 to \$1,199	\$1,200 to \$1,399	\$1,400 to \$1,599	\$1,600 to \$1,799	\$1,800 to \$1,999	\$2,000 to \$2,299	\$2,300 to \$2,599	\$2,600 to \$2,899	\$2,900 and Over	Weighted Mean Expenditures ²
Percentage Distribution											
50 States and D.C.	3.0	10.0	16.8	17.6	16.5	13.3	10.4	5.0	2.7	4.7	\$1,667
Alabama	28.3	58.3	11.8	1.6	.0	.0	.0	.0	.0	.0	1,089
Alaska	.0	.0	.0	.0	.0	.0	.0	.0	3.8	96.2	3,992
Arizona	12.2	21.3	21.7	13.1	8.1	5.4	6.8	4.5	2.3	4.5	1,326
Arkansas	19.6	42.6	23.1	8.3	3.8	1.6	1.1	.0	.0	.0	1,152
California	.2	1.0	8.5	25.6	27.0	17.4	10.3	3.7	2.7	3.5	1,743
Colorado	.0	1.1	7.7	23.2	17.7	19.9	11.0	4.4	4.4	10.5	1,718
Connecticut	.0	.0	1.2	6.1	21.2	26.1	25.5	16.4	3.0	.6	2,080
Delaware	.0	.0	.0	46.2	30.8	15.4	.0	7.7	.0	.0	2,025
District of Columbia	.0	.0	.0	.0	.0	.0	100.0	.0	.0	.0	2,223
Florida	.0	.0	11.9	59.7	20.9	6.0	.0	1.5	.0	.0	1,557
Georgia	8.6	46.0	33.7	6.4	3.7	1.1	.0	.5	.0	.0	1,292
Hawaii	.0	.0	.0	.0	100.0	.0	.0	.0	.0	.0	1,754
Idaho	1.7	26.1	33.0	15.7	12.2	4.3	1.7	2.6	.9	1.7	1,233
Illinois	.0	3.9	18.3	25.2	22.1	10.9	10.4	5.0	1.8	2.5	1,801
Indiana	1.3	14.4	41.6	27.9	10.2	2.6	1.3	.3	.0	.3	1,498
Iowa	.0	.0	.0	.4	19.9	49.4	25.5	4.3	.4	.0	1,914
Kansas	.0	.7	6.2	23.5	24.1	19.2	14.7	6.2	2.6	2.9	1,650
Kentucky	2.2	47.0	38.7	8.8	3.3	.0	.0	.0	.0	.0	1,294
Louisiana	1.5	12.1	42.4	30.3	6.1	6.1	1.5	.0	.0	.0	1,365
Maine	2.6	14.5	35.5	25.4	11.4	3.5	2.6	1.3	.9	2.2	1,396
Maryland	.0	.0	.0	16.7	45.8	20.8	12.5	4.2	.0	.0	1,884
Massachusetts	.3	.0	3.4	7.9	21.1	17.4	27.1	10.3	5.5	7.1	2,131
Michigan	2.6	1.2	12.9	38.3	21.0	12.0	7.8	2.3	1.2	.7	1,761
Minnesota	.0	.0	.5	16.4	42.1	27.8	9.8	1.8	.5	1.1	1,850
Mississippi	19.9	46.8	27.6	4.5	1.3	.0	.0	.0	.0	.0	1,135
Missouri	.7	12.3	36.8	26.7	10.3	6.5	5.1	.5	.5	.5	1,568
Montana	2.2	5.0	8.6	10.6	13.6	11.3	13.1	10.9	6.1	18.6	1,849
Nebraska	7.7	9.8	13.7	15.7	12.5	11.4	10.9	6.4	4.0	7.9	1,627
Nevada	.0	.0	.0	35.3	23.5	29.4	.0	.0	.0	11.8	1,812
New Hampshire	11.5	21.7	28.0	17.2	7.0	7.0	3.2	2.5	.0	1.9	1,334
New Jersey	.5	.5	.5	3.4	10.3	18.2	29.1	19.8	8.6	9.1	2,166
New Mexico	.0	.0	4.5	25.0	25.0	12.5	11.4	8.0	5.7	8.0	1,585
New York	.0	.0	.0	1.4	14.5	25.5	22.3	10.0	7.8	18.6	2,349
North Carolina	.0	32.6	48.6	17.4	1.4	.0	.0	.0	.0	.0	1,272
North Dakota	.7	2.0	8.6	14.3	21.9	17.6	17.6	9.6	3.0	4.7	1,634
Ohio	.9	19.0	39.5	17.0	8.1	4.7	5.9	2.7	1.7	.6	1,524
Oklahoma	4.0	20.3	28.7	17.1	10.3	5.8	5.3	3.5	2.1	2.7	1,289
Oregon	.0	.3	5.5	12.6	20.6	21.3	17.1	11.0	5.2	6.5	1,911
Pennsylvania	1.8	4.6	26.6	33.9	17.8	7.8	4.3	2.7	.5	.0	1,652
Rhode Island	.0	.0	.0	2.5	30.0	35.0	17.5	7.5	2.5	5.0	1,944
South Carolina	7.6	53.3	31.5	6.5	.0	.0	.0	.0	.0	1.1	1,215
South Dakota	.0	3.7	17.6	28.9	26.2	11.8	7.0	2.1	1.6	1.1	1,487
Tennessee	41.2	41.2	10.1	2.7	4.1	.0	.0	.0	.0	.7	1,187
Texas	1.3	12.3	21.8	20.8	13.9	9.2	7.6	4.2	3.2	5.8	1,496
Utah	.0	27.5	42.5	12.5	2.5	10.0	2.5	2.5	.0	.0	1,181
Vermont	6.8	12.4	28.9	20.5	14.9	8.4	4.4	1.6	.4	1.6	1,589
Virginia	.0	15.6	48.1	20.0	8.9	3.7	1.5	.7	1.5	.0	1,491
Washington	.0	1.3	2.3	10.7	25.3	24.3	12.0	8.0	5.7	10.3	1,878
West Virginia	.0	.0	32.7	50.9	10.9	5.5	.0	.0	.0	.0	1,474
Wisconsin	.0	.0	1.8	17.3	38.1	25.4	12.5	3.2	1.2	.5	1,853
Wyoming	.0	.0	.0	6.1	10.2	26.5	20.4	16.3	10.2	10.2	2,011

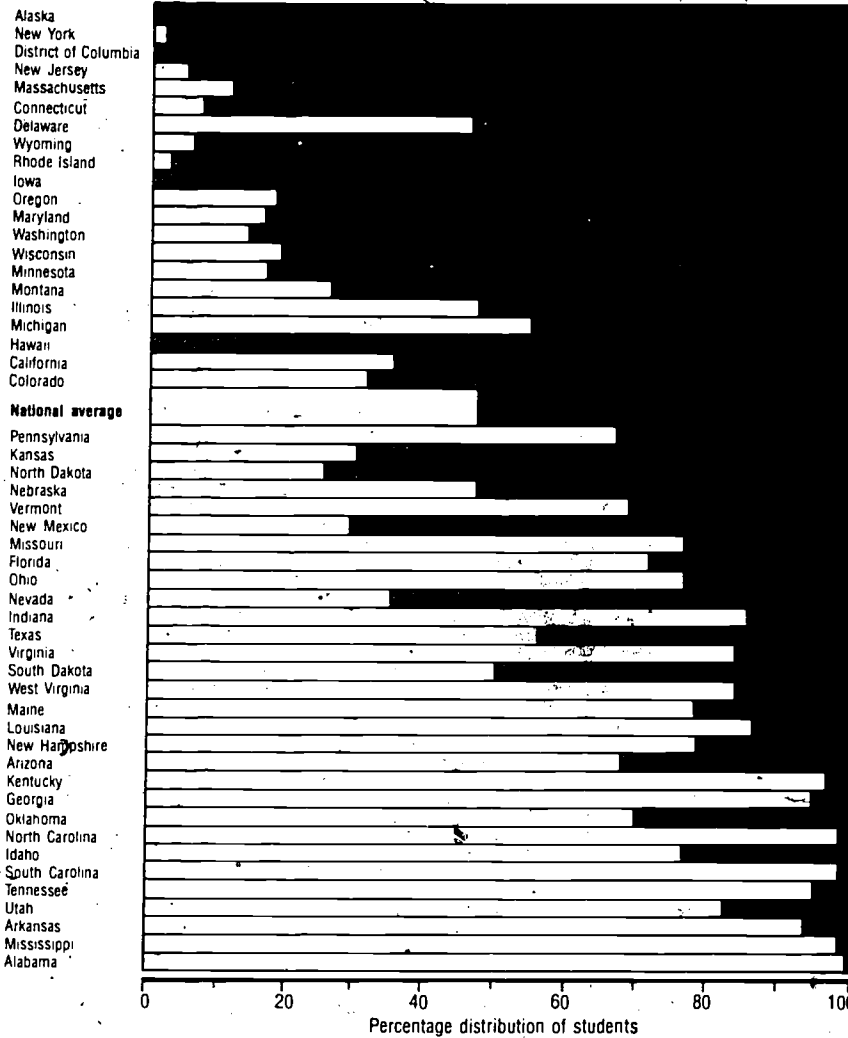
¹ Core current expenditures are calculated by subtracting food services and transportation costs from total current expenditures. Data pertain to outlays made by local school districts and exclude direct expenditures by State and intermediate agencies at the local level.

² Total core current expenditure divided by total enrollment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Governments Division, Survey of Local Governments Finances: School Systems, unpublished tabulations (September 1982).

Distribution of Public Elementary/Secondary School Students, by the Core Current Expenditures Per Student in Their School District

Ranked high to low,
by weighted mean expenditures:



Under \$1,600
 \$1,600 to \$1,999
 \$2,000 and over

In school year 1979-80, core current expenditures per student varied from under \$1,000 (in districts representing 3-percent of students) to over \$2,900 (in districts representing 5 percent of students), with the majority of students enrolled in districts spending over \$1,600 per student.

Table 1.18

Expenditures Per Student in Average Daily Attendance in Public Elementary/Secondary Schools, by State: School Year 1979-80

State	Expenditures Per Student			
	Total ¹	Current ²	Capital Outlay ³	Interest on School Debt
50 States and D.C.	\$2,469	\$2,250	\$170	\$49
Alabama	1,699	1,570	115	14
Alaska	5,077	4,659	151	267
Arizona	2,410	1,948	398	64
Arkansas	1,807	1,542	224	41
California	2,360	2,252	89	19
Colorado	2,813	2,408	330	75
Connecticut	2,494	2,399	47	48
Delaware	2,976	2,825	55	96
District of Columbia	3,270	3,264	6	—
Florida	2,061	1,868	160	33
Georgia	1,806	1,599	181	26
Hawaii	2,528	2,322	204	2
Idaho	1,893	1,638	215	40
Illinois	2,763	2,572	140	51
Indiana	2,137	1,885	245	7
Iowa	2,519	2,308	176	35
Kansas	2,373	2,159	172	42
Kentucky	1,814	1,668	91	55
Louisiana	1,980	1,757	171	52
Maine	1,854	1,731	82	41
Maryland	2,813	2,568	204	41
Massachusetts	2,929	2,796	54	79
Michigan	2,849	2,616	151	82
Minnesota	2,599	2,376	215	8
Mississippi	1,772	1,647	124	1
Missouri	2,062	1,927	98	37
Montana	2,850	2,444	363	43
Nebraska	2,380	2,127	199	54
Nevada	2,528	2,064	356	108
New Hampshire	2,030	1,878	115	37
New Jersey	3,353	3,165	116	72
New Mexico	2,378	2,016	339	23
New York	3,653	3,434	134	85
North Carolina	1,832	1,728	104	0
North Dakota	2,042	1,899	120	23
Ohio	2,197	2,064	94	39
Oklahoma	2,157	1,907	229	21
Oregon	3,078	2,665	355	58
Pennsylvania	2,721	2,514	101	106
Rhode Island	2,594	2,525	17	52
South Carolina	1,937	1,693	209	35
South Dakota	1,905	1,885	1	19
Tennessee	1,782	1,593	175	14
Texas	2,300	1,907	316	77
Utah	2,172	1,621	491	60
Vermont	2,159	1,973	133	53
Virginia	2,199	1,957	191	51
Washington	3,060	2,556	446	58
West Virginia	2,137	1,897	219	21
Wisconsin	2,652	2,456	144	52
Wyoming	3,285	2,486	698	101

¹ Includes current expenditures for day schools, capital outlay, and interest on school debt.

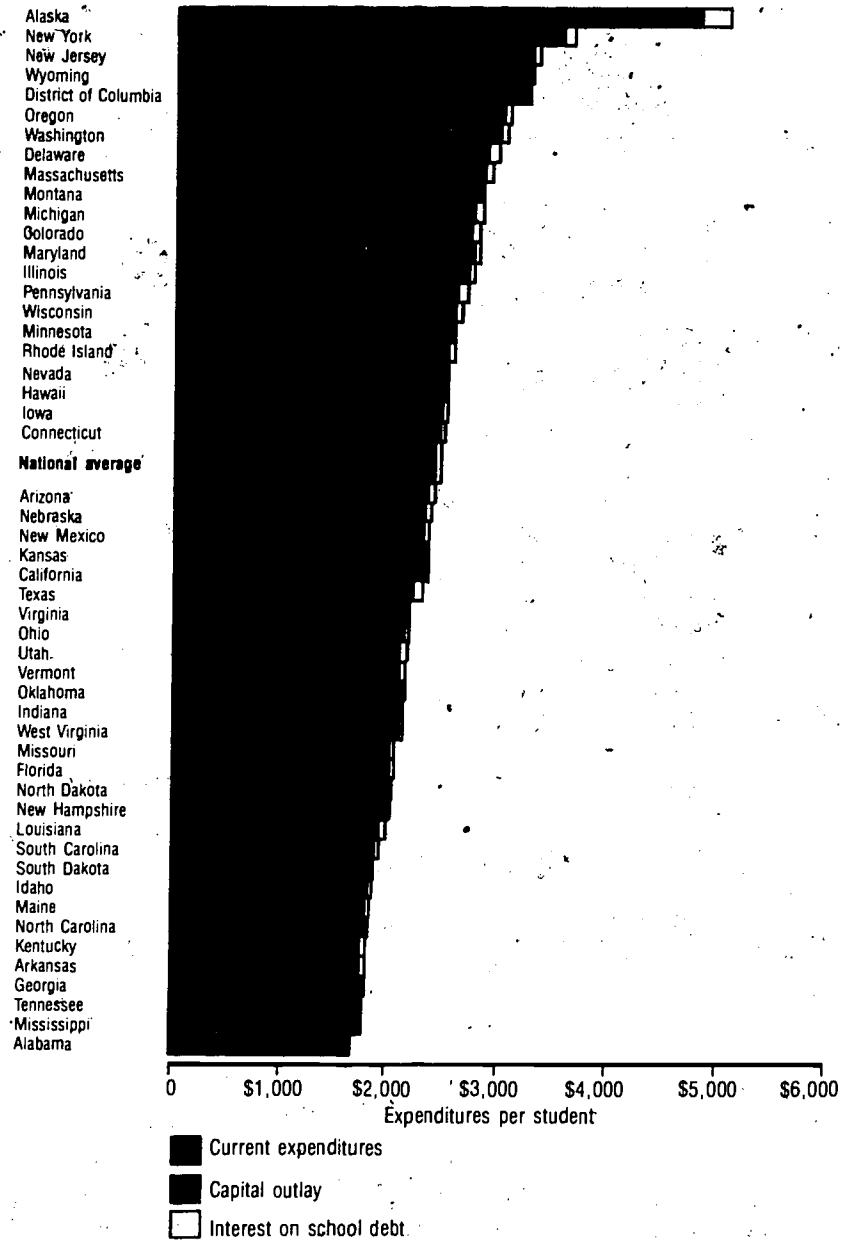
² Includes expenditures for day schools only; excludes adult education, community colleges, and community services.

³ Includes capital outlay by State and local school housing authorities.

NOTE: Details may not add to total because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Revenues and Expenditures for Public Elementary and Secondary Education, 1979-80, 1982, and unpublished tabulations (July 1982).*

Public Elementary/Secondary School Expenditures Per Student, by Function



Total expenditures per student varied greatly from over \$5,000 to less than \$2,000. While nationally over 90 percent went for current operations, in seven growth States (Arizona, Nevada, New Mexico, Texas, Utah, Washington, and Wyoming) spending was heavier than average for capital outlays.

60

Table 1.19

Public Opinion on Cost-Cutting Measures to Reduce Public School Costs: Spring 1982

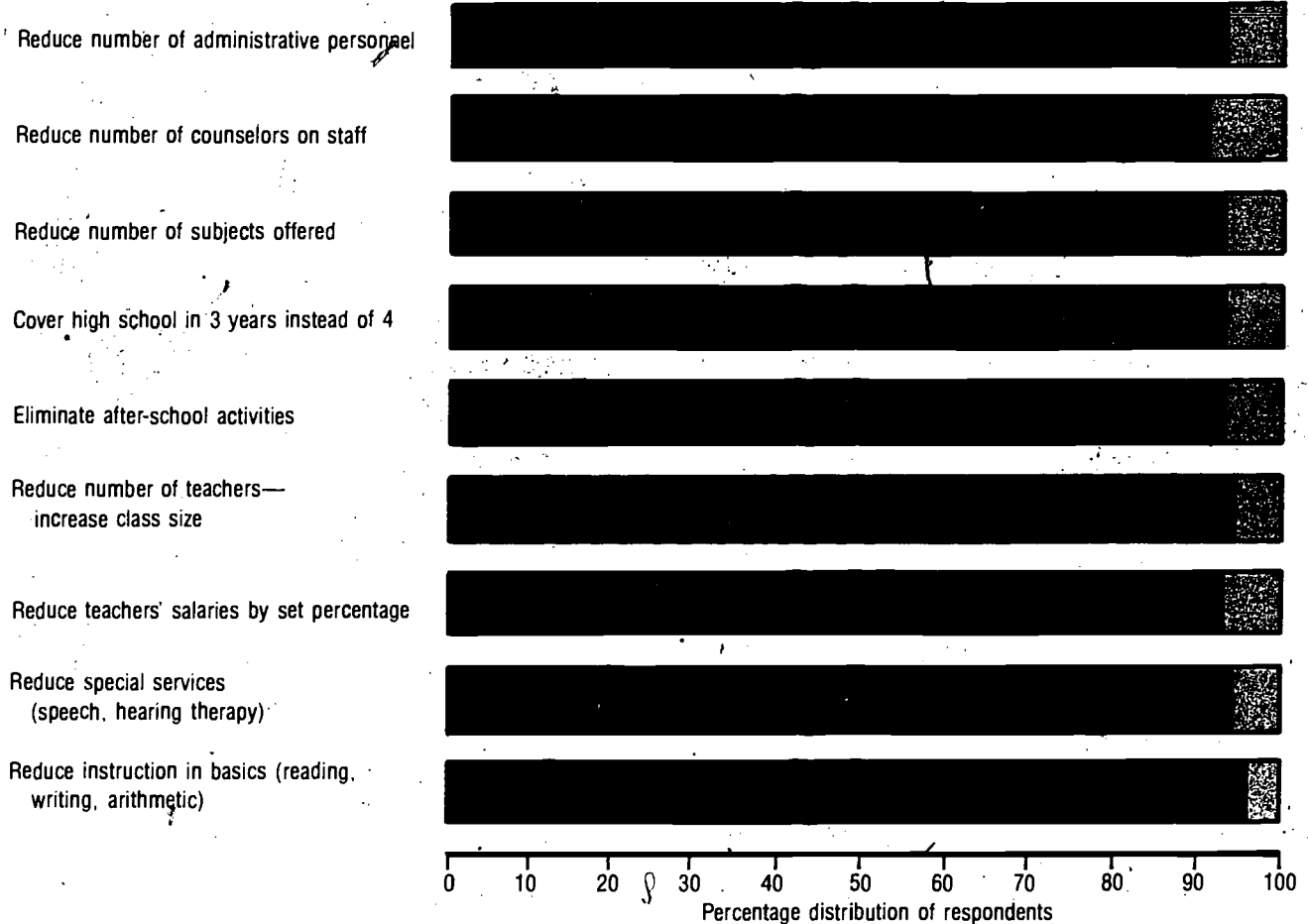
Item	Total	Would Favor Measure	Would Not Favor Measure	No Opinion
<p>"Suppose your local school board were forced to cut some things from school costs because there is not enough money. I am going to read you a list of many ways that have been suggested for reducing school costs. Will you tell me, in the case of each one, whether your opinion is favorable, or unfavorable?"</p> <p style="text-align: center;">Percentage Distribution of Respondents</p>				
Reduce number of administrative personnel	100	71	22	7
Reduce number of counselors on staff ..	100	49	42	9
Reduce number of subjects offered	100	35	58	7
Cover high school in 3 years instead of 4	100	31	62	7
Eliminate after-school activities	100	29	64	7
Reduce number of teachers—increase class size	100	18	76	6
Reduce teachers' salaries by set percentage	100	17	76	7
Reduce special services (speech, hearing therapy)	100	11	83	6
Reduce instruction in basics (reading, writing, arithmetic)	100	3	93	4
Sample size	1,557			

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

SOURCE: *Phi Delta Kappan*, "The 14th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools," September 1982.

Public Opinion on Cost-Cutting Measures to Reduce Public School Costs

"Suppose your local school board were forced to cut some things from school costs because there is not enough money. I am going to read you a list of many ways that have been suggested for reducing school costs. Will you tell me, in the case of each one, whether your opinion is favorable, or unfavorable?"



- Would favor measure
- Would not favor measure
- No opinion

If forced to cut school budgets, respondents most favored reducing nonteaching personnel in the schools; they least favored reducing instruction in the "3 R's"

Table 1.20

Average Reading Performance of 9-, 13-, and 17-Year-Old Students, by Race and Region: School Year 1970-71, 1974-75, and 1979-80

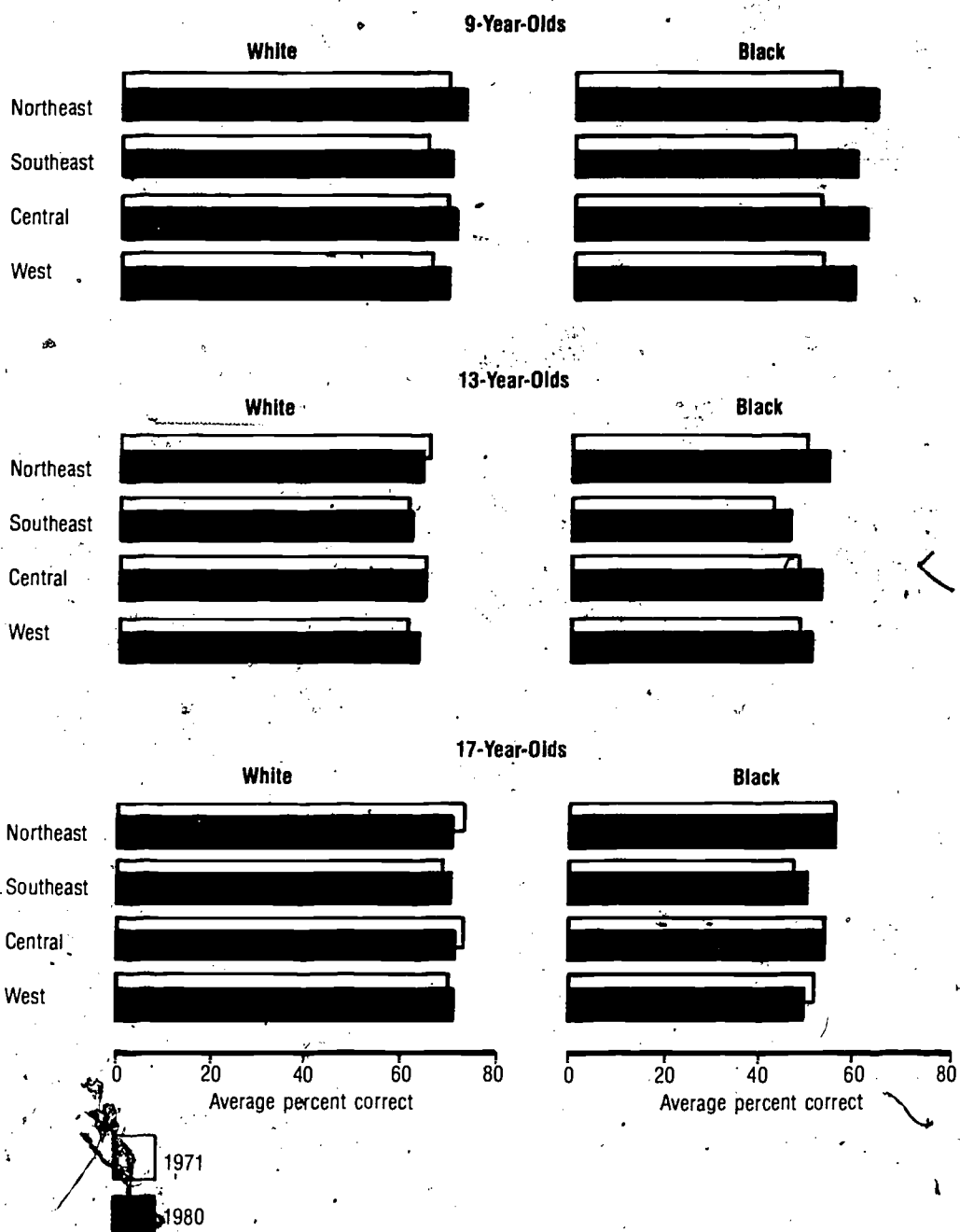
Age Group, Race, and Region	Performance			Change		
	1971	1975	1980	1971 to 1975	1975 to 1980	1971 to 1980
	Average Percent Correct					
9-year-olds	64.0	65.3	67.9	1.3*	2.6*	3.9*
White	66.4	67.0	69.3	.6	2.3*	2.8*
Northeast	67.8	69.0	71.6	1.2	2.6*	3.7*
Southeast	63.9	65.3	69.2	1.4	3.9*	5.3*
Central	68.0	69.1	70.3	1.1	1.2	2.3*
West	64.8	66.6	68.8	1.8	2.2*	4.0*
Black	49.7	54.5	59.6	4.8*	5.1*	9.9*
Northeast	54.1	56.4	62.0	2.2	5.6*	7.8*
Southeast	45.4	53.1	58.1	7.6*	5.0*	12.7*
Central	51.0	56.8	60.6	5.8*	3.8*	9.7*
West	51.7	52.6	57.2	.9	4.6	5.5
13-year-olds	60.0	59.9	60.8	-.1	.9	.8
White	62.6	61.9	62.6	-.7	.7	(¹)
Northeast	64.3	63.1	63.6	-1.2	.5	-.7
Southeast	59.9	60.4	61.6	.6	1.1	1.7
Central	64.4	64.3	64.8	.0	.5	.4
West	61.1	62.1	63.2	1.0	1.1	2.2*
Black	45.4	46.4	49.6	1.0	3.2*	4.2*
Northeast	48.8	48.5	53.2	-.3	4.7*	4.4
Southeast	41.5	45.5	45.5	4.0*	-.1	3.9
Central	47.7	48.6	52.4	.9	3.7	4.7
West	48.1	42.6	50.5	-5.6*	7.9*	2.4
17-year-olds	68.9	69.0	68.2	(¹)	-.8	-.7
White	71.2	71.2	70.6	(¹)	-.6	-.7
Northeast	72.7	72.6	70.8	-.1	-1.8	-1.9
Southeast	68.3	70.2	70.2	2.0	.0	2.0
Central	72.6	72.9	71.6	.3	-1.3	-1.0
West	69.9	70.6	71.6	.6	1.0	1.7
Black	51.7	52.1	52.2	.5	.1	.5
Northeast	56.1	54.1	56.1	-1.9	1.9	.0
Southeast	47.7	50.7	49.8	3.0	-.9	2.1
Central	53.8	54.9	54.2	1.1	-.7	.4
West	51.8	49.4	50.8	-2.4	1.4	-1.0

* Indicates statistically significant change in performance between assessments.

¹ Less than 0.05 percent.

SOURCE: National Assessment of Educational Progress, *Three National Assessments of Reading: Changes in Performance, 1979-80* (Report No. 11-R-01), April 1981.

Average Reading Performance, by Race and Region: 1971 and 1980



White and black 9-year-olds nationwide significantly improved their reading performance between 1971 and 1980; black 9-year-olds in the Southeast showed the most appreciable gains.

Table 1.21

Average Reading Performance of 9-, 13-, and 17-Year-Old Students, by Hispanic Background: School Year 1974-75 and 1979-80

Characteristic	9-Year-Olds' Performance			13-Year-Olds' Performance			17-Year-Olds' Performance		
	1975	1980	Change,	1975	1980	Change,	1975	1980	Change,
			1975 to 1980			1975 to 1980			1975 to 1980
	Average Percent Correct								
Total	65.3	67.9	2.6*	59.9	60.8	0.9	69.0	68.2	-0.7
White, non-Hispanic	67.8	70.0	2.2*	62.7	63.4	.7	71.9	71.2	-.7
Black, non-Hispanic	54.5	59.6	5.1*	46.5	49.6	3.1*	52.2	52.2	.0
Hispanic	55.0	60.3	5.3*	49.1	51.5	2.4	56.8	58.8	2.0
Hispanic subgroups ¹ :									
Male	52.9	57.2	4.3	49.1	51.0	1.9	54.7	57.3	2.6
Female	57.0	63.2	6.2	50.0	52.5	2.5	59.2	60.7	1.5
Western region	55.6	59.7	4.1	49.1	51.0	1.9	57.0	58.8	1.8
Big cities ²	52.4	60.8	8.4	49.1	51.0	1.9	56.3	60.4	4.1
Modal grade ³	60.0	66.4	6.4	49.1	51.0	1.9	61.6	62.3	.7
Parent with no postsecondary education	55.3	58.8	3.5	49.1	51.0	1.9	56.7	57.1	.4
Parent with some postsecondary education	57.1	65.2	8.1*	57.3	56.5	-.8	62.3	66.4	4.1

* Indicates statistically significant change in performance between assessments.

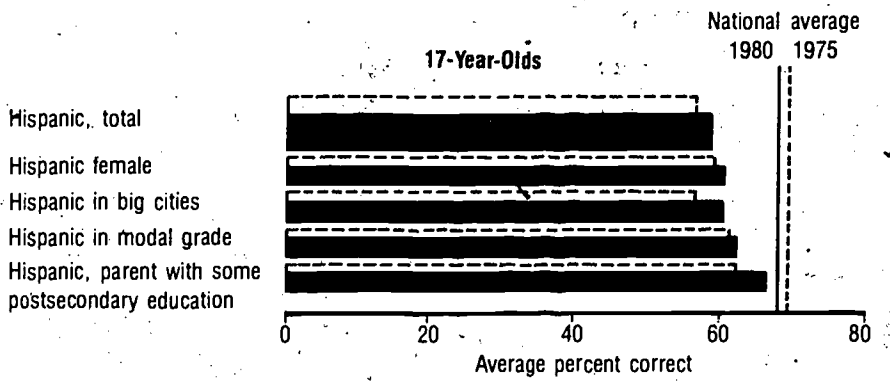
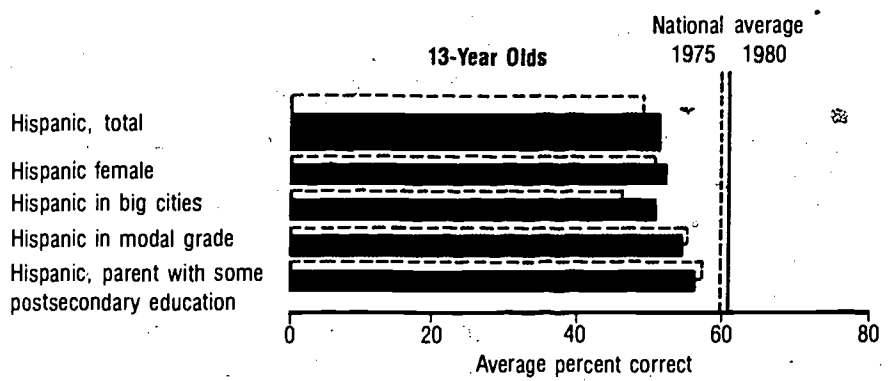
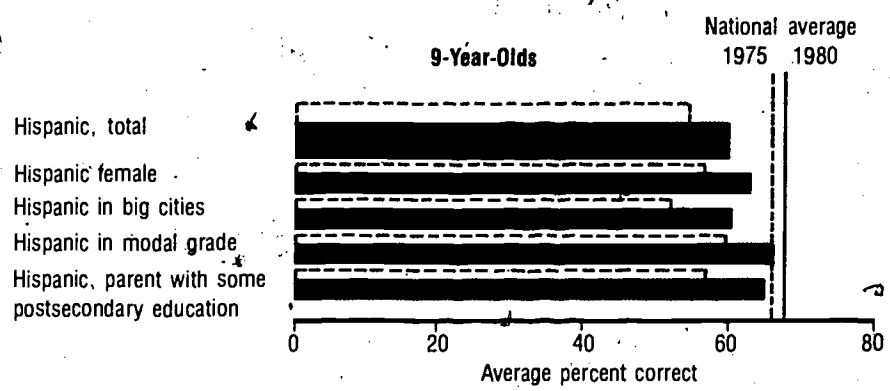
¹ Cell-counts for Hispanic students are too small for presenting all variables within NAEP reporting categories.

² Big cities are those with a population of 200,000 and over.

³ Modal grade is the grade in which the majority of students are enrolled. The modal grade for 9-year-olds is grade 4; for 13-year-olds, grade 8; for 17-year-olds, grade 11. In 1980, 42 percent of Hispanic 9-year-olds were below modal grade, compared with 27 percent of the whites and 34 percent of the blacks. At age 13, 31 percent were below, compared with 28 percent of the whites and 35 percent of the blacks. And at age 17, 27 percent were below, compared with 11 percent of the whites and 29 percent of the black students.

SOURCE: National Assessment of Educational Progress, *Performance of Hispanic Students in Two National Assessments of Reading* (Report No. SY-HR-50), June 1982.

Average Reading Performance of Selected Hispanic Student Subgroups Compared to National Average



1975
1980

Although reading performance of Hispanic students still lagged behind the national average, substantial gains were made from 1975 to 1980 in the 9-year-old group. By 1980, Hispanic 9-year-olds in the modal grade performed about as well as all 9-year-olds nationally.



Table 1.22

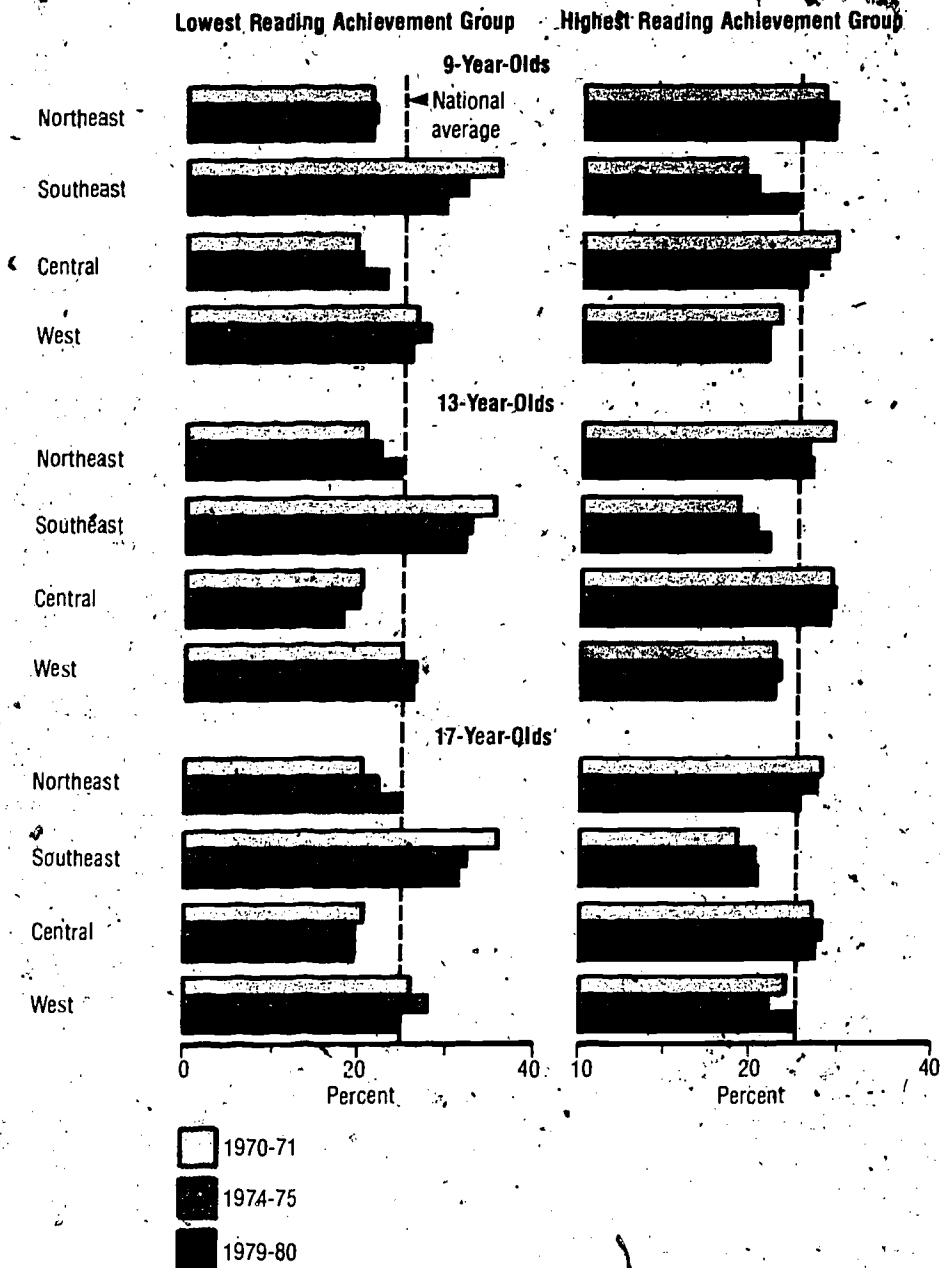
Distribution of 9-, 13-, and 17-Year-Olds Within the Lowest and Highest Reading Achievement Groups, by Region, Sex, and Racial/Ethnic Group: School Year 1970-71, 1974-75, and 1979-80

Age Group and Characteristic	Lowest Achievement Group			Highest Achievement Group		
	1971	1975	1980	1971	1975	1980
	Percent (Average = 25.0)					
9-year-olds	25.0	25.0	25.0	25.0	25.0	25.0
Region:						
Northeast	21.1	21.6	21.2	27.5	29.0	28.8
Southeast	35.8	31.9	29.6	18.6	20.0	24.6
Central	19.3	20.0	22.8	29.2	28.2	25.8
West	26.5	27.9	26.0	23.0	21.6	21.6
Sex:						
Male	28.9	30.1	29.4	21.9	22.0	21.9
Female	21.1	19.9	20.6	28.1	28.0	28.1
Racial/ethnic group:						
White	19.6	21.1	21.6	28.3	27.7	27.4
Black	56.4	48.8	45.4	5.8	8.4	10.4
13-year-olds	25.0	25.0	25.0	25.0	25.0	25.0
Region:						
Northeast	20.7	22.4	24.6	29.0	26.2	26.6
Southeast	35.3	32.5	31.9	18.1	20.2	22.0
* Central	20.4	19.9	18.2	29.1	29.4	28.6
West	24.8	26.6	26.1	22.7	23.2	22.5
Sex:						
Male	29.5	29.4	29.0	21.7	20.7	21.6
Female	20.6	20.6	21.2	28.3	29.3	28.2
Racial/ethnic group:						
White	19.4	20.3	20.9	28.4	27.8	28.0
Black	56.1	56.2	49.8	6.0	5.9	6.7
17-year-olds	25.0	25.0	25.0	25.0	25.0	25.0
Region:						
Northeast	20.5	22.5	24.8	28.1	27.4	25.6
Southeast	35.9	32.3	31.6	18.4	20.4	20.9
Central	20.7	19.8	19.8	27.3	28.2	27.4
West	26.1	28.1	25.2	24.3	22.2	25.4
Sex:						
Male	28.7	29.8	28.8	22.2	22.7	23.6
Female	21.4	20.4	21.1	27.8	27.2	26.4
Racial/ethnic group:						
White	19.9	20.1	19.7	27.6	27.7	28.2
Black	62.7	61.7	61.8	5.7	4.9	3.9

NOTE: Based on reading assessment scores, students nationwide were partitioned into four achievement groups of equal size, each class representing 25 percent of the students. Since the national average is 25 percent within each achievement group, more than 25 percent in an achievement group indicates over-representation and less than 25 percent, under-representation. For example, 36 percent of 9-year-olds in the Southeast in 1971 were found in the lowest achievement group, indicating that they were over-represented among low-achievers.

SOURCE: National Assessment of Educational Progress, *Three National Assessments of Reading: Change in Performance, 1970-80* (Report No. 11-R-01), April 1981.

Distribution of Students in Lowest and Highest Reading Achievement Groups, by Region



In 1970-71, a greater percentage of students in the Southeast placed in the lowest reading achievement quartile than students in the other three regions, and a smaller percentage placed in the highest quartile, in all age groups. By the 1979-80 reading assessment, however, differences among regions in all age groups had narrowed considerably.

Table 1.23

Public and Private High School Graduates and as Percent of Age Group, by State: School Year 1979-80

State	Total High School Graduates	Public High School Graduates ¹			Private High School Graduates			Age Group, Average of 17- and 18-Year-Olds	High School Graduates as Percent of Age Group
		Total	Male	Female	Total	Religiously Affiliated	Not Affiliated		
50 States and D.C.	3,051,304	2,756,768	1,355,264	1,401,504	294,536	239,380	55,156	4,236,248	72.0
Alabama	49,067	45,190	21,691	23,499	3,877	1,841	2,036	75,260	65.2
Alaska	5,398	5,223	2,606	2,617	175	161	14	7,257	74.4
Arizona	30,746	28,944	14,214	14,730	1,802	1,332	470	50,194	61.3
Arkansas	30,166	29,052	14,785	14,267	1,114	827	287	42,758	70.6
California	282,858	257,996	129,905	128,091	24,862	20,948	3,914	429,490	65.9
Colorado	38,664	36,804	18,277	18,527	1,860	1,385	475	54,045	71.5
Connecticut	46,251	47,683	17,672	20,011	8,568	5,331	3,237	57,132	81.0
Delaware	9,048	7,582	3,639	3,943	1,466	1,247	219	12,018	75.3
District of Columbia	6,573	4,959	2,210	2,749	1,614	1,333	281	11,560	56.9
Florida	97,679	87,324	42,089	45,235	10,355	7,525	2,830	161,884	60.3
Georgia	66,893	61,621	29,490	32,131	5,232	1,899	3,333	105,985	63.1
Hawaii	14,121	11,493	5,680	5,813	2,628	1,530	1,098	17,002	83.1
Idaho	13,501	13,187	6,682	6,505	314	302	12	17,914	75.4
Illinois	155,917	135,579	66,335	69,244	20,338	19,068	1,270	214,382	72.7
Indiana	78,502	73,143	36,044	37,099	5,359	4,623	736	105,518	74.4
Iowa	47,282	43,445	21,365	22,080	3,837	3,818	19	55,900	84.6
Kansas	32,701	30,890	15,444	15,446	1,811	1,691	120	43,810	74.6
Kentucky	45,593	41,203	20,227	20,976	4,390	3,740	650	71,188	64.0
Louisiana	55,572	46,297	21,370	24,927	9,275	7,437	1,838	84,664	65.6
Maine	17,280	15,445	7,594	7,851	1,835	529	1,306	21,662	79.8
Maryland	61,121	54,270	25,861	28,409	6,851	5,765	1,086	80,199	76.2
Massachusetts	86,434	73,802	36,606	37,196	12,632	8,568	4,064	109,611	78.9
Michigan	137,379	124,316	61,425	62,891	13,063	11,760	1,303	179,054	76.7
Minnesota	69,311	64,908	32,420	32,488	4,403	4,067	336	80,965	85.6
Mississippi	31,308	27,586	13,019	14,567	3,722	1,150	2,572	52,114	60.1
Missouri	69,636	62,265	31,016	31,249	7,371	6,748	623	93,378	74.6
Montana	12,588	12,135	6,167	5,968	453	404	49	15,148	83.1
Nebraska	25,252	22,410	11,240	11,170	2,842	2,779	63	29,690	85.1
Nevada	8,772	8,473	4,255	4,218	299	298	1	13,850	63.3
New Hampshire	13,873	11,722	5,533	5,189	2,151	1,115	1,036	17,353	79.9
New Jersey	108,607	94,574	46,831	47,733	14,043	12,358	1,685	133,762	81.2
New Mexico	19,355	18,424	8,930	9,494	931	467	464	26,422	73.3
New York	236,430	204,064	100,545	103,549	32,366	28,283	4,083	318,524	74.2
North Carolina	73,643	70,862	34,261	36,601	2,781	1,282	1,499	102,945	65.2
North Dakota	10,642	9,928	4,948	4,980	714	661	53	12,892	82.5
Ohio	159,903	144,169	71,268	72,901	15,734	14,731	1,003	201,524	79.3
Oklahoma	40,340	39,305	19,814	19,491	1,035	907	128	56,482	71.4
Oregon	31,623	29,939	14,754	15,185	1,684	1,501	183	45,877	68.9
Pennsylvania	172,491	146,458	72,286	74,172	26,033	23,266	2,767	214,887	80.3
Rhode Island	12,966	10,864	5,180	5,684	2,102	1,933	169	17,792	72.9
South Carolina	41,390	38,697	18,812	19,985	2,693	1,145	1,548	63,598	65.1
South Dakota	11,328	10,689	5,402	5,287	639	531	108	13,794	82.1
Tennessee	55,071	49,845	23,947	25,898	5,226	3,535	1,691	85,764	64.2
Texas	178,538	171,449	84,932	86,517	7,089	6,233	856	270,898	65.9
Utah	20,514	20,035	10,054	9,981	479	251	228	28,497	72.0
Vermont	7,654	6,733	3,333	3,400	921	293	628	10,272	74.5
Virginia	71,094	66,621	31,312	30,309	4,473	2,879	1,594	100,582	70.7
Washington	53,499	50,402	25,118	25,284	3,097	2,665	432	74,229	72.1
West Virginia	24,219	23,369	11,612	11,757	850	753	97	34,400	70.4
Wisconsin	76,282	69,332	33,961	35,371	6,950	6,475	475	93,553	81.5
Wyoming	6,229	6,072	3,103	2,969	157	10	147	8,571	72.7

¹Includes graduates of regular day school programs, but excludes other programs. Also excludes about 7,000 graduates of subcollegiate departments of institutions of higher education, Federal schools for Indians and on Federal installations, and residential schools for exceptional children.

²Includes graduates of regular day school and other programs.

³Estimated.

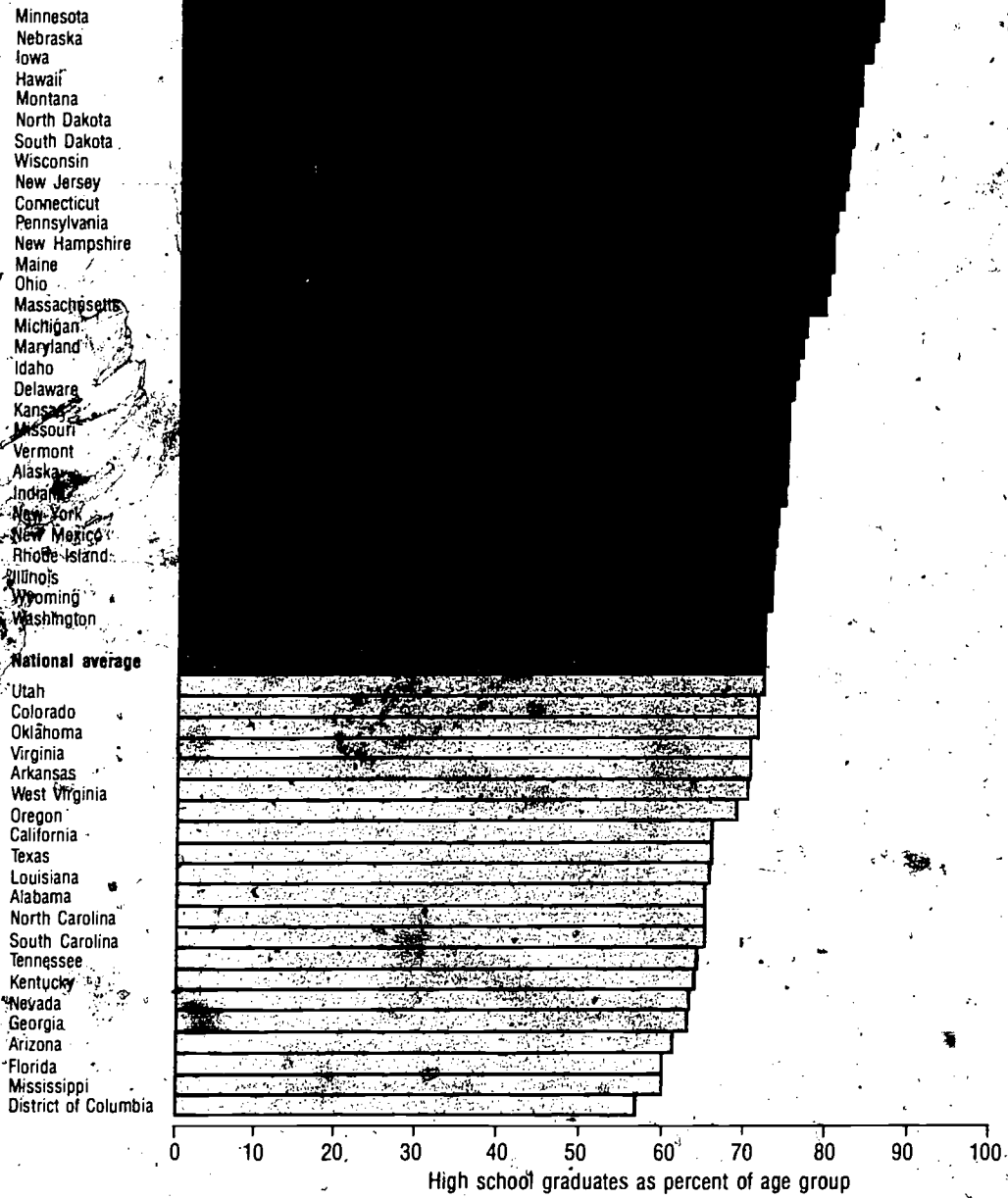
⁴Distribution of sex estimated.

⁵Data reflect the number of diplomas ordered from the Office of Accreditation and Administration from July 1, 1979 through June 30, 1980.

NOTE: Excludes General Educational Development (GED) recipients.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1982, 1982*, and unpublished tabulations (December, 1982); and U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population and Housing, special tabulations.

High School Graduates as Percent of Age Group, by State



Nationally, high schools graduated 72 percent of the relevant age group in the 1979-80 school year. This proportion ranged from a high of more than 85 percent in Minnesota and Nebraska to a low of approximately 57 percent in the District of Columbia.

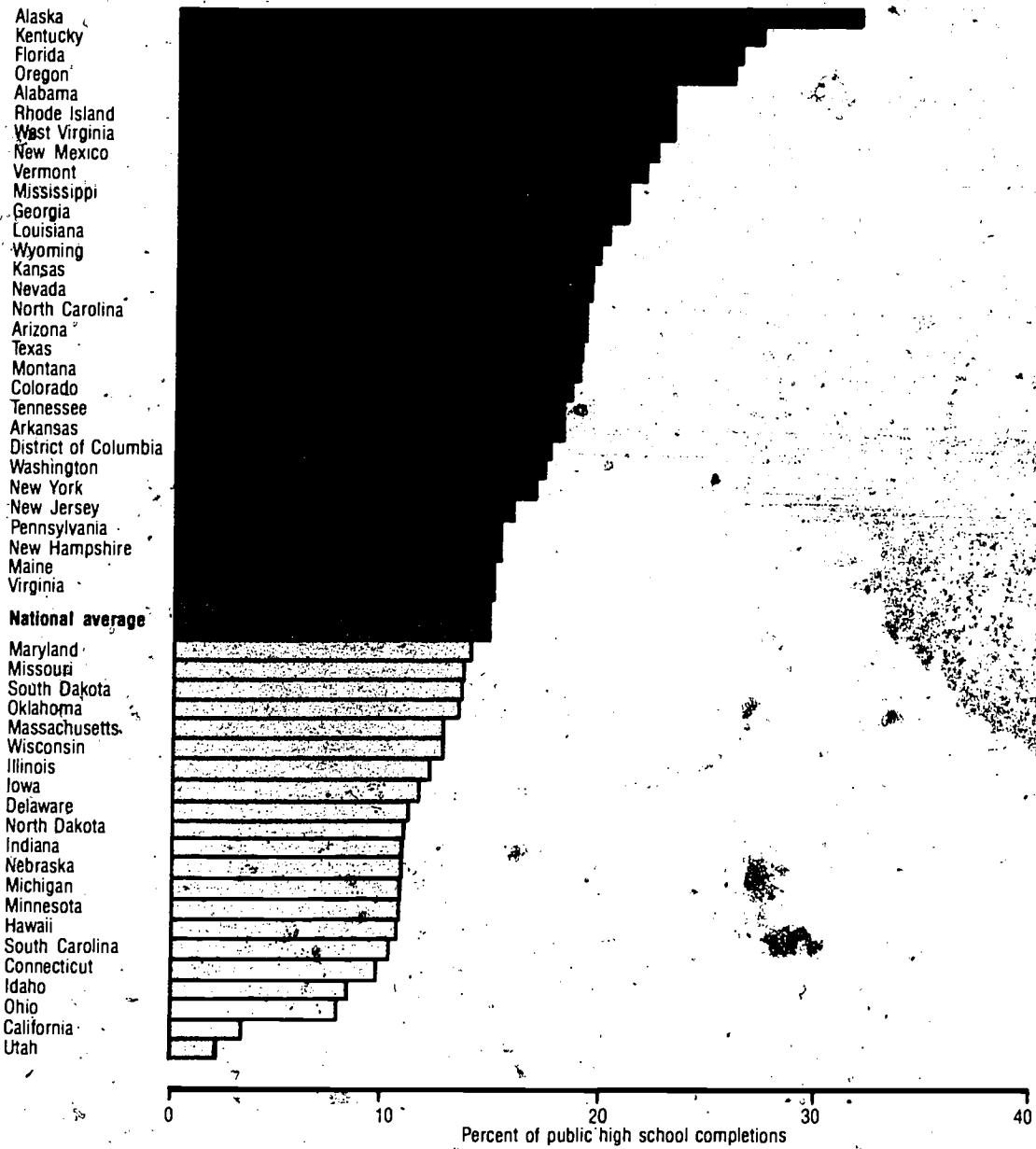
Table 1.24

High School Equivalency (GED) Certificate Recipients as Percent of Public High School Completions, by State: School Year 1979-80

State	Total Public High School Completions	Graduates of Regular School Programs	Graduates From Other Programs	Persons Granted High School Equivalency (GED) Certificates	GED as Percent of Total
50 States and D.C.	3,270,210	2,756,768	25,549	487,893	14.9
Alabama	58,853	45,190	—	13,663	23.2
Alaska	7,731	5,223	32	2,476	32.0
Arizona	38,710	28,944	2,289	7,477	19.3
Arkansas	35,479	29,052	0	6,427	18.1
California	266,497	266,496	—	8,501	3.2
Colorado	45,093	36,804	—	8,289	18.4
Connecticut	44,333	37,683	2,354	4,296	9.7
Delaware	10,017	7,582	1,312	1,123	11.2
District of Columbia	6,265	4,959	213	1,093	17.4
Florida	118,579	87,324	—	31,255	26.4
Georgia	78,216	61,621	—	16,595	21.2
Hawaii	12,846	11,493	—	1,353	10.5
Idaho	14,369	13,187	—	1,182	8.2
Illinois	153,987	135,579	—	18,408	12.0
Indiana	84,891	73,143	2,496	9,252	10.9
Iowa	49,104	43,445	0	5,659	11.5
Kansas	38,385	30,890	1	7,495	19.5
Kentucky	56,703	41,203	0	15,500	27.3
Louisiana	57,960	46,297	0	11,663	20.1
Maine	18,183	15,445	0	2,738	15.1
Maryland	63,450	54,270	221	8,959	14.1
Massachusetts	84,420	73,802	—	10,618	12.6
Michigan	139,417	124,316	—	15,101	10.8
Minnesota	72,671	64,908	—	7,763	10.7
Mississippi	34,991	27,586	0	7,405	21.2
Missouri	72,190	62,265	—	9,925	13.7
Montana	14,918	12,135	0	2,783	18.7
Nebraska	26,475	22,410	1,166	2,899	10.9
Nevada	10,515	8,473	—	2,042	19.4
New Hampshire	13,838	11,722	—	2,116	15.3
New Jersey	112,287	94,564	—	17,723	15.8
New Mexico	25,270	18,424	1,190	6,656	22.4
New York	248,400	204,064	2,251	42,085	16.9
North Carolina	87,827	70,862	0	16,965	19.3
North Dakota	11,152	9,928	—	1,224	11.0
Ohio	156,876	144,169	1,011	11,696	7.5
Oklahoma	45,464	39,305	0	6,159	13.5
Oregon	40,472	29,939	—	10,533	26.0
Pennsylvania	172,977	146,458	—	26,519	15.3
Rhode Island	14,415	10,864	206	3,345	23.2
South Carolina	45,929	38,697	2,539	4,693	10.2
South Dakota	12,327	10,689	—	1,688	13.6
Tennessee	60,838	49,845	0	10,993	18.1
Texas	220,973	171,449	7,960	41,564	18.8
Utah	20,438	20,035	0	398	1.9
Vermont	8,631	6,733	—	1,898	22.0
Virginia	78,334	66,621	0	11,713	15.0
Washington	60,854	50,402	—	10,452	17.2
West Virginia	30,392	23,369	0	7,023	23.1
Wisconsin	79,648	69,332	309	10,007	12.6
Wyoming	7,575	6,072	—	1,503	19.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD) 1979-80 Survey, unpublished tabulations (November 1982).

GED Recipients as Percent of Public High School Completions



GED recipients comprised approximately 15 percent of all public high school completions in school year 1979-80. Their representation among completions ranged from 32 percent in Alaska to under 2 percent in Utah.

Table 1.25

**Disciplinary Actions Reported in Public Elementary/Secondary Schools,
by State: Fall 1980**

State	Suspensions	Expulsions	Corporal Punishment
	Percent of Total Enrollment		
50 States and D.C.	5.4	0.4	3.5
Alabama	4.3	.1	9.3
Alaska	3.2	.1	1.4
Arizona	3.9	.1	3.1
Arkansas	3.6	.7	12.6
California	6.0	.2	.4
Colorado	3.6	.2	.6
Connecticut	6.9	1.1	.1
Delaware	10.2	.1	2.9
District of Columbia	1.9	1.6	0
Florida	8.5	(¹)	11.8
Georgia	5.1	.5	9.6
Hawaii	3.0	(¹)	0
Idaho	2.1	.8	.8
Illinois	5.3	.2	1.2
Indiana	4.4	.9	4.1
Iowa	3.0	.5	.3
Kansas	4.4	.7	1.3
Kentucky	3.1	.3	6.6
Louisiana	8.2	.4	5.1
Maine	3.1	.3	0
Maryland	8.7	.1	.6
Massachusetts	4.7	.5	0
Michigan	7.6	.4	.9
Minnesota	2.9	.1	(¹)
Mississippi	4.3	.2	10.9
Missouri	4.7	.2	4.0
Montana	4.4	(¹)	.4
Nebraska	2.9	.6	.2
Nevada	4.9	(¹)	2.2
New Hampshire	5.7	.5	0
New Jersey	7.5	.3	0
New Mexico	4.1	.5	5.7
New York	4.4	.2	.1
North Carolina	5.5	.5	6.0
North Dakota	1.5	(¹)	.1
Ohio	6.1	.3	4.7
Oklahoma	2.1	.5	9.3
Oregon	4.3	.3	.5
Pennsylvania	6.9	.2	1.3
Rhode Island	4.2	(¹)	0
South Carolina	8.1	.3	6.4
South Dakota	2.1	.3	.1
Tennessee	4.2	.2	10.6
Texas	3.7	.7	9.5
Utah	2.0	.1	.1
Vermont	3.3	(¹)	(¹)
Virginia	8.1	.2	1.8
Washington	4.7	.5	1.9
West Virginia	2.6	.4	5.4
Wisconsin	4.9	.4	.1
Wyoming	3.9	(¹)	1.1

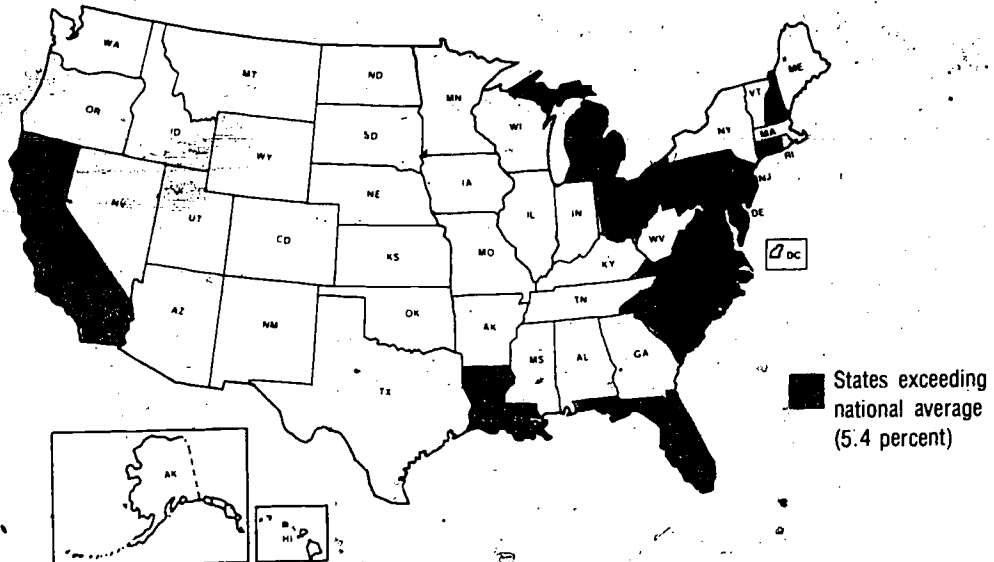
¹ Less than 0.05 percent.

NOTE: Students were counted only once within each category, regardless of the number of disciplinary actions against them. Duplication was possible among categories; for example, students could be suspended and also expelled and be counted in both categories. Data exclude enrollments in school districts of under 300 students.

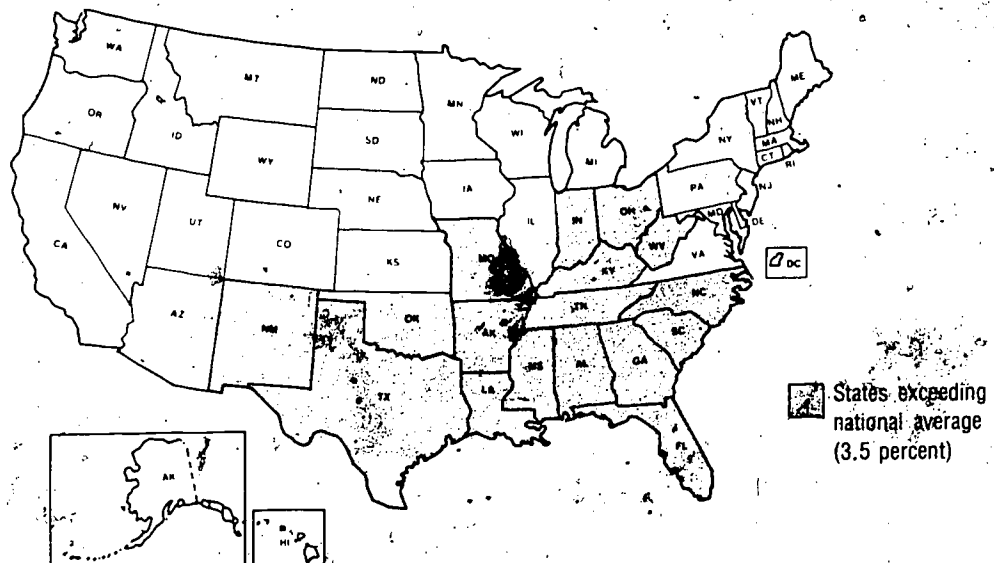
SOURCE: U.S. Department of Education, Office for Civil Rights, 1980, Elementary and Secondary Civil Rights Survey, National Summaries, 1982, and State Summaries, 1982, projected data.

Reported Disciplinary Actions as Percent of Public Elementary/Secondary School Enrollment

States Reporting Suspensions Exceeding National Average



States Reporting Corporal Punishment Exceeding National Average



In 1980, all States above the national average in suspending students were located east of the Mississippi, except for California. Those States above the national average in corporal punishment of students were concentrated in the Southeast and the adjacent Southwestern States.

Table 1.26

States Using Minimum Competency Testing, by Government Level Setting Standards, Grade Levels Assessed, and Expected Uses of Standards: 1982

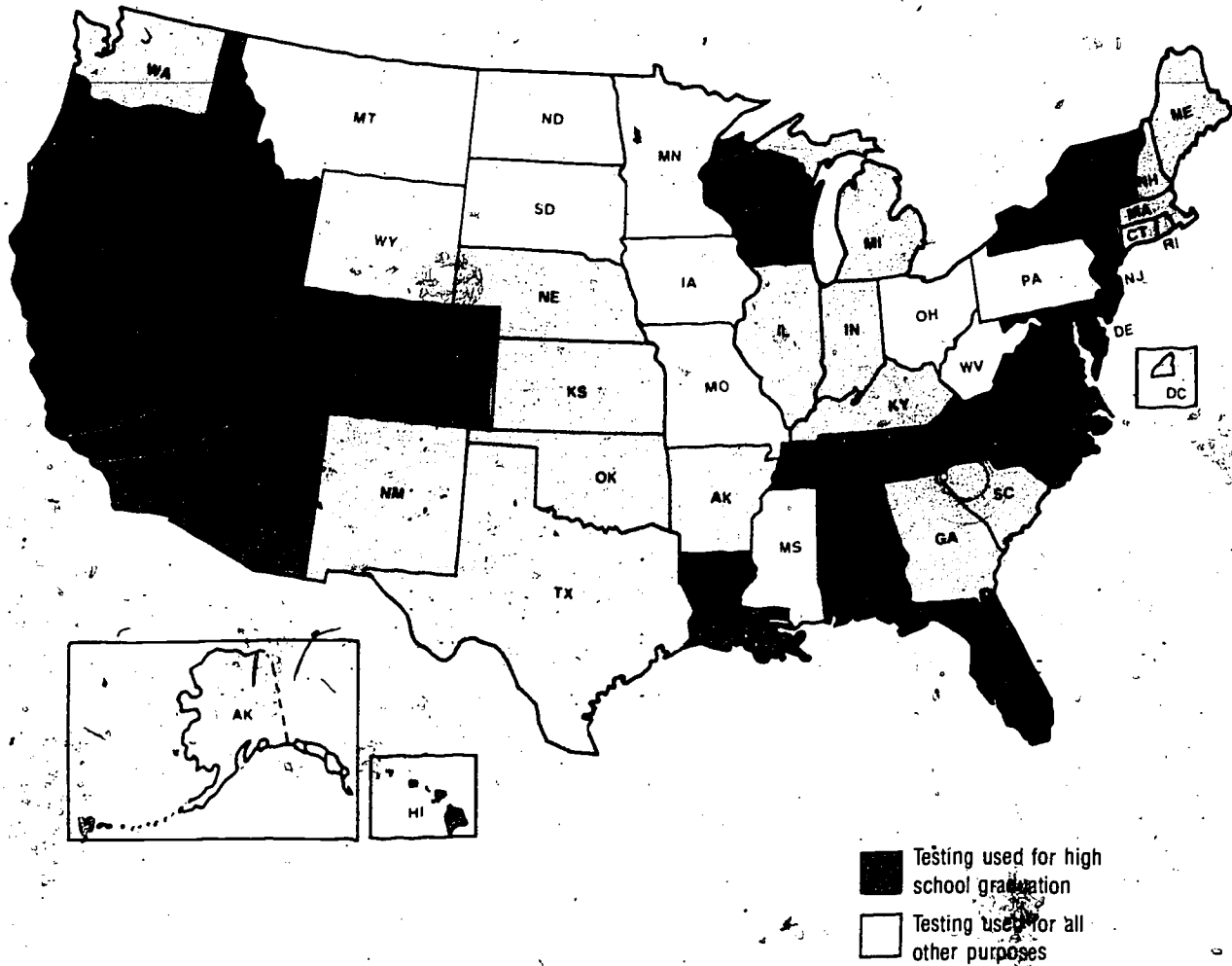
States Using Minimum Competency Testing	Government Level Setting Standards	Grade Levels Assessed	Expected Uses					First Graduating Class Assessed
			Grade Promotion	High School Graduation	Early Exit	Remediation	Other	
Alabama	State	3,6,9+		X		X		1985
Arizona	State/local	8,12		X			X	1976
Arkansas	State	3,4,6,8						
California	State/local	4-11,16 yr. old +	X	X	X	X		1979
Colorado	Local	9,12		Local option				
Connecticut	State/local	3,5,7,9				X	X	
Delaware	State	11		X				1981
Florida	State/local	3,5,8,11	X	X	X			1983
Georgia	State	4,8,10,11					X	
Hawaii	State	9-12		X		X		1983
Idaho	State	9-12		Local option				1982
Illinois	Local	Local option					Local option	
Indiana	Local	3,6,8,10				X	X	
Kansas	State	2-4,6,8,9,11,12					Local option	
Kentucky	State/local	3,5,7,8,10,11					X	
Louisiana	State	4,8,11		X			X	1992
Maine	State	8,11					X	
Maryland	State	3,7,9,11	X	X		X		1982
Massachusetts	Local	Local option					X	
Michigan	State	4,7,10					Local option	
Missouri	State	8					X	
Nebraska	Local	5+					X	
Nevada	State	3,6,9,12		X		X		1982
New Hampshire	State	4,8,12					Local option	
New Jersey	State	3,6,9-12		X		X	X	1985
New Mexico	State	Local option, 10					X	1981
New York	State	3,6,8-12		X		X		1979
North Carolina	State	1-3,6,9,11		X				1980
Oklahoma	None	3,6,9,12					X	
Oregon	Local	Local option		X				1978
Rhode Island	State	4,8,10					X	
South Carolina	State	1-3,6,8,11				X	X	1989
Tennessee	State/local	4-6,8,11,12		X		X	X	1982
Texas	Not reported	3,5,9+				X		
Utah	Local	Local option		X				1980
Vermont	State	K-12		X			X	1981
Virginia	State/local	K,6,9-12		X				1981
Washington	Local	4,8					Local option	
Wisconsin	Local	1-4,5-8,9-10		Local option		X		

¹ In Hawaii, students have three options: paper-pencil test; performance test; or course.

NOTE: Some States have dates for first high school graduating class to be assessed with no expected use for high school graduation.

SOURCE: Education Commission of the States, Department of Research and Information, unpublished tabulations (September 1982).

Minimum Competency Testing for High School Graduation



In 1982, 20 States employed or expected to use minimum competency testing for high school graduation and another 18 States used it for other purposes.

Table 1.27

States with Competency-Based Teacher Certification Provisions, by Authorization, Year Enacted, Year Effective, and Type of Test: 1982

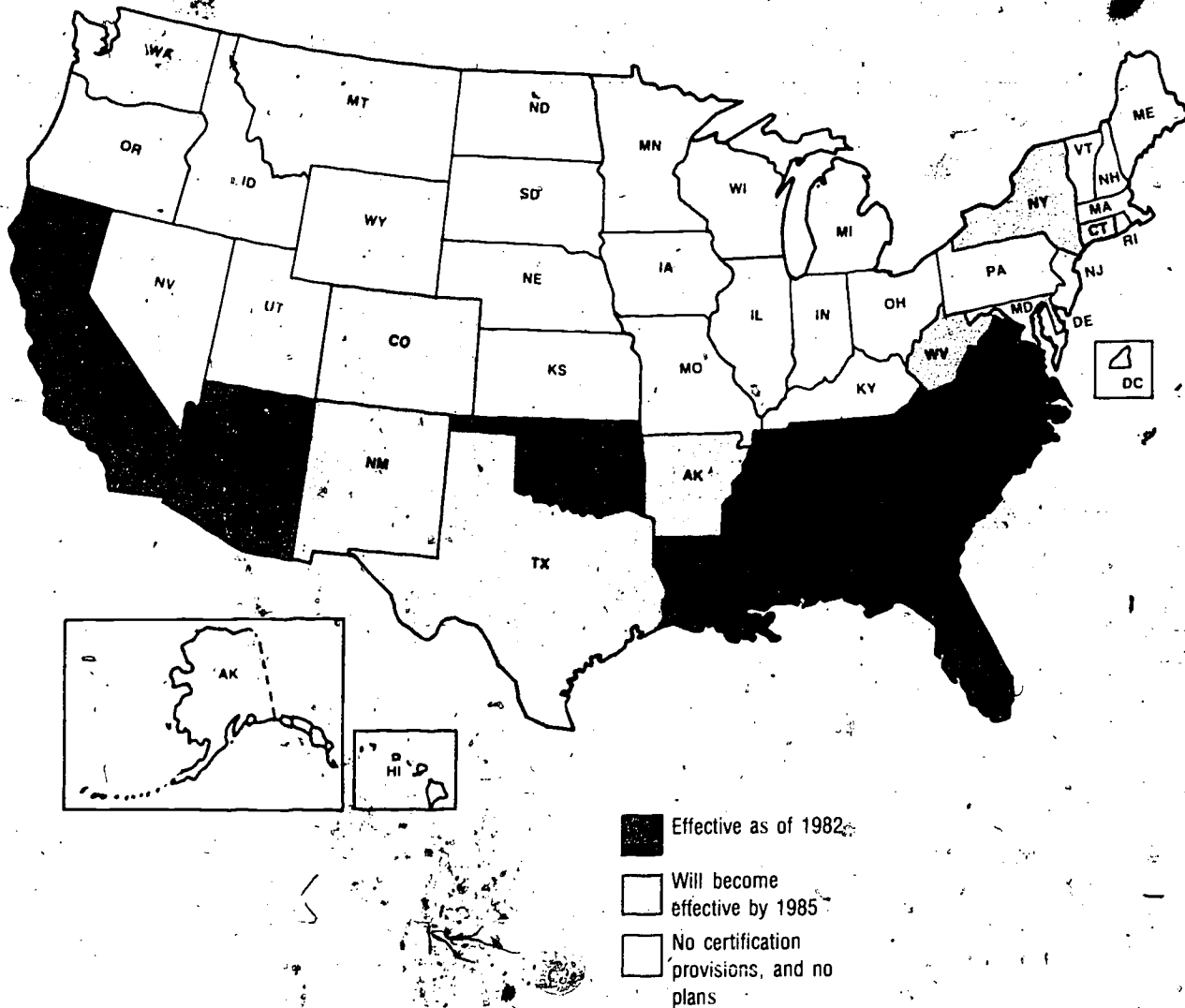
State	Authority	Year Enacted	Year Effective	Test Used
Alabama	SBE	1980	1981	State
Arizona	Legislature	1980	1980	State
Arkansas	Legislature	1979	1983	NTE
California	Legislature	1981	1982	State
Colorado	Legislature	1981	1983	State
Connecticut	SBE	1982	1985	State
Delaware	SBE	1982	1983	NTE
Florida	Legislature	1978	1980	State
Georgia	SBE	1979	1979	State
Louisiana	Legislature	1977	1979	NTE
Mississippi	SBE	1977	1977	NTE
New Mexico	SBE	1981	1983	State
New York	SBE	1980	1984	State
North Carolina	SBE	1979	1981	State
Oklahoma	Legislature	1980	1982	State
South Carolina	Legislature	1979	1982	NTE/State
Tennessee	SBE	1980	1981	NTE
Texas	SBE/Legislature	1980/1981	1985	State
Virginia	Legislature	1980	1981	NTE
West Virginia	SBE	1982	1985	State

SBE = State Board of Education.

NTE = National Teacher Examination.

Source: Education Commission of the States, Information Clearinghouse, *Issuegram*, November 4, 1982.

Competency-Based Teacher Certification Provisions



With few exceptions, States with provisions or plans for competency-based teacher certification were located across the southern tier of the country from coast to coast.

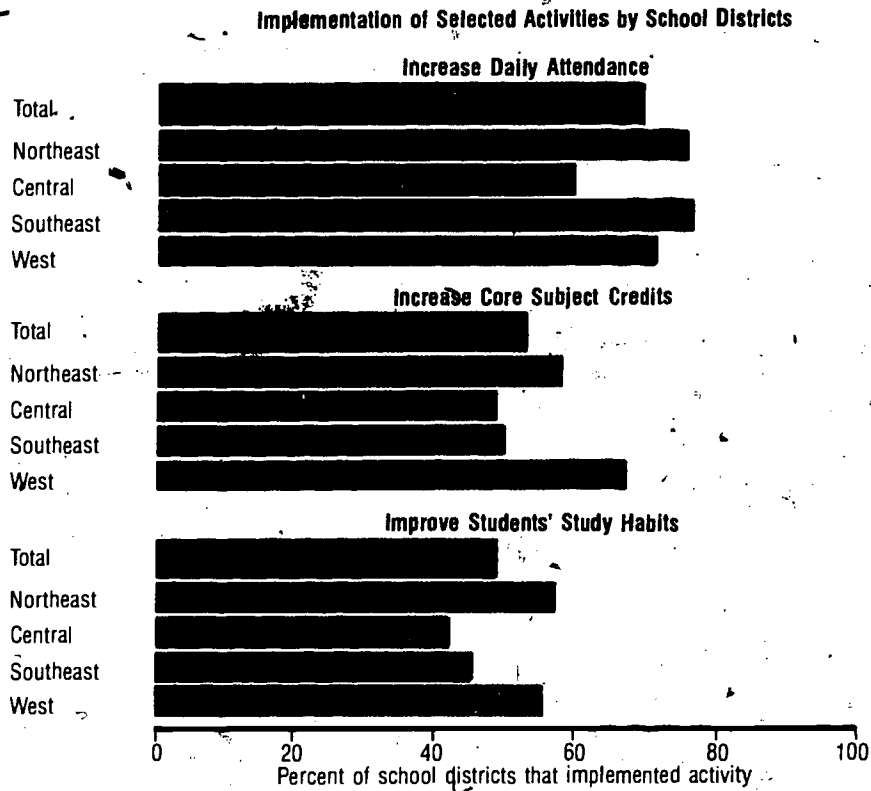
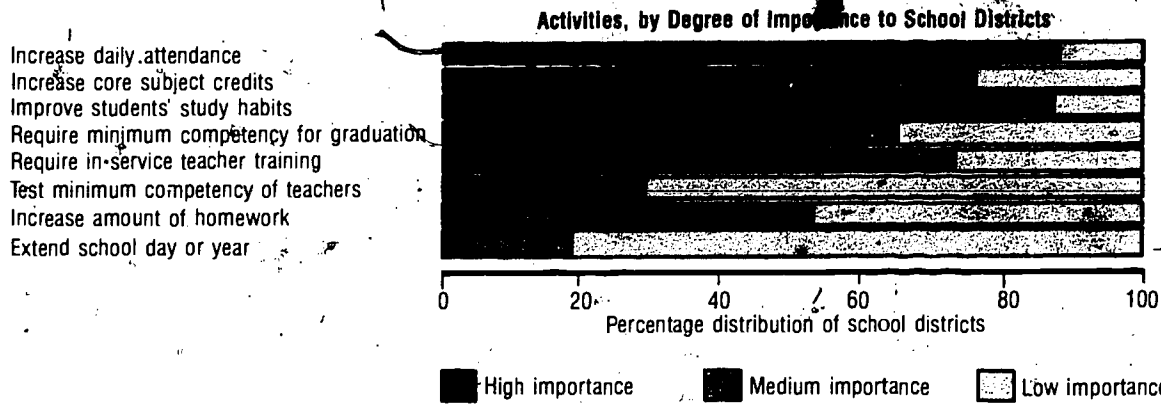
Table 1.28

Importance to School District Policy and Implementation of Selected Activities for Improving High School Academic Achievement: Region: Fall 1982

Activities to Improve Academic Achievement	Degree of Importance to District Policy				Implemented Between 1979-80 and 1980-81	Planned by 1984-85
	Total	High	Medium	Low		
	Percentage Distribution of School Districts				Percent of School Districts	
Total						
Increase daily attendance	100	66	23	11	69	51
Increase units of credit required in core subject areas	100	47	30	23	53	38
Establish/increase courses to improve students' study skills/habits	100	47	41	12	48	52
Establish/increase minimum competency requirements for graduation	100	29	37	34	27	34
Establish/increase requirements for in-service teacher training for subject matter competence	100	28	47	26	36	43
Establish/increase minimum competency tests for teachers	100	9	21	70	9	19
Increase amount of homework	100	7	47	46	19	19
Extend the school day or the school year	100	5	15	80	7	8
Northeast						
Increase daily attendance	100	62	29	9	76	62
Increase units of credit required in core subject areas	100	58	30	13	58	45
Establish/increase courses to improve students' study skills/habits	100	52	38	10	57	66
Central						
Increase daily attendance	100	57	25	18	60	40
Increase units of credit required in core subject areas	100	40	33	27	49	26
Establish/increase courses to improve students' study skills/habits	100	38	48	15	42	45
Southeast						
Increase daily attendance	100	77	17	6	76	58
Increase units of credit required in core subject areas	100	52	32	17	50	44
Establish/increase courses to improve students' study skills/habits	100	54	36	10	45	58
West						
Increase daily attendance	100	77	19	5	71	60
Increase units of credit required in core subject areas	100	48	20	32	67	51
Establish/increase courses to improve students' study skills/habits	100	53	36	11	56	45

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey of School Districts in Academic Requirements and Achievement, unpublished tabulations (November 1982).

Importance to School District Policy and Implementation of Selected Activities for Improving Academic Achievement in High Schools



Of a selected group of activities to improve academic achievement in high schools, increasing daily attendance was rated highly important by the greatest percentage of school districts. Of all the activities, it was also the most likely to have been recently implemented in each of the regions.

Table 1.29

Public Opinion Ratings of Public Schools Locally and Nationally: Spring 1982

Characteristic	Total	Rating						Sample Size
		A	B	C	D	Fail	Don't Know	
<p>"Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. Suppose the public schools themselves, in this community, were graded in the same way. What grade would you give the public schools here—A, B, C, D, or Fail?"</p>								
Percentage Distribution of Respondents								
Total	100	8	29	33	14	5	11	1,557
Respondents with:								
Children in public school	100	11	38	31	13	6	1	414
Children in private school	100	13	25	39	13	9	1	82
No children in school	100	7	25	34	14	5	15	1,084
<p>"How about the public schools in the Nation as a whole? How would you rate them? A, B, C, D, or Fail?"</p>								
Total	100	2	20	44	15	4	15	1,557
Respondents:								
Children in school	100	3	20	44	15	5	13	414
Children in private school	100	0	21	48	15	2	14	82
No children in school	100	2	20	44	15	3	16	1,084

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

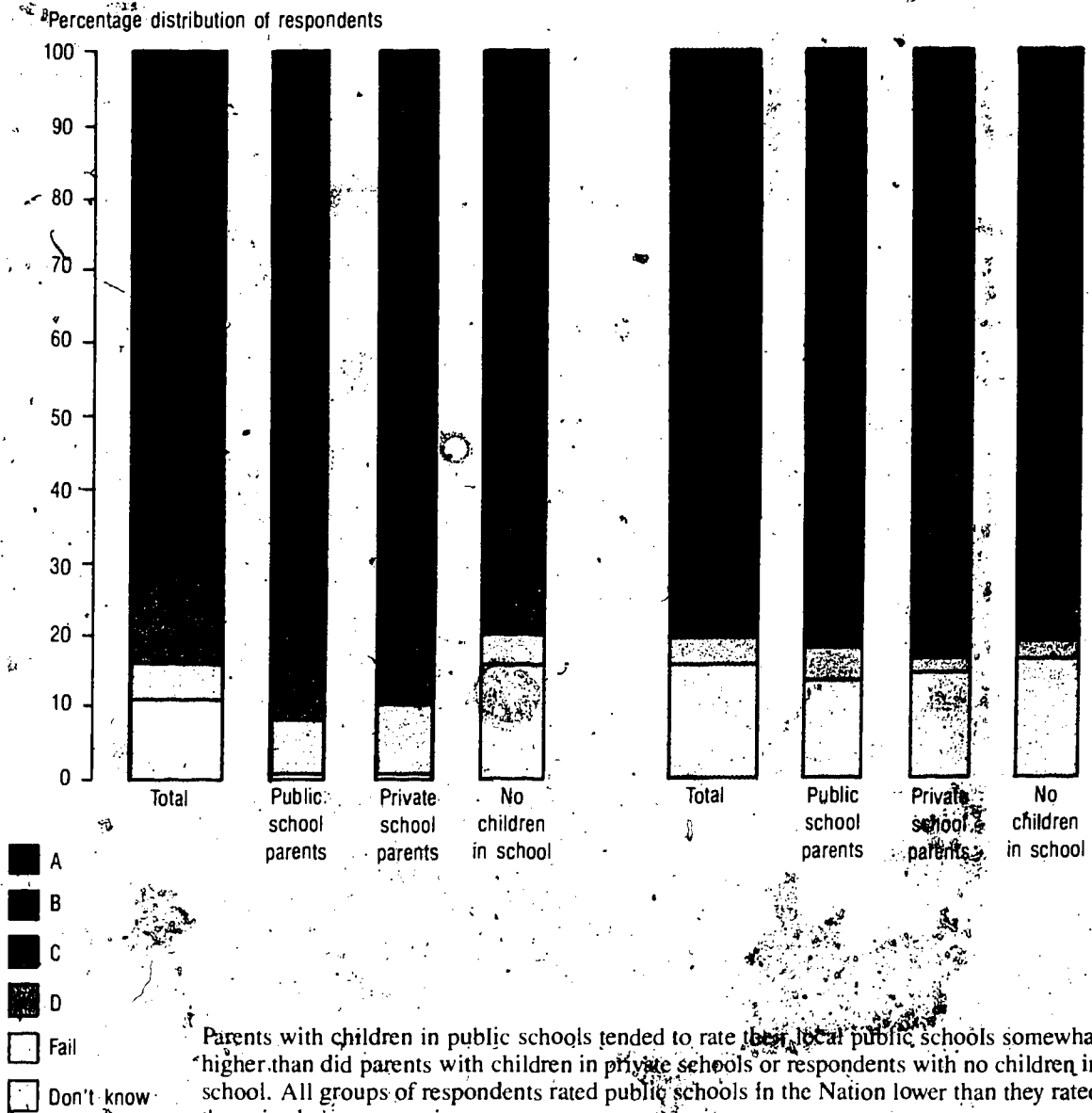
SOURCE: *Phi Delta Kappan*, "The 14th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools", September 1982.



Public Opinion Ratings of Public Schools Locally and Nationally

"Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. Suppose the public schools in this community were graded in the same way. What grade would you give the public schools here—A, B, C, D, or Fail?"

"How about the public schools in the Nation as a whole? How would you rate them—A, B, C, D, or Fail?"



Chapter 2 Higher Education

If overlaid on a map of the Nation, higher education would appear as a patchwork of institutions, ranging from small, variously patterned colleges to large systems that cover entire States. Some variation in higher education would show up along regional lines, since various types of institutions developed as the Nation expanded. Differences would also be apparent along State lines, shaped by tradition and recent initiatives. This chapter sketches the various components of higher education—enrollment, institutions, staffing, finances, and outcomes—from a State perspective. It begins by profiling recent trends in enrollment, then shows the different effects of change on the States. The chapter also examines the public/private mix in higher education institutions and discusses staffing and finances in terms of this characteristic and others. It concludes by showing trends and State comparisons in earned degrees awarded and by highlighting recent data on short-term outcomes of college.

Enrollment

Trends in enrollment

Higher education enrollment increased rapidly from the early to mid-1970's. After some fluctuations in the late 1970's, enrollment again increased to a peak of 12.4 million in 1981 (entry 2.1). After stabilizing at 12.4 million in 1982 and 1983, enrollment is expected to drop slightly but remain at more than 12 million throughout the remainder of the 1980's.

The average annual growth of enrollment in full-time-equivalent students was twice as great in the first half of the 1970's as it was in the second half (entry 2.2). Between 1970 and 1975, full-time-equivalent enrollment rose nationally by 4 percent each year; between 1976 and 1981, the rate slowed to 2 percent growth per annum. This slowdown was registered in a majority of States as well as the Nation. In all but 14 States, annual growth in the later period did not approach the average annual increases throughout the whole of the decade. Among the 14 States with larger gains between 1976 and 1981 than in the earlier period, only one, Alaska, showed any appreciable growth. States with higher-than-average per-

annum increases throughout the entire period were geographically dispersed. The three States with the largest increases were Nevada, Alaska, and South Carolina, and the three States with the smallest were North Dakota, West Virginia, and South Dakota.

Composition of enrollment

During the past decade of enrollment changes, the composition of the students and institutions also changed. Some characteristics that typified the student body at the beginning of the 1970's became less apparent by the end of the decade. Although full-time students and those in 4-year colleges and universities still comprised the majority of college students, their representation among total enrollment was decidedly lower in 1981 than in the previous decade (see entry 2.1). The expansion of public 2-year institutions had much to do with this change. Often offering open admissions, low tuitions, and flexible scheduling, these institutions generally serve the needs of part-time students who combine education with work. The impact of the expansion of public 2-year institutions is readily apparent in the enrollment data. Between 1970 and 1981, the proportion of students in 4-year institutions as opposed to 2-year institutions declined from 74 percent to 62 percent. The proportion of full-time students showed a similar trend, decreasing from 68 percent to 58 percent during the period. The concomitant rise in public enrollment was much less evident, however, increasing from 75 percent to 78 percent of the total enrollment between 1970 and 1981. Evidently, private institutions did not necessarily lose students to the public 2-year institutions.

An additional development over this period was the appreciable growth in the enrollment of women. At the same time, male enrollment remained fairly steady so that by the end of the 1970's, males were no longer in the majority. Male enrollment as a percent of the total enrollment declined by more than 10 percentage points from 59 percent in 1970 to 48 percent in 1981.

On a State-by-State basis, the proportion of undergraduate students ranged from a high of 96 percent in Alaska to a low of 83 percent in New York and 64 percent in the

District of Columbia. Except for the District of Columbia, States did not vary by more than 10 percentage points from the national average of 87 percent undergraduate (entry 2.3). The proportion of enrollment in public institutions ranged from 16 percent in the District of Columbia (with the next lowest proportion being 43 percent in Massachusetts) to nearly 100 percent in Wyoming. The proportion of enrollment in 4-year institutions (colleges and universities) ranged from 35 percent in California to 96 percent in South Dakota (and 100 percent in D.C.). The Far West was largely public, with high proportions in 2-year institutions, while New England had larger proportions in private 4-year institutions. This public/private mix of higher education largely reflects the origins of private higher education in the New England region and the expansion westward of publicly supported colleges and universities.

Minority enrollment in higher education varied widely among the States, primarily as a result of differences in the distribution of minorities in the general population. For example, in Hawaii nearly two-thirds of college students were Asian American, in New Mexico nearly one-quarter were Hispanic, and in the District of Columbia more than one-third were black (entry 2.4). In contrast, white enrollment as a percent of the total was more than 95 percent in some New England, West North Central, and Mountain States.

Residence and migration

College enrollment by State is, to some degree, dependent upon the number of students who attend out of their State of residence. In 1980, high school seniors who planned to attend college were asked whether their intentions were to attend in-State or out-of-State institutions (entry 2.5). Overall about one in five planned to attend college out of State.

When these results were tabulated across a variety of student characteristics, a rather clear picture emerges of students most likely to seek out-of-State enrollment. Highly able students, affluent students, private non-Catholic school students, and New England residents

were the most likely groups intending to enter out-of-State schools. Specifically, the data show that among students in the highest ability group, 28 percent planned to attend an out-of-State college, 10 percentage points higher than indicated in the other three ability groups. Similarly, of students in the high socioeconomic status (SES) group, 29 percent planned to attend out-of-State colleges compared to 16 and 18 percent of low and middle SES students, respectively.

The same measure, tabulated by control of high school, indicates that seniors attending non-Catholic private schools were more than twice as likely to intend enrolling in out of State institutions than public and Catholic high school seniors bound for college. Here, care should be taken in interpreting these results because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in the "other private" category. Educational expectations also played a part in student intentions to attend college out of State. Only 14 percent of those expecting 2 years or less of college planned to attend out of State, but 20 percent of those expecting 4 years of college and 30 percent expecting a graduate degree had such plans. In addition, 43 percent of seniors who planned to enroll in a private college or university intended to go out of State. By comparison, 16 percent of those who planned to attend a public institution intended to go out of State.

Differences in the plans of seniors to attend out-of-State colleges appear regionally as well, ranging from a low of 12 percent in the West South Central region to a high of 43 percent in New England. Family and regional traditions contribute to those plans, as well as such factors as attending private non-affiliated high schools and the availability of nearby private colleges. These factors may help to explain why New England, with its small States, its wide array of private institutions, and its higher-than-average enrollments in private non-affiliated high schools, shows a greater proportion of seniors with out-of-State plans.

An examination of movement into and out of State by first-time freshmen helps to clarify the picture of residence versus migration. Some States, such as California

and Michigan, have only small proportions of their first-time freshman enrollment migrating either into or out of State (entry 2.6). Other States, such as Utah, have small proportions going out of State but large proportions coming into the State. Others experience the reverse, with large proportions going out and small proportions coming into the State, as in New Jersey and Alaska. Still others, such as New Hampshire, have very large proportions both coming into and going out of State to attend college. The effect of the movement of college students into and out of State is called net migration. An imbalance will cause either a positive net migration—that is, more students come into the State than go out—or a negative net migration, where fewer students come into the State than go out. In 1979, 14 States experienced a negative net migration of first-time freshman students.

Institutions

Higher education was offered in the 1981-82 academic year by 3,253 2-year and 4-year collegiate institutions. Despite the tremendous growth in enrollments at the 2-year level, 4-year institutions outnumbered 2-year institutions by about 700 schools (entry 2.7). At the 4-year level, private schools predominated, comprising over two-thirds of 4-year institutions and representing the most typical unit in higher education. At the 2-year level, the reverse was true, with public institutions representing over two-thirds of the schools.

State comparisons of institutions

The distribution of institutions by level and control tends to follow regional lines. Eight States, all located in the South and West regions, had more 2-year than 4-year institutions and, with 19 other States, more public than private institutions. States with more private than public institutions were generally located in the Northeast and North Central regions, with a few exceptions. The public/private mix was usually reflected in enrollments; that is, in most States where public institutions were in the majority, enrollment in public institutions was well over the national average of 78 percent of all students. Conversely, in most States where private institutions pre-

dominated, the private sector enrolled a greater-than-average proportion of all students. Yet, it is noteworthy that of the 24 States with more private schools than public, only Massachusetts and the District of Columbia enrolled a majority of students in private schools. This is because private schools, although more numerous, tend to be smaller than public institutions.

Classification of institutions

In addition to classifying institutions by level and control, as presented above, the National Center for Education Statistics has recently adopted a more detailed classification system for institutions of higher education. This new system is based on the kinds and variety of the programs offered and degrees awarded. Of the 3,253 institutions of higher education operating in 1981-82, the 1,214 institutions were classified as 2-year colleges, or their degrees and awards for work below the bachelor's level (entry 2.5). Of these 1,214 schools, the vast majority (933) were public institutions. General baccalaureate institutions comprised the largest category of institutions awarding 4-year degrees. They are characterized by a primary emphasis on general undergraduate, baccalaureate-level education and the fact that such colleges were not significantly engaged in post-baccalaureate education. Of these 730 institutions, 607 were privately controlled.

Doctoral-granting and comprehensive institutions were two of the categories that offered post-baccalaureate education, and they numbered 167 and 408 institutions, respectively. While both doctoral-granting and comprehensive institutions offer diverse post-baccalaureate programs (including first-professional programs in areas such as law and medicine), only the doctoral-granting institutions engage significantly in doctoral-level programs. Both types included more public than private institutions.

There were 545 specialized institutions, classified as such because they emphasize a single program area (or a closely-related group of areas), such as business or engineering. Most of these institutions were privately con-

trolled and offered baccalaureate, post-baccalaureate, or a combination of these levels of education.

The two smallest categories of institutions are called "new" and "non-degree granting". The new institutions, 142 in 1981-82, are thus classified because they are recent additions to the survey and will be reclassified as degree and award information become available. The non-degree granting schools numbered 47, all private, and are so classified because they offer undergraduate- or graduate-level instruction but do not confer degrees or awards.

Closings of institutions

The private 4-year college was not only the most typical institution in higher education, it was also the most likely to have closed over the last decade. During the 1970's, 76 private 4-year institutions closed their doors, out of a total of 141 closings (entry 2.9). In 1980-81, three private 4-year institutions closed. Most of these were small residential colleges with enrollments under 1,000 students and offered baccalaureate liberal arts curriculums. Largely dependent on full-time undergraduates of traditional college age for their enrollments and tuition revenues, these schools have had to compete in recent years for students and some have failed. Most closings have occurred in States that have large numbers of higher education institutions, such as New York, and thus have not appreciably diminished the stock of institutions within particular States. In addition, closings may not represent a net drop in institutions, as new institutions are established and former 2-year institutions convert to 4-year institutions. Yet, over the past 20 years, most of the new schools to open were public 2-year institutions. It is projected that as the population of traditional college-age decreases, more schools may close.

Staff

Trends in staffing

Higher education faculty was estimated to number 846,000 in 1980 (entry 2.10). The number of instructional faculty generally followed enrollment trends, with

the number having increased rapidly in the early to mid-1970's and rising at a slower rate later in the decade. It is projected to begin decreasing after 1982. The number of part-time faculty nearly doubled between 1970 and 1980, while the number of full-time faculty increased at a slower rate. The demand for additional full-time replacement faculty totaled 229,000 between 1970 and 1975 but dropped to 183,000 for the period 1976 to 1980. Most of the demand in the early period was attributable to enrollment changes, while in the later period, it was due to replacement needs. Although projections are speculative, replacement needs are expected to continue in the 1980's at about the same rate as in the previous decade, while the effect of enrollment changes on the demand for faculty is expected to be negative.

Faculty salaries

Throughout most of the 1970's, increases in faculty salaries failed to keep pace with high rates of inflation. Faculty salaries in real terms dropped by some 5 percent annually in years of double-digit inflation and did not fully recover in the years following (entry 2.11). In 1981-82, faculty salaries in real terms increased minimally by 0.3 percent as inflation fell. Viewed over the entire period, the average salary for all ranks combined declined by one-fifth when adjusted for inflation.

On the average nationally, salaries of professors in public institutions differed little from those of their counterparts in private institutions, \$33,700 compared to \$32,900 in 1981-82 (entry 2.12). Variations did exist regionally, however. In the Plains, Southeast, and Southwest, public institution professors averaged at least \$3,000 more than private institution professors. In only one region, New England, professors in private institutions earned appreciably more than professors in public institutions. Salaries in public institutions were highest in the Midwest, Southwest, and Far West and in private institutions they were highest in New England and the Far West, although salaries within the regions varied by State. Professors in public institutions earned the highest salaries in Alaska, Arizona, Delaware, and Wyoming while those in private institutions earned the highest in Massachusetts and California.

Unionization of faculty

Unionization of higher education faculty grew during the past 8 years. In 1974, faculty at 211 institutions had collective bargaining agreements (entry 2.13). By 1981, the total was 382, an increase of 81 percent, and represented approximately 12 percent of all institutions of higher education. Public institutions were about five times as likely as private institutions to have faculty working under collective bargaining agreements. Two-year institutions were about twice as likely as 4-year institutions to have a unionized faculty.

The degree of faculty unionization varied significantly among the States, with clear regional differences (entry 2.14). Most of the States in the South and Mountain regions had no unionized faculties, while all of the States in New England had faculty contracts and bargaining agents in some institutions.

Finance

Revenues

Institutions of higher education depend for their financial support on a combination of public and private sources. The mix of monies is largely dependent on the control of the institution and, to a lesser extent, on the level of the institution. Public institutions derive their funding primarily from governmental sources, while private institutions depend much more heavily on student sources (entry 2.15).

Of the governmental sources, State governments contributed the largest share of governmental funds at public institutions and the Federal government provided most of the governmental funds at private institutions. State funding was generally through appropriations, while Federal funding was often through contracts and grants. This excludes aid to higher education through student loans and grants, of which the Federal government is the largest contributor. In 1980-81, State revenues comprised 44 percent of all funding for public 4-year institutions and 50 percent for public 2-year institutions, but only 2 percent for all private institutions. The State share for public institutions in 1980-81 represented somewhat of

an increase over the figures reported in 1970-71. Federal revenues made up almost one-fifth of the support for private 4-year institutions, slightly higher than for public 4-year institutions and much higher than for public and private 2-year institutions. Local support was a significant source only for public 2-year institutions, and its share has declined over time, replaced by State government revenues.

Student revenues, mainly tuition and fees, comprised less than one-fourth of the total revenues of public institutions, about half of those of private 4-year institutions, and more than three-fourths of those of private 2-year institutions. Funding from institutional sources, including endowment income, was relatively significant only for 4-year institutions.

State and local revenues combined equaled about half of all monies received by public institutions, with some variation by State. The shares from State and local governments ranged in public institutions from a low of 21 percent in Vermont to over 60 percent in Alaska, California, New York, and the District of Columbia (entry 2.16). Variations in the share contributed by State and local governments to public institutions may be accounted for by several factors. Among these, extensive community college systems and high in-State student enrollments may increase the State and local share. Other factors may be differences in the State philosophy regarding tuition. The proportion of private institution revenues derived from State and local sources was small, less than 3 percent nationally. The contribution to private institutions was highest in New York at 7 percent. A majority of States and their localities, however, contributed less than 1 percent to private higher education.

Expenditures

Trends in expenditures by higher education institutions generally reflected the impact of inflation and differing growth in the various sectors between 1971 and 1981. In fiscal year 1970-71, 23 billion dollars in current funds were spent by higher education institutions; by 1980-81, expenditures had almost tripled to 64 billion dollars (en-

try 2.17). The impact of high inflation throughout the period can be shown by applying to the data the Higher Education Price Index, a variant of the Consumer Price Index, which takes into account price increases in higher-education-related goods and services. For every 100 dollars spent in 1971 by higher education institutions, 203 dollars were required in 1981 to purchase comparable goods and services. The impact of increased enrollments is also apparent by examining the increases in expenditures by sector. While all sectors at least doubled their expenditures, public 2-year institutions, the sector experiencing the greatest expansion, almost quadrupled expenditures between 1971 and 1981. Controlling both for rises in higher education prices and increases in enrollment, however, reveals that little of the increase in expenditures translated into real growth in dollars spent per full-time-equivalent (FTE) student. Public 4-year institutions showed the most appreciable growth in expenditures per FTE student, rising in constant dollars by some 13 percent from 1971. Still, private 4-year institutions spent at least \$2,000 more per FTE student than did public 4-year institutions. Expenditures per FTE student made by private 2-year institutions actually declined somewhat throughout most of the period when adjusted for inflation. In 1971, private 2-year institutions spent about \$4,400 per FTE student, \$1,400 more than public 2-year institutions; by 1981, less than \$500 separated private 2-year from public 2-year expenditures per FTE student.

The bulk of current funds expenditures in higher education went towards instructional costs; approximately 41 percent was spent for instruction in the 1980-81 fiscal year (entry 2.18). Funds also were channelled, in about equal proportions, to research, public and student services, institutional support, academic support, and physical plant, with somewhat less having gone towards scholarships and fellowships. Public institutions and, in particular, public 2-year institutions devoted a larger share of their funding to instructional expenses: 42 percent of expenditures in public 4-year institutions went to instruction compared with 37 percent in private 4-year institutions, and 51 percent in public 2-year institutions compared with 34 percent in private 2-year institutions.

States varied only slightly in the proportion of educational and general expenditures devoted to instructional costs. The proportion spent on instruction ranged from a low of 31 percent to a high of 49 percent, with most States clustered around the national average of 41 percent. States with extensive public 2-year systems had generally higher proportions going to instruction. States with large universities, however, devoted a smaller share to instruction, spending more on research.

Outcomes

Degrees conferred

Trends in degree production generally reflect earlier changes in the numbers enrolled, tempered by changes in the composition of enrollment. The peak year in bachelor's degrees awarded came in 1973-74 following the rapid rise in college enrollment in the late 1960's (entry 2.19). In the mid- to late 1970's, bachelor's degree production fluctuated with the falling off of full-time undergraduate enrollment. By the early 1980's, however, production appeared again on the rise. In 1980-81, almost 1 million bachelor's degrees were awarded. Contributing heavily to the increase was the growth in female enrollments throughout the 1970's. While bachelor's degrees awarded to men declined beginning in the mid-1970's and continuing into 1980-81, bachelor's degrees earned by women increased steadily. By 1980-81, fully half of all bachelor's degrees went to females.

Master's degree production reached a high point in the 1976-77 academic year and has tapered off since then. As will be shown in a later chapter on teacher preparation, master's degrees in education contributed largely to the rise and subsequent decline in the total number of master's degrees awarded. Again, women represented a steadily increasing share of degree recipients, accounting for 50 percent of all master's degrees awarded for the 1980-81 academic year.

The number of doctor's degrees awarded showed only minor fluctuations throughout the period. Since the early 1970's, the number and share of doctor's degrees earned by men has fallen each year, declining by over one-fourth

between 1972-73 and 1980-81, compensating for this decline has been the unprecedented rise in the number of women earning doctor's degrees. More than twice as many women earned doctorates in 1980-81 than a decade earlier. While women continued to represent a smaller share of doctoral recipients than men, 31 percent in 1980-81, their representation more than doubled over the period.

At the first-professional degree level, too, the number of degrees conferred to women contributed substantially to the rise in total degree output throughout the 1970's and into the 1980's. The number of male recipients of first-professional degrees in general rose steadily in the early and mid-1970's, but by 1976-77 it had begun to level off (entry 2.20). The first-professional degrees awarded to female recipients, however, increased geometrically, almost doubling in number every 3 years. From 1970-71 to 1980-81, the number of female recipients more than quadrupled in medicine and increased by nine-fold in law. In terms of representation, women comprised one-third of all first-professional degree recipients in general, one-fourth of those in medicine, and one-fifth of those in law in 1980-81.

When first-professional degrees are added in with baccalaureate and graduate academic degrees, total degrees awarded were over 1.3 million in 1980-81 (entry 2.21). Bachelor's degrees represented 70 percent of this total nationally but varied somewhat by State. States with smaller populations or located in the South tended to confer more bachelor's degrees relative to advanced degrees. States whose institutions have extensive graduate programs that draw students from outside State boundaries as well as from large resident populations tended to award proportionally more advanced degrees.

Just as the public sector dominated enrollment, so too did it confer a greater share of total degrees awarded. Public institutions in 1980-81 conferred 64 percent of all degrees, a smaller proportion, however, than these schools enrolled. Generally, the public/private mix in degrees awarded followed the pattern set by enrollment, that is, the private sector was significant in the Northeast, some Midwestern States, Utah, and the District of Co-

lumbia. In fact, in Connecticut, the District of Columbia, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont, a majority of degrees were conferred by private institutions.

States, too, differed in the extent to which degrees were conferred below the baccalaureate level. Associate degrees require at least 2 but less than 4 years of college work and may terminate with an entry-level occupational skill or be creditable towards a baccalaureate degree. In the school year 1980-81, 416,000 associate degrees were awarded, slightly greater than the number of master's, doctor's, and first-professional degrees combined (entry 2.22). States with large associate degree programs, relative to total baccalaureate and advanced degree production, included Alaska, California, Florida, Idaho, Washington, and Wyoming (see also entry 2.21). The academic or occupational emphasis of associate degree programs varied from State to State. Nationally, associate degrees were divided somewhat evenly among nonoccupational arts and sciences degrees, earned primarily as credit towards a 4-year degree; occupational degrees earned in science- or engineering-related curriculums, and occupational degrees earned outside of science- or engineering-related curriculums. In Florida, most notably, and in nine other States, associate degrees in nonoccupational programs predominated. Associate degrees in science- or engineering-related occupational curriculums represented the majority in 6 States, led by Nebraska, while occupational degrees outside of science- or engineering-related fields represented at least 50 percent in South Carolina and South Dakota.

Employment of recent college graduates

College graduation with a baccalaureate degree leads some recipients into the labor market, others into more advanced academic work. In some fields, graduate study is almost mandatory, while in others such as engineering and education, graduates often enter directly into the labor force. In May of 1981, 86 percent of bachelor's recipients from the previous year were in the labor force (entry 2.23). This figure was essentially unchanged from the labor force participation of recent bachelor's recip-

ients reported in 1978. The field of academic preparation influenced to some extent whether recipients went directly into the labor market. Students who trained in the professional fields—including engineering, business and management, health, education, and public affairs—had the highest labor force entry rate, 91 percent. Arts and sciences graduates, many of whom were pursuing advanced study, had a lower rate of 77 percent. Graduates who were newly qualified to teach had rates comparable to those graduated in professional fields.

Unemployment among those graduates in the labor force was approximately 5 percent in May of 1981 and differed somewhat by field of college study. Graduates newly qualified to teach had one of the lowest rates, 3 percent. Among graduates not newly qualified to teach, those who majored in physical sciences and mathematics also had low unemployment, while those in psychology, social sciences, and humanities had higher-than-average unemployment. Some caution, however, should be taken in making inferences about unemployment rates based on small numbers surveyed.

The extent to which graduates applied their college study to full-time work also differed by field. In May 1981, 71 percent of recent bachelor's recipients were employed full-time, ranging from 80 percent of those who graduated in the professional fields to 56 percent in the arts and sciences (entry 2.24). Among all recipients, 38 percent were employed full-time in work they considered highly related to their college major. This represented a majority of those employed full-time. Graduates in professional fields and those newly qualified to teach were the most likely to be working full-time in fields considered closely related. In addition, these graduates were less likely to be employed full-time in non-professional jobs than the average. Graduates with physical sciences and mathe-

matics majors were also much less likely to be employed full-time in non-professional work. Again caution should be exercised in interpreting these results for fields reporting small numbers.

Most recent bachelor's recipients working full-time in 1981 were employed in professional and technical work or managerial and administrative work. Business represented the largest occupational field; about one-fourth of all those working full-time were employed in the business field (entry 2.25). Education was the next largest occupational field, although its share of bachelor's recipients declined somewhat between 1978 and 1981. Compared to graduates in 1978, fewer graduates in 1981 went into non-professional fields, with the exception of sales work.

Although unemployment and underemployment changed little between 1978 and 1981 among recent bachelor's recipients, salaries on the average declined. When adjusted for inflation to 1981 dollars, the average salary was \$700 more in 1978 than in 1981, \$16,000 compared to \$15,300. Salary declines were more apparent in some occupations than in others. For example, in 1978, those employed in education earned salaries comparable to all recipients when the educators' salaries were adjusted to a 12-month pay period. When the same adjustment is made to educators' salaries in 1981, however, the figures show that they earned \$14,000 compared to \$15,300. Graduates working full-time in engineering and computer sciences continued to earn the highest salaries, \$22,900 and \$19,800 respectively. This meant that graduates working in engineering commanded salaries one and one-half times as high as the average salary of all graduates and twice that of graduates employed in the lowest paying field, clerical and secretarial work.

Table 2.1

Total Enrollment in Institutions of Higher Education and Percent of Total Enrollment, by Student and Institutional Characteristics: Fall 1970 to 1990

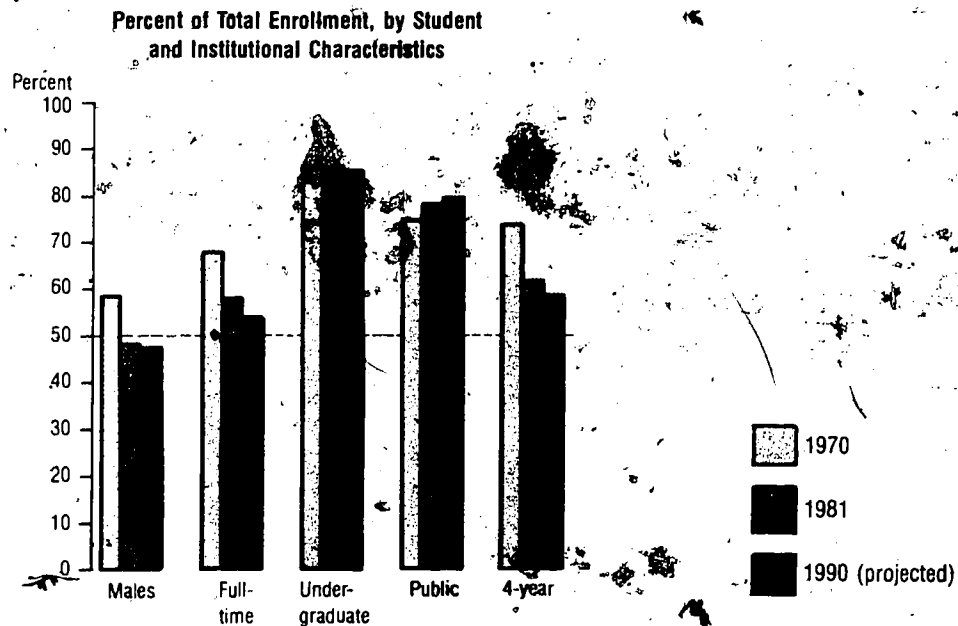
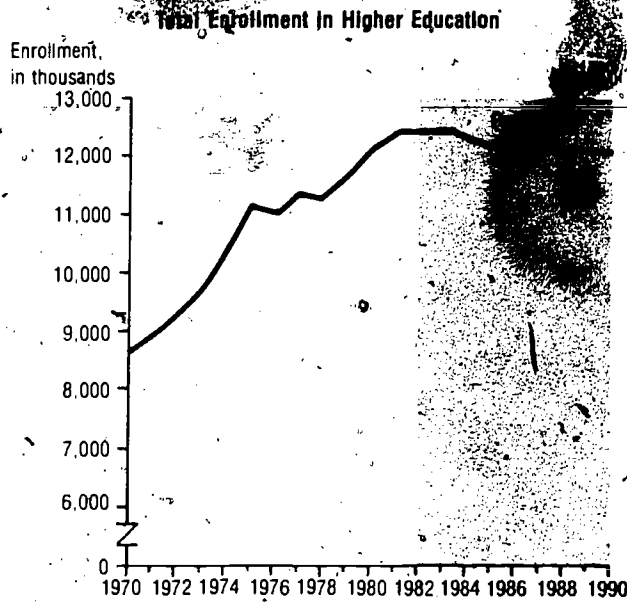
Fall of Year	Total Enrollment, in Thousands	Percent of Total				
		Male Students	Full-Time Students	Under-Graduate Students	Students in Public Institutions	Students in 4-Year Institutions
1970	8,581	58.8	67.8	86.0	74.9	74.1
1971	8,949	58.2	67.9	86.5	76.0	72.2
1972	9,215	56.9	65.9	86.2	76.7	70.1
1973	9,602	55.9	64.5	86.0	77.3	68.6
1974	10,224	55.0	62.3	86.1	78.1	66.7
1975	11,185	55.0	61.2	86.5	79.0	64.5
1976	11,012	52.8	61.0	85.6	78.6	64.7
1977	11,286	51.3	60.2	86.1	78.4	64.2
1978	11,259	50.1	59.2	86.1	78.0	64.2
1979	11,570	49.1	58.7	86.4	78.1	63.6
1980	12,097	48.6	58.7	86.6	78.2	62.6
1981	12,372	48.3	58.0	86.9	78.0	61.9
1982 ¹	12,358	48.4	58.3	86.2	78.3	61.7
			Projected ²			
1983	12,353	48.6	57.8	85.9	78.6	61.3
1984	12,351	48.9	56.9	85.6	78.8	60.8
1985	12,174	48.6	55.7	85.3	79.0	60.3
1986	12,120	48.4	55.0	85.1	79.1	59.9
1987	12,093	48.2	54.6	85.1	79.2	59.5
1988	12,098	48.0	54.4	85.1	79.3	59.2
1989	12,139	47.8	54.3	85.4	79.4	58.9
1990	12,101	47.7	54.0	85.4	79.5	58.7

¹ Preliminary estimates.

² Intermediate alternative projections.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91, Volume I, 1982; Fall Enrollment in Colleges and Universities, 1982*, early release, 1983; and unpublished tabulations (February 1983).

Total Enrollment in Institutions of Higher Education and Percent of Total, by Student and Institutional Characteristics



After peaking in 1981, higher education enrollment is projected to stabilize in 1982 and 1983 before declining slightly through 1987. The proportions that are male, full-time, and in 4-year institutions are expected to continue decreasing in the 1980's, while the proportion in public institutions is expected to increase.

Table 2.2

Average Annual Percent Change in Full-Time-Equivalent Enrollment in Institutions of Higher Education, by State: Fall 1970 to 1975 and fall 1976 to 1981

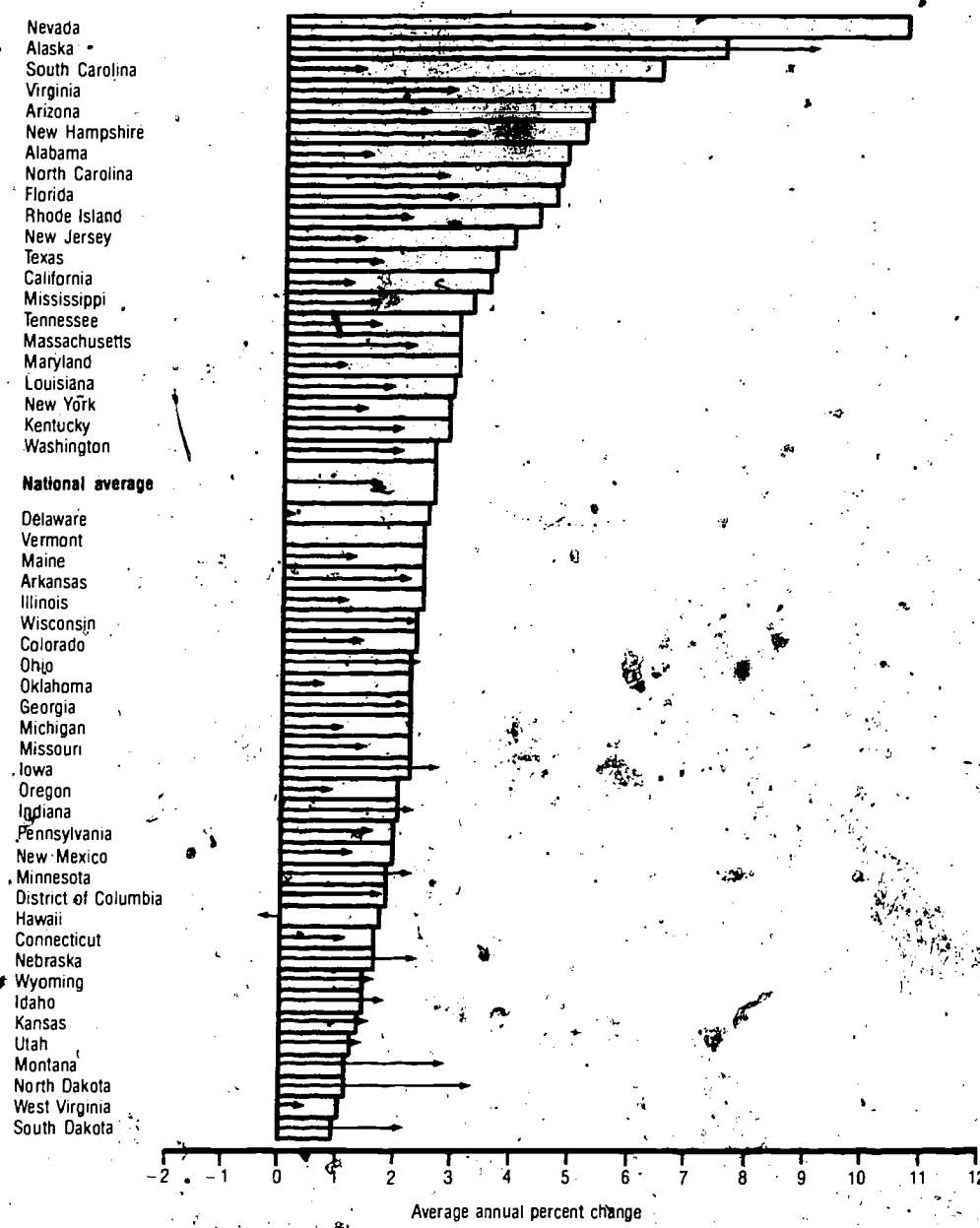
State	Average Annual Percent Change		
	1970 to 1975	1976 to 1981	1970 to 1981
50 States and D.C.	3.6	1.8	2.7
Alabama	8.3	1.5	4.9
Alaska	6.0	9.2	7.6
Arizona	8.1	2.5	5.3
Arkansas	2.7	2.3	2.5
California	6.0	1.2	3.6
Colorado	3.4	1.4	2.4
Connecticut	2.3	1.1	1.7
Delaware	5.0	1.2	2.6
District of Columbia	1.9	1.8	1.9
Florida	6.4	3.0	4.7
Georgia	2.3	2.2	2.3
Hawaii	4.0	-.4	1.8
Idaho	1.1	1.9	1.5
Illinois	3.7	1.2	2.5
Indiana	1.8	2.4	2.1
Iowa	1.7	2.8	2.3
Kansas	1.2	1.6	1.4
Kentucky	3.7	2.1	2.9
Louisiana	4.1	1.9	3.0
Maine	3.6	1.3	2.5
Maryland	5.0	1.1	3.1
Massachusetts	3.9	2.3	3.1
Michigan	3.5	1.1	2.3
Minnesota	1.4	2.4	1.9
Mississippi	4.9	1.7	3.3
Missouri	3.1	1.5	2.3
Montana	-.6	2.9	1.1
Nebraska	.9	2.5	1.7
Nevada	16.1	5.3	10.8
New Hampshire	7.0	3.4	5.2
New Jersey	6.5	1.4	4.0
New Mexico	2.7	1.3	2.0
New York	4.2	1.5	2.9
North Carolina	6.8	2.7	4.8
North Dakota	-1.0	3.4	1.2
Ohio	2.2	2.4	2.3
Oklahoma	3.8	.7	2.3
Oregon	3.2	.9	2.1
Pennsylvania	2.3	1.7	2.0
Rhode Island	6.6	2.2	4.4
South Carolina	11.6	1.4	6.5
South Dakota	-.2	2.2	1.0
Tennessee	4.5	1.7	3.1
Texas	5.7	1.7	3.7
Utah	1.0	1.5	1.3
Vermont	5.0	(¹)	2.5
Virginia	8.1	3.0	5.6
Washington	3.3	2.1	2.7
West Virginia	1.8	0.4	1.1
Wisconsin	2.3	2.4	2.4
Wyoming	1.2	1.7	1.5

¹ Less than 0.05 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, and American Council on Education, *Trends and Patterns: A Study of Enrollments in Higher Education, 1970-79, 1982*, and unpublished tabulations (October 1982).

Chart 2.2

Average Annual Percent Change in Full-Time-Equivalent Enrollment, 1970 to 1981, by State



From 1970 to 1981, the average annual growth in full-time-equivalent enrollment ranged from 11 percent per year in Nevada to 1 percent in South Dakota. Most States experienced slower growth in the latter half of the period.

9.4

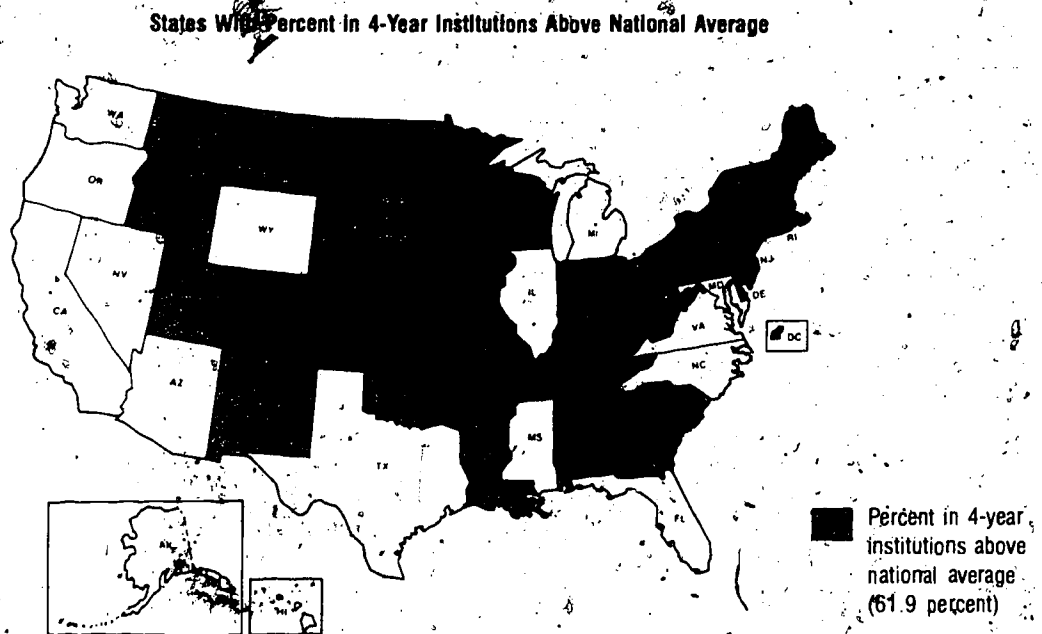
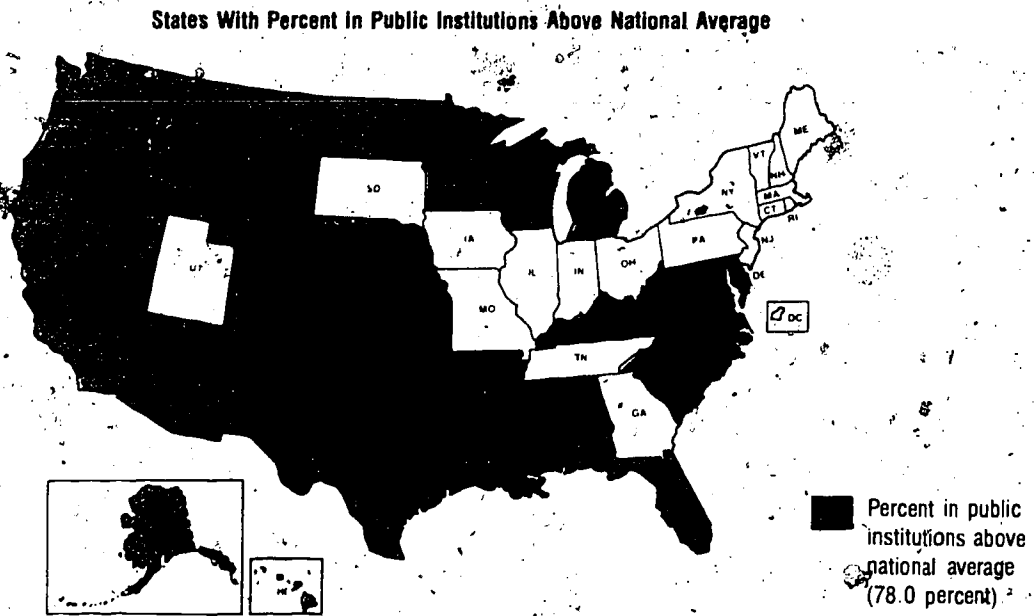
Table 2.3

Higher Education Enrollment and Percent Undergraduate, Full-Time, in Public, and in 4-Year Institutions, by State, Academic Year 1981-82

State	Total Enrollment	Percent of Total Enrollment			
		Undergraduate and Unclassified	Full-Time	In Public Institutions	In 4-Year Institutions
50 States and D.C.	12,371,672	86.9	58.0	78.0	65.9
Alabama	166,375	88.9	71.9	87.2	72.6
Alaska	24,754	95.6	29.2	96.4	41.3
Arizona	205,169	89.2	45.2	95.3	44.3
Arkansas	76,032	89.5	73.6	84.9	82.1
California	1,885,757	89.3	40.4	89.7	35.3
Colorado	467,977	87.8	63.3	89.1	71.5
Connecticut	162,367	81.2	53.2	61.3	72.5
Delaware	32,061	93.2	65.1	87.8	76.9
District of Columbia	88,553	60.4	57.5	15.9	100.0
Florida	426,570	90.0	52.5	81.0	47.9
Georgia	191,384	84.2	68.9	76.4	75.7
Hawaii	48,121	88.2	61.2	93.7	56.7
Idaho	42,758	89.2	68.1	79.2	72.8
Illinois	659,623	86.4	57.2	76.4	51.4
Indiana	251,826	86.2	67.0	76.7	85.3
Iowa	143,105	86.0	76.5	69.8	73.0
Kansas	138,453	84.4	60.0	89.7	70.6
Kentucky	144,154	84.4	68.4	80.1	80.4
Louisiana	174,656	80.8	68.9	86.3	91.6
Maine	44,012	94.8	68.6	73.6	80.1
Maryland	229,936	86.9	68.5	85.9	57.4
Massachusetts	417,830	82.3	62.9	42.7	78.8
Michigan	513,033	88.3	56.0	86.9	57.3
Minnesota	210,713	87.6	68.1	78.5	79.3
Mississippi	105,974	89.9	76.2	89.6	58.9
Missouri	243,672	84.9	62.5	71.0	75.8
Montana	35,959	90.5	73.8	88.6	87.8
Nebraska	93,507	87.6	61.3	82.1	74.3
Nevada	39,936	93.9	32.1	99.5	50.1
New Hampshire	48,524	89.5	72.1	52.6	82.6
New Jersey	322,797	85.4	51.7	77.0	63.8
New Mexico	60,413	87.1	61.6	94.8	82.3
New York	1,014,863	83.2	63.4	56.4	71.2
North Carolina	295,771	90.0	67.6	79.9	58.6
North Dakota	35,446	91.5	83.0	92.7	77.4
Ohio	521,396	86.7	61.0	73.8	68.9
Oklahoma	162,825	86.8	58.6	85.8	66.5
Oregon	149,924	87.9	61.0	88.4	53.5
Pennsylvania	517,879	85.2	67.4	56.7	75.9
Rhode Island	68,339	87.6	63.4	51.7	81.2
South Carolina	132,394	88.4	71.0	82.3	65.2
South Dakota	35,015	89.4	75.7	75.0	96.2
Tennessee	200,183	87.0	68.0	76.4	72.9
Texas	716,297	86.4	57.6	87.4	61.4
Utah	97,048	90.3	67.8	83.6	82.1
Vermont	30,573	89.9	73.3	59.7	85.7
Virginia	286,015	88.7	58.0	87.8	59.3
Washington	278,680	91.8	55.1	89.6	39.2
West Virginia	82,375	84.0	61.0	86.7	85.7
Wisconsin	275,325	89.4	64.8	87.5	66.3
Wyoming	21,335	91.3	60.4	99.9	45.4
U.S. Service Schools	54,988	93.3	99.7	100.0	36.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, unpublished tabulations (August 1982)

Higher Education Enrollment Characteristics, by State



States in the Far West had a larger proportion of enrollment in public institutions than the national average and a smaller proportion in 4-year institutions than the national average. The reverse was true for States in New England.

Table 2.4

**Racial/Ethnic Distribution of Higher Education Enrollment¹, by State:
Fall 1980**

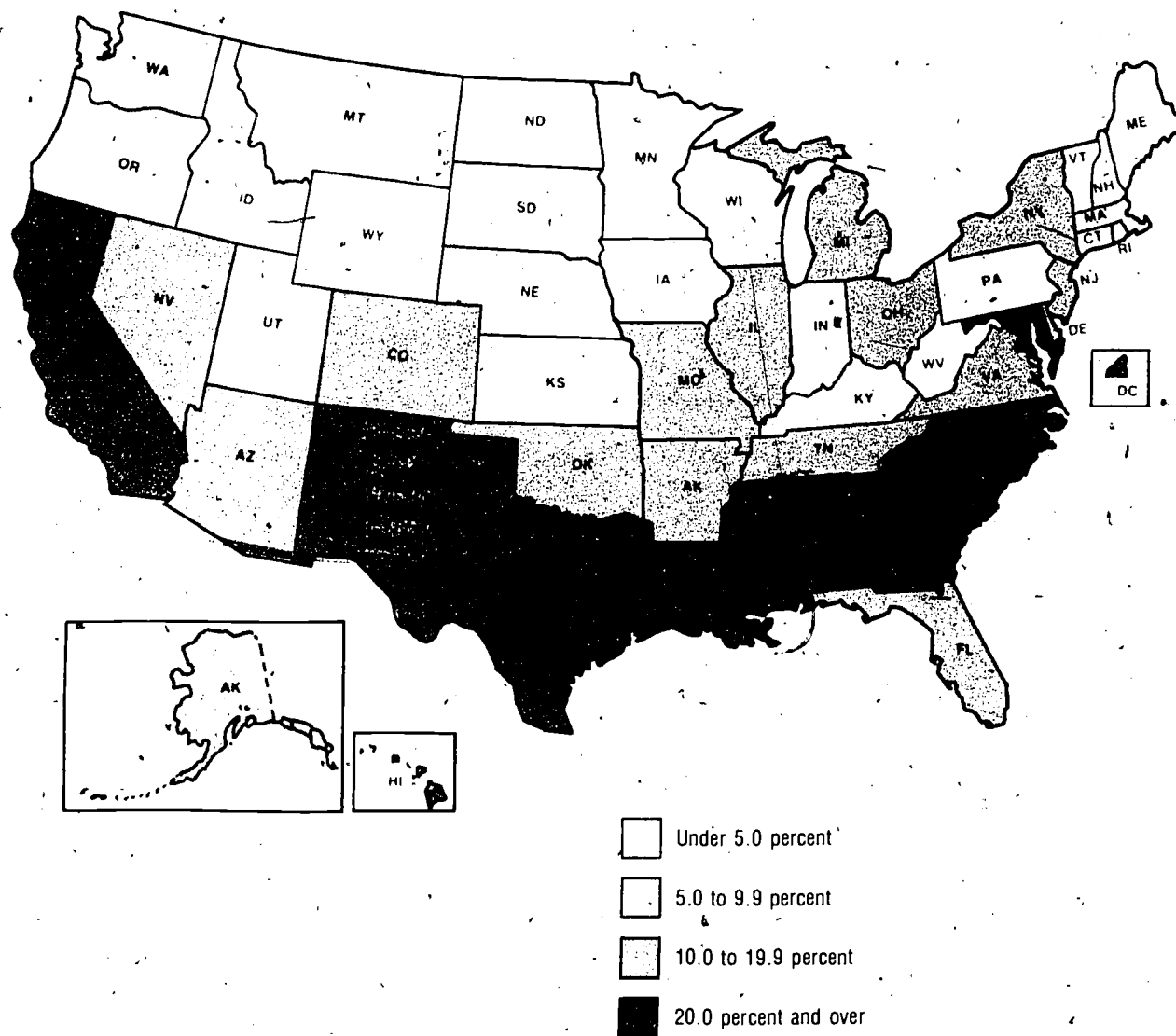
State	Total ¹	White Non-Hispanic	Total Minority	Black Non-Hispanic	Hispanic	American Indian/ Alaskan Native	Asian or Pacific Islander
50 States and D.C.	100.0	83.5	16.5	9.4	4.0	0.7	2.4
Alabama	100.0	76.9	23.1	22.0	4	2	5
Alaska	100.0	88.9	11.1	2.5	1.0	6.4	1.2
Arizona	100.0	84.7	15.3	2.8	7.6	3.6	1.3
Arkansas	100.0	83.4	16.6	15.0	3	7	7
California	100.0	73.3	26.7	8.2	9.7	1.3	7.5
Colorado	100.0	89.2	10.8	2.9	5.7	7	1.4
Connecticut	100.0	91.9	8.1	5.0	1.7	3	1.0
Delaware	100.0	87.4	12.6	11.1	8	1	6
District of Columbia	100.0	60.3	39.7	34.8	2.0	4	2.5
Florida	100.0	80.1	19.9	10.6	8.1	3	1.0
Georgia	100.0	79.3	20.7	19.2	7	2	7
Hawaii	100.0	29.8	70.2	1.4	2.7	3	65.8
Idaho	100.0	95.6	4.4	6	1.5	9	1.4
Illinois	100.0	83.4	16.6	11.6	2.5	4	2.2
Indiana	100.0	91.5	8.5	6.4	1.2	3	7
Iowa	100.0	95.9	4.1	2.4	6	4	8
Kansas	100.0	92.3	7.7	4.3	1.5	1.3	6
Kentucky	100.0	91.6	8.4	7.2	4	3	6
Louisiana	100.0	74.2	25.8	23.3	1.6	2	6
Maine	100.0	98.8	1.2	4	2	4	3
Maryland	100.0	78.3	21.7	18.0	1.4	3	2.1
Massachusetts	100.0	93.4	6.6	3.6	1.5	2	1.3
Michigan	100.0	87.0	13.0	10.3	1.2	5	9
Minnesota	100.0	96.9	3.1	1.2	5	5	1.0
Mississippi	100.0	69.5	30.5	29.7	3	2	3
Missouri	100.0	88.9	11.1	9.1	8	3	9
Montana	100.0	94.3	5.7	4	4	4.5	3
Nebraska	100.0	94.6	5.4	3.0	1.0	6	7
Nevada	100.0	86.2	13.8	6.9	3.2	1.5	2.2
New Hampshire	100.0	97.1	2.9	1.6	6	3	4
New Jersey	100.0	83.6	16.4	10.2	4.3	3	1.6
New Mexico	100.0	68.1	31.9	2.2	24.0	3.9	8
New York	100.0	80.7	19.3	10.9	5.5	5	2.3
North Carolina	100.0	78.8	21.2	19.4	4	7	6
North Dakota	100.0	96.6	3.4	5	2	2.4	3
Ohio	100.0	88.8	11.2	9.5	7	3	7
Oklahoma	100.0	87.8	12.2	6.2	1.1	3.9	1.1
Oregon	100.0	94.3	5.7	1.0	1.1	1.0	2.6
Pennsylvania	100.0	90.5	9.5	7.6	8	2	9
Rhode Island	100.0	94.1	5.9	3.4	1.4	2	1.0
South Carolina	100.0	76.6	23.4	22.3	5	1	5
South Dakota	100.0	93.8	6.2	1.0	8	4.2	3
Tennessee	100.0	83.6	16.4	15.4	4	2	4
Texas	100.0	76.4	23.6	9.5	12.7	4	1.1
Utah	100.0	95.0	5.0	6	1.5	1.1	1.8
Vermont	100.0	98.0	2.0	1.1	5	1	3
Virginia	100.0	83.0	17.0	14.7	7	2	1.3
Washington	100.0	91.4	8.6	2.2	1.5	1.3	3.6
West Virginia	100.0	95.4	4.9	4.0	3	2	4
Wisconsin	100.0	94.0	6.0	3.5	1.0	7	8
Wyoming	100.0	96.0	4.0	8	1.7	9	5
U.S. Service Schools	100.0	86.5	13.5	11.1	1.2	1	1.0

¹Excludes nonresident aliens.

NOTE: Data include undergraduate, graduate, first-professional, and unclassified students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Fall Enrollment in Higher Education, 1980, unpublished tabulations (September 1982).

Minority Enrollment as Percent of Total Enrollment in Higher Education, by State



States with large populations of minorities had larger proportions of higher education enrollment from minority groups in 1980. New England, West North Central, and Mountain States had the lowest percent of minority enrollment.

Table 2.5

Intentions of 1980 College-Bound¹ Seniors to Attend In-State or Out-of-State Schools, by Ability Quartile, Socioeconomic Status (SES), Racial/Ethnic Group, Student Educational Expectation, Control of High School, and Region: Spring 1980

Item	Total	Plan to Attend In-State	Plan to Attend Out-of-State	Not Reported	Sample Size
Percentage Distribution					
Total	100.0	73.8	20.2	6.1	17,871
Ability ² quartile:					
Lowest	100.0	69.8	17.6	12.6	2,894
2nd	100.0	78.0	16.7	5.3	3,555
3rd	100.0	78.8	17.4	3.8	4,283
Highest	100.0	69.3	27.9	2.8	5,301
SES ³ :					
Low	100.0	76.2	15.8	8.0	4,039
Middle	100.0	77.7	17.8	4.4	8,098
High	100.0	66.3	29.2	4.5	5,437
Racial/ethnic group:					
White non-Hispanic	100.0	74.6	21.3	4.1	12,527
Black non-Hispanic	100.0	62.2	24.8	13.0	2,498
Hispanic	100.0	78.3	13.2	8.5	1,991
American Indian/Alaskan Native	100.0	74.1	21.0	4.9	109
Asian or Pacific Islander	100.0	78.3	17.6	4.1	336
Educational expectation:					
2 years of college or less	100.0	78.9	13.9	7.2	4,179
4 years of college	100.0	74.9	19.8	5.4	6,895
Graduate degree	100.0	65.7	29.7	4.6	5,725
Control of high school:					
Public	100.0	74.1	19.9	5.9	14,906
Catholic	100.0	74.7	20.9	4.4	2,211
Other private	100.0	48.4	47.2	4.4	754
Region ⁴ :					
New England	100.0	53.1	42.6	4.3	916
Mid-Atlantic	100.0	65.1	30.6	4.3	2,777
South Atlantic	100.0	67.6	23.3	9.0	2,885
East South Central	100.0	78.4	15.1	6.4	930
West South Central	100.0	85.6	8.2	6.2	1,981
East North Central	100.0	75.3	18.6	6.2	3,507
West North Central	100.0	77.3	19.0	3.8	1,368
Mountain	100.0	71.6	23.8	4.7	888
Pacific	100.0	83.3	11.8	4.9	2,619

¹College-bound seniors include those who indicated that they expected either to attain at least some college in the future or to be enrolled in college for academic or vocational training in the year following high school.

²The general academic ability index was derived from four base-year "Test Book" scores: vocabulary, reading, letter groups, and mathematics.

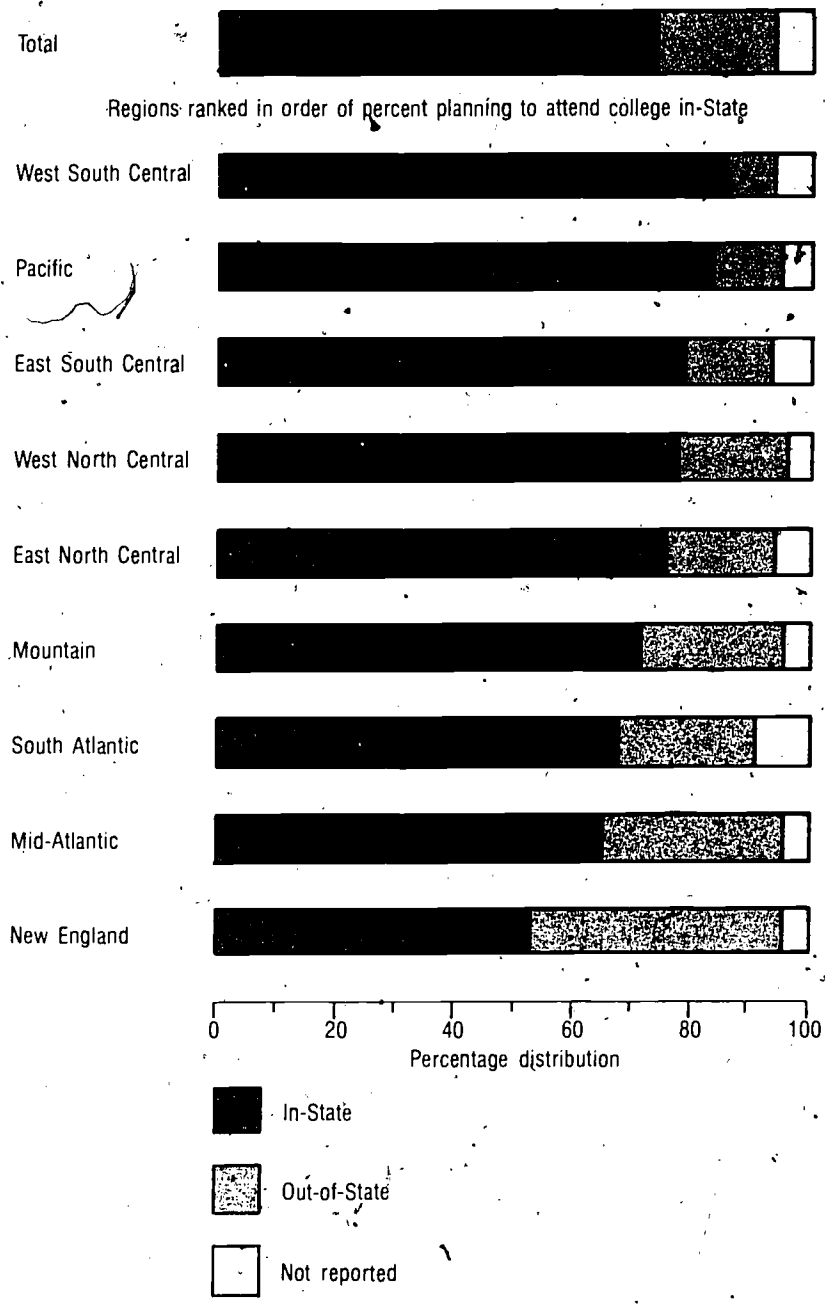
³The SES index was based on a composite score involving five components: father's education, mother's education, parental income, father's occupation, and a household items index.

⁴The regions correspond to U.S. Bureau of the Census definitions. See the Definitions of Selected Terms in the Appendix.

NOTE: Precision of the estimates may be calculated using the sample size following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations (June 1982).

Intentions of College-Bound Seniors to Attend In-State or Out-of-State Schools, by Region



Among college-bound seniors, about one in five planned to attend college out of State. The proportion was lowest in the western regions of the country and highest in the eastern seaboard regions.

Table 2.6

First-Time Freshman Enrollment and Migration Into and Out of State, by State: Fall 1979

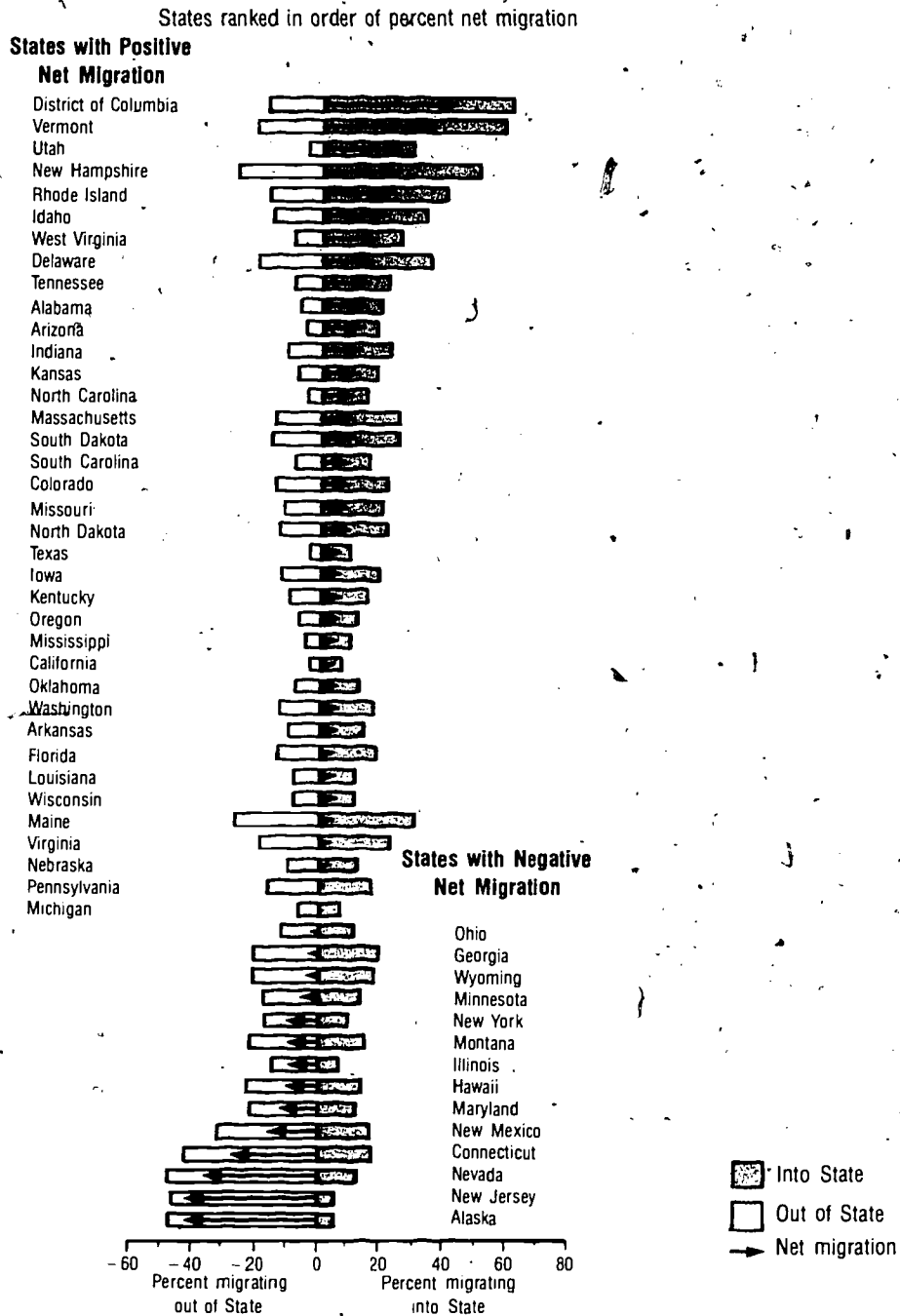
State	Total Enrolled in State	Migration of Students			Migration of Students as Percent of Total ²		
		Out of State	Into State ¹	Net ¹	Out of State	Into State ¹	Net ¹
50 States and D.C.	2,461,240	294,243	338,919	24,676	12.0	13.8	1.8
Alabama	38,400	2,754	7,290	4,536	7.2	19.0	11.8
Alaska	2,994	1,409	171	-1,238	47.1	5.7	-41.3
Arizona	47,984	2,828	8,333	5,505	5.9	17.4	11.5
Arkansas	18,068	1,900	2,568	668	10.5	14.2	3.7
California	369,260	11,228	25,522	14,294	3.0	6.9	3.9
Colorado	27,948	4,094	5,841	1,747	14.6	20.9	6.3
Connecticut	32,083	13,679	5,600	-8,079	42.6	17.5	-25.2
Delaware	8,224	1,715	2,889	1,174	20.9	35.1	14.3
District of Columbia	11,920	2,181	7,169	4,988	18.3	60.1	41.8
Florida	77,971	11,158	13,990	2,832	14.3	17.9	3.6
Georgia	33,748	6,936	6,490	-446	20.6	19.2	-1.3
Hawaii	9,114	2,092	1,273	-819	23.0	14.0	-9.0
Idaho	11,232	1,839	3,697	1,858	16.4	32.9	16.5
Illinois	137,211	19,822	7,760	-12,062	14.4	5.7	-8.8
Indiana	47,150	5,258	10,008	4,750	11.2	21.2	10.1
Iowa	35,911	4,638	6,458	1,820	12.9	18.0	5.1
Kansas	31,539	2,375	5,505	3,130	7.5	17.5	9.9
Kentucky	28,267	2,809	4,146	1,337	9.9	14.7	4.7
Louisiana	32,239	2,540	3,693	1,153	7.9	11.5	3.6
Maine	8,990	2,413	2,696	283	26.8	30.0	3.1
Maryland	42,485	9,362	5,077	-4,285	22.0	12.0	-10.1
Massachusetts	86,078	13,061	20,849	7,788	15.2	24.2	9.0
Michigan	111,662	7,054	7,204	150	6.3	6.5	.1
Minnesota	40,561	6,984	5,492	-1,492	17.2	13.5	-3.7
Mississippi	29,406	1,611	2,798	1,187	5.5	9.5	4.0
Missouri	45,784	5,649	8,489	2,840	12.3	18.5	6.2
Montana	6,843	1,511	999	-512	22.1	14.6	-7.5
Nebraska	22,205	2,166	2,703	537	9.8	12.2	2.4
Nevada	3,988	1,892	526	-1,366	47.4	13.2	-34.3
New Hampshire	10,394	2,868	5,170	2,302	27.6	49.7	22.1
New Jersey	61,439	28,276	3,322	-24,954	46.0	5.4	-40.6
New Mexico	8,774	2,774	1,449	-1,325	31.6	16.5	-15.1
New York	182,150	31,093	18,491	-12,602	17.1	10.2	-6.9
North Carolina	71,846	3,420	10,325	6,905	4.8	14.4	9.6
North Dakota	8,701	1,230	1,769	539	14.1	20.3	6.2
Ohio	98,344	11,972	10,748	-1,224	12.2	10.9	-1.2
Oklahoma	31,013	2,430	3,655	1,225	7.8	11.8	3.9
Oregon	42,459	2,809	4,701	1,892	6.6	11.1	4.5
Pennsylvania	101,891	16,378	17,395	1,017	16.1	17.1	1.0
Rhode Island	14,331	2,536	5,620	3,084	17.7	39.2	21.5
South Carolina	36,081	2,774	5,219	2,445	7.7	14.5	6.8
South Dakota	7,464	1,205	1,819	614	16.1	24.4	8.2
Tennessee	43,239	3,739	9,112	5,373	8.6	21.1	12.4
Texas	155,324	5,843	14,456	8,613	3.8	9.3	5.5
Utah	19,763	1,023	5,565	4,542	5.2	28.2	23.0
Vermont	6,325	1,385	3,679	2,294	21.9	58.2	36.3
Virginia	40,408	7,786	8,934	1,148	19.3	22.1	2.8
Washington	30,081	3,984	5,150	1,166	13.2	17.1	3.9
West Virginia	17,443	1,667	4,350	2,683	9.6	24.9	15.4
Wisconsin	65,398	5,168	7,363	2,195	7.9	11.3	3.4
Wyoming	4,485	925	778	-147	20.6	17.3	-3.3
U.S. Service Schools	4,613	—	4,613	—	—	—	—

¹Includes first-time freshmen who were resident aliens and first-time freshmen in U.S. Service Schools.

²Includes resident aliens and, thus, is not equal to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Residence and Migration of College Students, Fall 1979, 1980*.

Percent Migration of First-Time Freshmen Into and Out of State, by State



Fourteen States had more first-time freshmen leaving the State to attend college than coming into the State.

Table 2.7

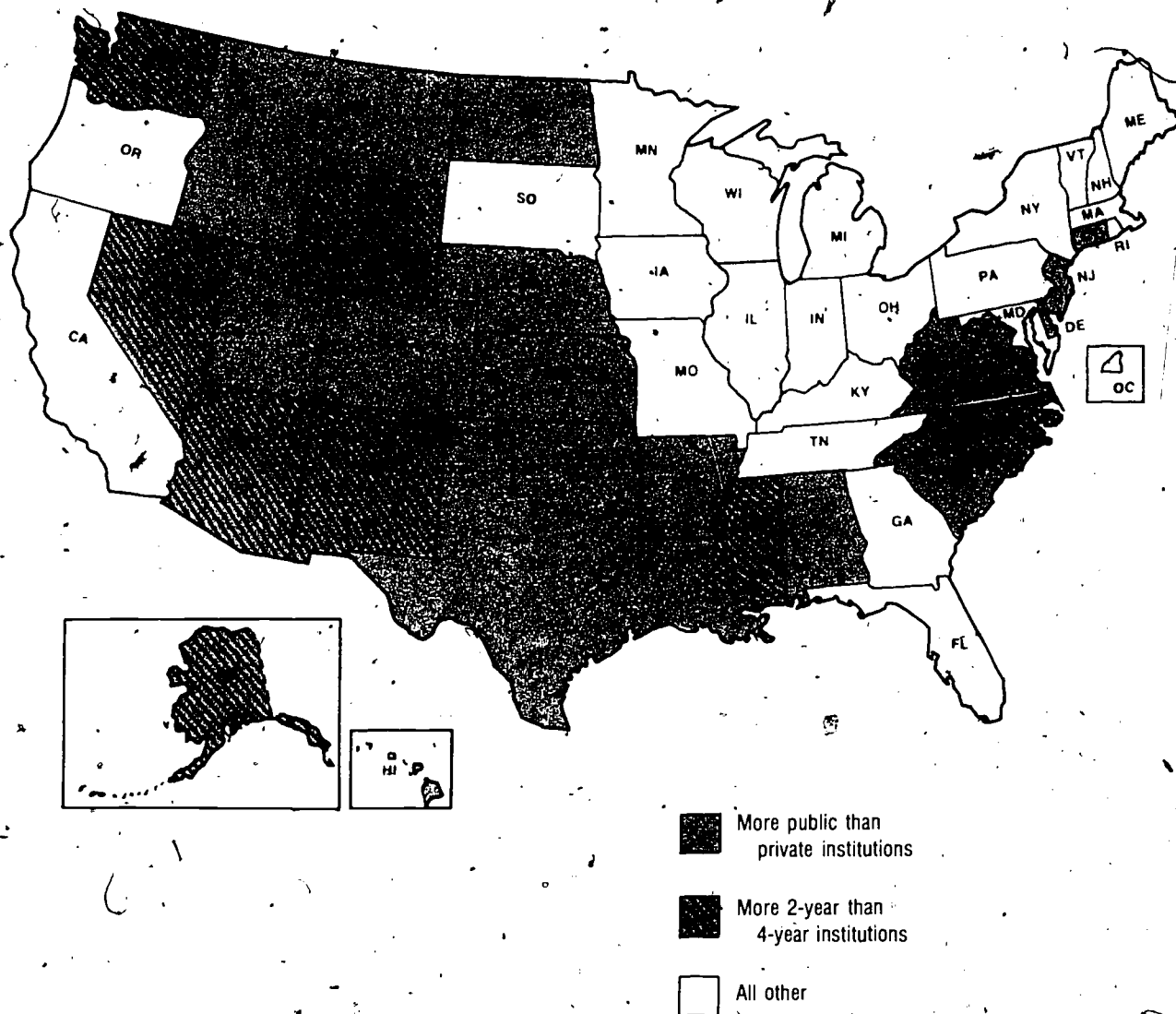
Number of Institutions of Higher Education and Branches, by Level, Control, and State: Academic Year 1981-82

State	Total	All Institutions		4-Year Institutions		2-Year Institutions	
		Public	Private	Public	Private	Public	Private
50 States and D.C.	3,253	1,498	1,755	558	1,420	940	335
Alabama	59	37	22	16	15	21	7
Alaska	15	12	3	3	3	9	0
Arizona	28	19	9	3	8	16	1
Arkansas	35	19	16	10	10	9	6
California	272	136	136	30	123	106	13
Colorado	45	27	18	18	15	14	3
Connecticut	47	24	23	7	19	17	4
Delaware	8	5	3	2	3	3	0
District of Columbia	19	1	18	1	18	0	0
Florida	81	37	44	9	39	28	9
Georgia	78	34	44	18	29	16	15
Hawaii	12	9	3	3	3	6	0
Idaho	9	6	3	4	2	2	1
Illinois	158	63	95	13	83	50	12
Indiana	74	28	46	13	37	15	9
Iowa	60	21	39	3	34	18	5
Kansas	52	29	23	8	20	21	3
Kentucky	57	21	36	8	22	13	14
Louisiana	32	20	12	14	11	6	1
Maine	29	12	17	7	13	5	4
Maryland	56	32	24	13	21	19	3
Massachusetts	118	32	86	15	65	17	21
Michigan	91	44	47	15	41	29	6
Minnesota	70	30	40	10	32	20	8
Mississippi	41	25	16	9	10	16	6
Missouri	89	28	61	13	54	15	7
Montana	16	9	7	6	4	3	3
Nebraska	31	16	15	7	13	9	2
Nevada	7	6	1	2	1	4	0
New Hampshire	26	11	15	3	11	8	4
New Jersey	61	31	30	14	26	17	4
New Mexico	19	16	3	6	3	10	0
New York	294	86	208	40	168	46	40
North Carolina	127	74	53	16	34	58	19
North Dakota	17	11	6	6	4	5	2
Ohio	136	59	77	18	62	41	15
Oklahoma	44	29	15	14	11	15	4
Oregon	45	21	24	8	21	13	3
Pennsylvania	202	61	141	24	108	37	33
Rhode Island	13	3	10	2	9	1	1
South Carolina	60	33	27	12	19	21	8
South Dakota	20	8	12	7	9	1	3
Tennessee	79	24	55	10	40	14	15
Texas	156	98	58	39	52	59	6
Utah	14	9	5	4	3	5	2
Vermont	21	6	15	4	14	2	1
Virginia	69	39	30	15	18	24	2
Washington	50	33	17	6	16	27	1
West Virginia	28	16	12	12	8	4	4
Wisconsin	64	30	34	13	30	17	4
Wyoming	9	8	1	1	0	7	1
U.S. Service Schools	10	10	0	9	0	1	0

NOTE: Branch campuses are counted separately.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1982, 1982.*

Level and Control of Institutions of Higher Education, by State



Eight States had more 2-year than 4-year institutions of higher education as well as more public than private institutions in 1981-82. These were located in the South and West regions. Connecticut was the only State in New England with more public than private colleges.

Table 2.8

Number of Institutions of Higher Education and Branches, by New Institutional Classification and Control: Academic Year 1981-82

Classification	All Institutions	Public Institutions	Private Institutions
Total	3,253	1,498	1,755
Doctoral-granting ¹	167	106	61
Comprehensive ²	408	255	153
General baccalaureate ³	730	123	607
Specialized ⁴	545	66	479
2-year ⁵	1,214	933	281
New ⁶	142	15	127
Non-degree granting ⁷	47	0	47

¹These institutions are characterized by a significant level and breadth of activity in and commitment to doctoral-level education as measured by the number of doctorate recipients and the diversity in doctoral-level program offerings.

²These institutions are characterized by diverse post-baccalaureate programs (including first-professional), but do not engage in significant doctoral-level education.

³These institutions are characterized by their primary emphasis on general undergraduate, baccalaureate-level education. They are not significantly engaged in post-baccalaureate education.

⁴These baccalaureate or post-baccalaureate institutions are characterized by a programmatic emphasis in one area (plus closely related specialties), such as business or engineering. The programmatic emphasis is measured by the percentage of degrees granted in the program area.

⁵These institutions confer at least 75 percent of their degrees and awards for work below the bachelor's level. The numbers reported differ from those shown according to the traditional classification of 2-year institutions because some are recent additions and are classified under new institutions.

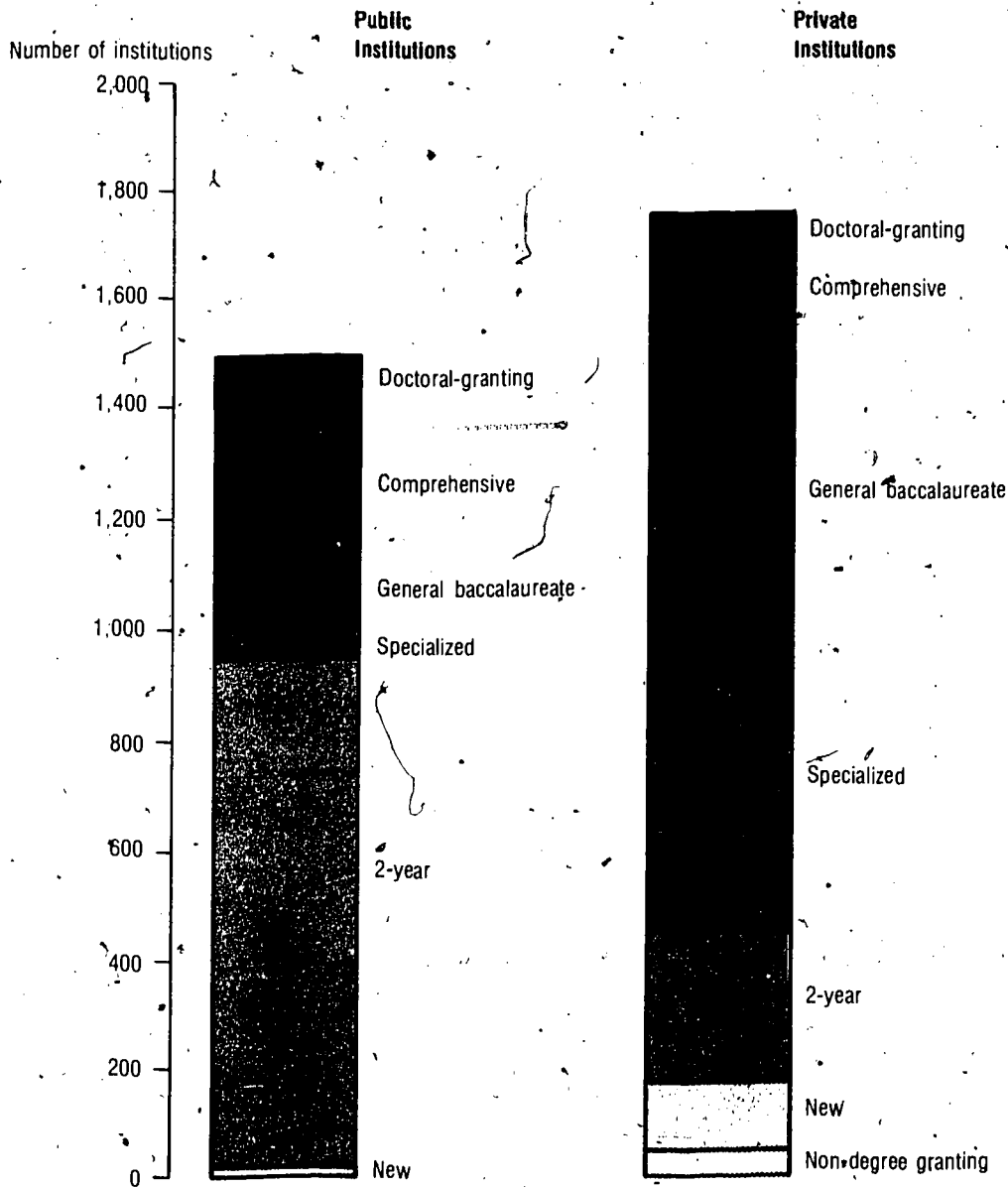
⁶These institutions are recent additions to the Higher Education General Information Survey universe (not necessarily newly organized). As degree and award information become available to NCES, these institutions will be reclassified.

⁷These institutions offer undergraduate instruction, work, or research beyond the bachelor's level, but do not confer degrees or awards.

NOTE: Branch campuses are counted separately.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Survey of Institutional Characteristics of Colleges and Universities, unpublished tabulations (September 1982).

Distribution of Institutions of Higher Education, by New Institutional Classification and Control



The largest category of public institutions of higher education was the 2-year institution, and the largest categories of private institutions were the general baccalaureate and the specialized institution.

Table 2.9

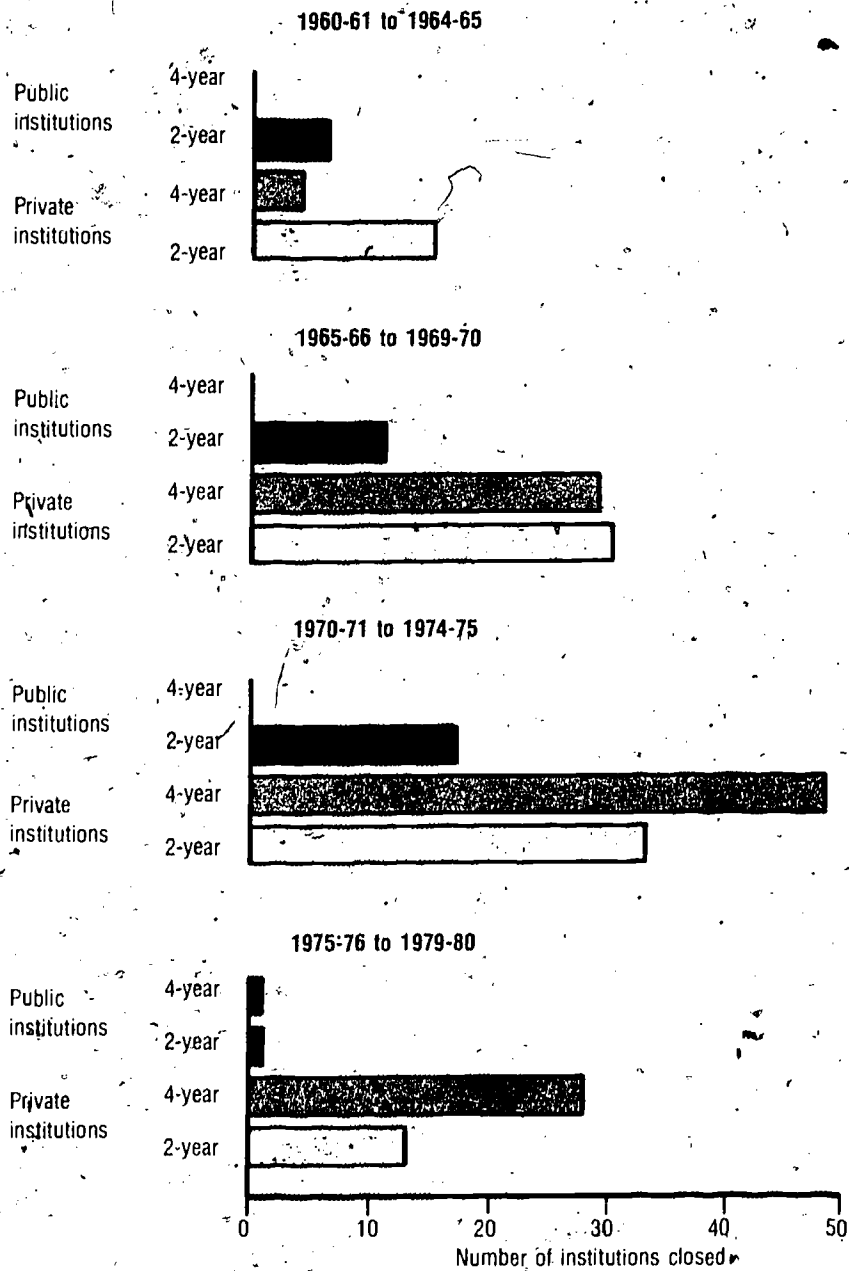
Number of Closings of Institutions of Higher Education, by Level and Control of Institution: Academic Year 1960-61 to 1980-81

Academic Year	All Institutions			Public Institutions			Private Institutions		
	Total	4-Year	2-Year	Total	4-Year	2-Year	Total	4-Year	2-Year
1960-61	8	1	7	1	0	1	7	1	6
1961-62	2	1	1	0	0	0	2	1	1
1962-63	0	0	0	0	0	0	0	0	0
1963-64	7	1	6	1	0	1	6	1	5
1964-65	8	1	7	4	0	4	4	1	3
1960-61 to 1964-65	25	4	21	6	0	6	19	4	15
1965-66	8	2	6	4	0	4	4	2	2
1966-67	9	2	7	3	0	3	6	2	4
1967-68	14	6	8	0	0	0	14	6	8
1968-69	21	11	10	1	0	1	20	11	9
1969-70	18	8	10	3	0	3	15	8	7
1965-66 to 1969-70	70	29	41	11	0	11	59	29	30
1970-71	32	9	23	9	0	9	23	9	14
1971-72	12	3	9	3	0	3	9	3	6
1972-73	19	12	7	2	0	2	17	12	5
1973-74	18	11	7	0	0	0	18	11	7
1974-75	17	13	4	3	0	3	14	13	1
1970-71 to 1974-75	98	48	50	17	0	17	81	48	33
1975-76	8	6	2	2	1	1	6	5	1
1976-77	8	5	3	0	0	0	8	5	3
1977-78	12	9	3	0	0	0	12	9	3
1978-79	9	4	5	0	0	0	9	4	5
1979-80	6	5	1	0	0	0	6	5	1
1975-76 to 1979-80	43	29	14	2	1	1	41	28	13
1980-81	4	3	1	0	0	0	4	3	1
1960-61 to 1980-81	240	113	127	36	1	35	204	112	92

NOTE: Numbers exclude branch campuses of institutions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1982, 1982.*

Closings of Institutions of Higher Education



Between 1960 and 1981, a total of 240 institutions of higher education closed their doors. Most of these were private 4-year institutions.

Table 2.10

Full-Time, Part-Time, and Full-Time-Equivalent (FTE) Instructional Staff in Institutions of Higher Education and Estimated Additional FTE Instructional Staff Needed: Fall 1970 to 1990

Fall of Year					Additional FTE Instructional Staff Needed		
	Total	Full-Time	Part-Time	FTE	Total	For Enrollment and Student-Staff Ratio Changes	For Replacement
In Thousands							
1970	573	383	191	451	—	—	—
1971 ¹	590	389	201	458	27	7	20
1972 ¹	590	386	204	455	18	-3	21
1973 ¹	634	402	232	481	46	26	20
1974 ¹	695	423	272	516	57	35	22
1975 ¹	781	482	319	574	81	58	23
1971-1975	—	—	—	—	229	123	106
1976	793	462	331	584	36	10	26
1977 ¹	812	476	337	599	41	15	26
1978 ¹	809	474	336	597	25	-2	27
1979 ¹	823	479	344	605	35	8	27
1980 ¹	846	496	350	624	46	19	27
1976-1980	—	—	—	—	183	50	133
Projected ²							
1981	877	510	367	644	48	20	28
1982	888	515	373	651	36	7	29
1983	872	507	365	640	18	-11	29
1984	847	493	354	622	11	-18	29
1985	824	481	343	606	12	-16	28
1981-1985	—	—	—	—	125	-18	143
1986	814	474	340	598	19	-8	27
1987	808	471	337	594	23	-4	27
1988	806	469	337	592	25	-2	27
1989	807	470	337	593	28	1	27
1990	799	468	331	589	23	-4	27
1986-1990	—	—	—	—	118	-17	135

¹ Estimated.

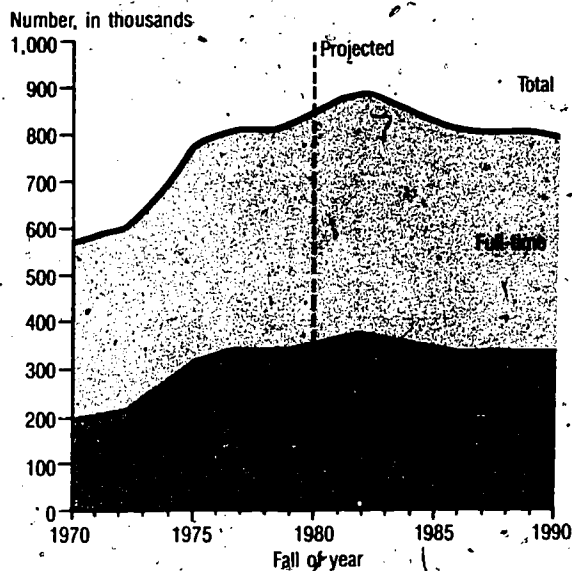
² Intermediate alternative projections.

NOTE: Details may not add to totals because of rounding.

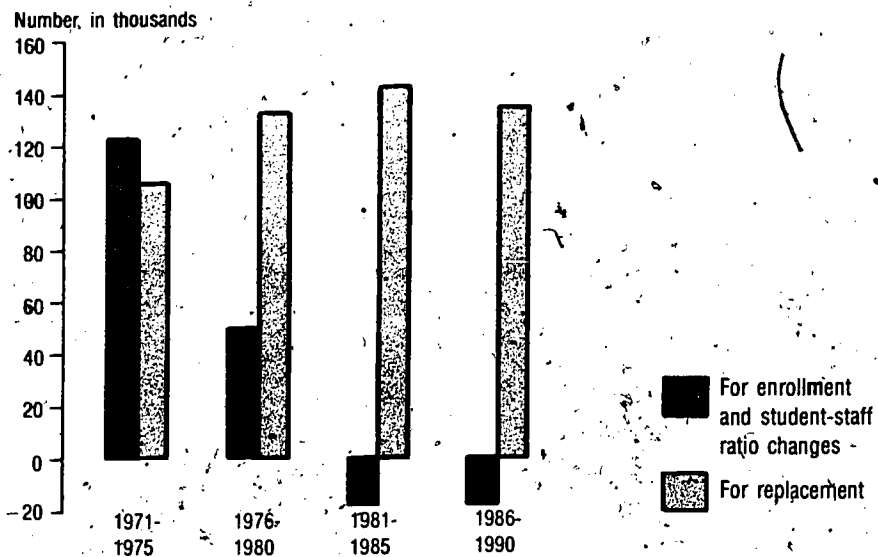
SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91, Volume I*, 1982.

Instructional Staff in Institutions of Higher Education and Estimated Demand: 1970 to 1990

Full-Time and Part-Time Instructional Staff



Estimated Demand for Instructional Staff



In the 1980's, demand for additional higher education faculty will result primarily from replacement needs rather than enrollment and student-staff ratio changes.

Table 2.11**Annual Percent Change in Average Salaries of Instructional Faculty¹ in Institutions of Higher Education², by Academic Rank: Academic Year 1971-72 to 1981-82**

Period	All Ranks	Professor	Associate	Assistant	Instructor
Annual Percent Change, in Current Dollars					
1971-72 to 1972-73	4.1	4.3	4.2	4.1	3.9
1972-73 to 1973-74	5.1	5.2	5.2	4.8	4.7
1973-74 to 1974-75	5.8	5.8	5.9	5.7	5.8
1974-75 to 1975-76	6.0	6.2	5.9	5.7	6.1
1975-76 to 1976-77	4.7	4.7	4.7	4.7	4.7
1976-77 to 1977-78	5.3	5.2	5.4	5.3	5.4
1977-78 to 1978-79	6.0	5.6	5.8	5.9	6.0
1978-79 to 1979-80	7.1	7.5	7.0	6.8	6.4
1979-80 to 1980-81	8.7	8.8	8.5	8.8	8.6
1980-81 to 1981-82	9.0	9.0	8.8	9.1	8.2
Annual Percent Change, in Constant ³ Dollars					
1971-72 to 1972-73	.1	.3	.2	.1	-.1
1972-73 to 1973-74	-3.6	-3.5	-3.5	-3.9	-3.9
1973-74 to 1974-75	-4.8	-4.8	-4.7	-4.9	-4.8
1974-75 to 1975-76	-1.0	-.8	-1.1	-1.3	-.9
1975-76 to 1976-77	-1.0	-1.0	-1.0	-1.0	-1.0
1976-77 to 1977-78	-1.3	-1.4	-1.2	-1.3	-1.2
1977-78 to 1978-79	-3.1	-3.5	-3.3	-3.2	-3.1
1978-79 to 1979-80	-5.5	-5.1	-5.6	-5.7	-6.1
1979-80 to 1980-81	-2.6	-2.5	-2.8	-2.7	-2.7
1980-81 to 1981-82	.3	.3	.2	.4	-.3
Average Annual Percent Change, in Constant ³ Dollars					
1971-72 to 1981-82	-2.2	-2.2	-2.3	-2.4	-2.4
1971-72 to 1976-77	-2.1	-2.0	-2.0	-2.2	-2.1
1976-77 to 1981-82	-2.4	-2.4	-2.5	-2.5	-2.7

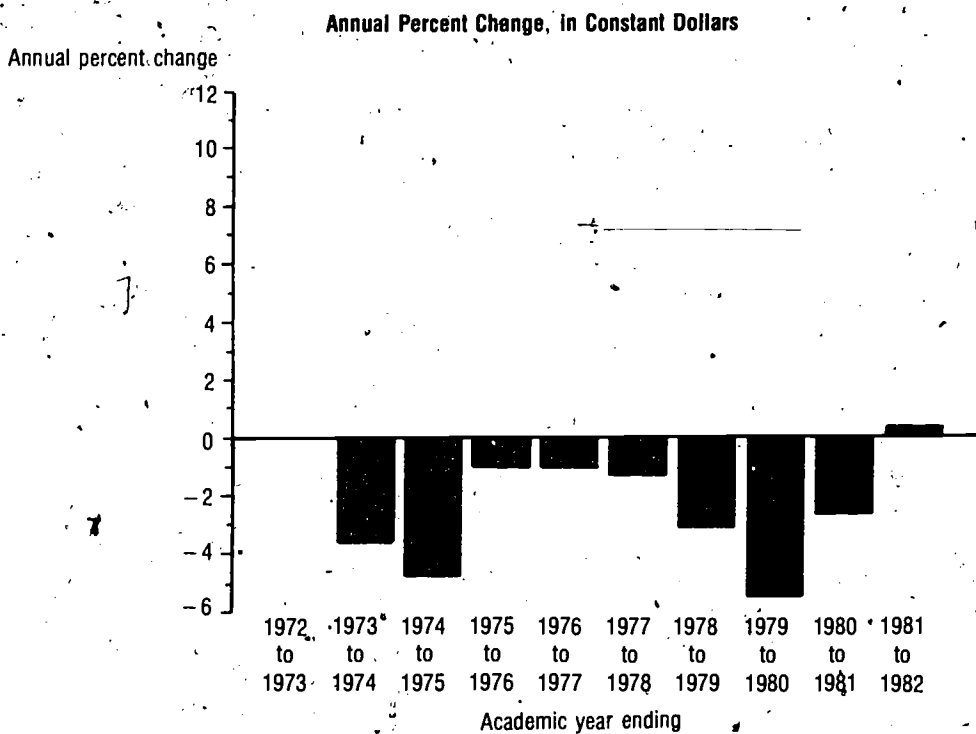
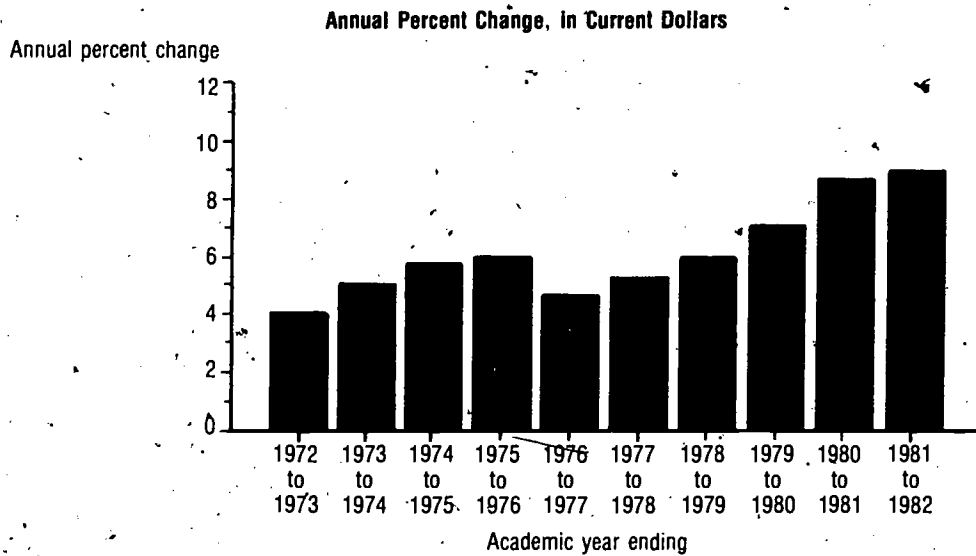
¹ Full-time faculty on 9- and 12-month contracts. Salaries on 12-month schedule were adjusted to an academic year.

² Institutions reporting comparable data for each of the 1-year periods.

³ Adjusted for inflation, using the Consumer Price Index (CPI) for the academic year.

SOURCE: American Association of University Professors, *Academe*, "The Annual Report on the Economic Status of the Profession, 1981-82," July-August 1982, table prepared by Maryse Eymonerie Associates.

Annual Percent Change in Average Salaries of Full-Time Instructional Faculty in Higher Education



Full-time instructional faculty lost earnings to inflation each year throughout most of the 1970's. In 1981-82, salaries increased minimally by 0.3 percent, attributable to a sharp decline in the inflation rate.

Table 2.12

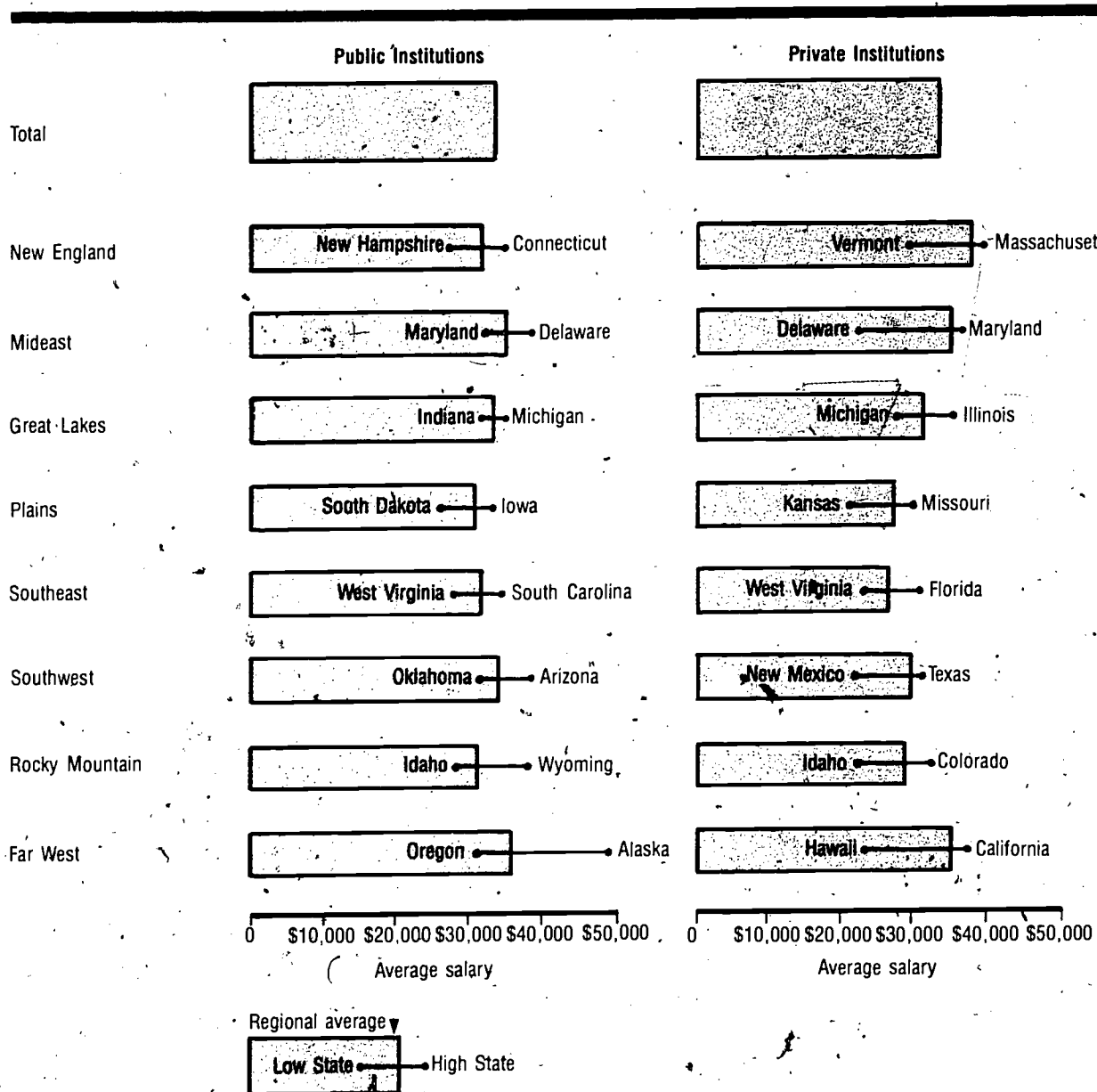
Average Salaries of All Full-Time Instructional Faculty and Professors on 9-Month Contracts, by Control of Institution and by State: Academic Year 1981-82

State	All Full-Time Faculty				Full-Time Professors			
	Public Institutions		Private Institutions		Public Institutions		Private Institutions	
	Number For Whom Salary Reported	Salary	Number For Whom Salary Reported	Salary	Number For Whom Salary Reported	Salary	Number For Whom Salary Reported	Salary
50 States and D.C.	244,992	\$25,886	89,824	\$24,255	63,644	\$33,651	27,004	\$32,935
New England	11,766	25,254	12,955	26,929	3,696	31,953	4,206	37,554
Connecticut	2,980	26,663	2,470	27,599	993	34,089	873	37,524
Maine	1,093	21,552	541	22,223	243	28,679	126	32,191
Massachusetts	4,904	26,046	7,761	27,702	1,639	32,187	2,536	38,828
New Hampshire	938	22,474	728	23,784	271	28,036	219	33,234
Rhode Island	1,183	25,155	931	27,037	372	30,891	327	35,968
Vermont	668	23,284	524	21,358	178	30,535	125	29,042
Mideast	38,236	26,929	28,807	25,922	10,655	35,105	9,100	35,011
Delaware	927	26,343	74	18,322	224	38,454	16	21,742
District of Columbia	581	27,069	2,301	27,147	159	34,163	739	35,722
Maryland	4,772	24,727	1,072	25,134	1,159	32,496	332	36,335
New Jersey	4,309	25,401	2,614	26,577	930	33,588	947	35,421
New York	17,948	28,337	14,533	26,265	5,455	36,497	4,600	35,534
Pennsylvania	9,699	26,132	8,213	24,935	2,728	33,726	2,463	33,572
Great Lakes	45,606	25,760	14,856	23,772	12,125	33,506	4,551	31,229
Illinois	12,222	25,426	5,430	26,018	3,033	33,061	1,742	35,148
Indiana	5,468	24,269	2,419	22,630	1,602	32,304	717	28,780
Michigan	10,635	26,862	1,714	22,039	2,884	34,338	465	27,721
Ohio	9,825	25,897	3,947	22,653	2,611	34,260	1,290	29,207
Wisconsin	7,456	25,648	1,346	22,248	1,995	32,958	337	28,764
Plains	19,423	23,675	7,541	20,788	5,111	31,042	1,897	27,384
Iowa	2,859	24,056	1,811	20,584	683	33,287	513	25,777
Kansas	3,718	23,348	725	16,389	974	31,052	136	20,310
Minnesota	4,153	25,321	1,886	22,372	1,291	32,081	449	29,421
Missouri	4,620	22,816	2,089	21,916	1,100	29,899	605	29,689
Nebraska	1,990	23,343	639	19,781	576	30,293	128	25,444
North Dakota	1,218	23,826	69	18,925	223	30,707	7	26,000
South Dakota	865	21,045	322	17,646	229	26,331	59	22,912
Southeast	51,947	23,260	13,220	19,892	11,239	31,878	3,280	26,677
Alabama	3,828	21,929	689	17,148	628	30,018	121	23,447
Arkansas	2,077	21,364	380	18,380	420	29,348	85	22,951
Florida	7,170	23,433	1,832	21,923	1,556	33,028	455	30,063
Georgia	4,730	24,256	1,666	20,340	969	32,893	426	28,108
Kentucky	3,610	23,487	896	18,200	972	30,345	219	23,336
Louisiana	4,557	23,805	788	21,865	998	31,621	219	28,832
Mississippi	3,043	21,138	218	16,016	450	29,918	45	21,625
North Carolina	6,015	24,514	2,000	18,737	1,391	34,789	458	24,400
South Carolina	3,185	23,818	1,012	17,946	580	34,960	233	23,418
Tennessee	4,379	21,985	1,721	21,378	1,193	28,833	501	28,773
Virginia	7,362	23,873	1,562	20,863	1,600	32,905	433	27,220
West Virginia	1,991	22,262	456	17,681	482	28,237	85	21,518
Southwest	24,966	25,445	4,346	22,824	5,472	34,203	1,296	29,752
Arizona	3,857	28,498	114	21,352	913	38,243	25	25,561
New Mexico	1,767	25,086	110	15,577	476	33,167	6	20,747
Oklahoma	3,561	24,170	730	21,831	752	31,302	181	28,514
Texas	15,781	25,027	3,392	23,322	3,331	33,898	1,084	30,106
Rocky Mountains	9,509	24,696	951	22,379	2,957	31,354	267	28,947
Colorado	4,414	24,722	688	23,807	1,424	31,145	192	31,701
Idaho	1,078	22,610	101	18,902	311	27,851	45	21,575
Montana	1,188	23,751	149	18,005	355	28,945	25	22,675
Utah	1,941	25,322	13	18,609	653	32,686	5	20,892
Wyoming	888	26,994	0	0	214	37,768	0	0
Far West	43,062	29,860	7,148	26,544	12,251	35,973	2,407	35,294
Alaska	547	38,224	21	17,759	64	49,365	0	0
California	31,368	31,251	5,159	28,386	9,384	36,891	1,904	37,287
Hawaii	1,489	26,023	87	17,416	378	35,023	14	22,964
Nevada	732	27,054	0	0	176	35,183	0	0
Oregon	3,860	23,895	793	21,922	841	30,604	210	28,779
Washington	5,066	26,418	1,088	22,078	1,408	32,805	279	27,211
U.S. Service Schools	477	33,983	0	0	158	40,759	0	0

Utah data questionable because of significant underreporting.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Faculty Salaries, unpublished tabulations (November 1982).



Average Salaries of Full-Time Professors on 9-Month Contracts, by Region



Nationally, the average salaries of full-time professors on 9-month contracts were approximately \$33,700 in public institutions and \$32,900 in private institutions. By region, higher-than-average salaries were earned in public institutions in the Mideast, Southwest, and Far West and in private institutions in New England and the Far West.

Table 2.13

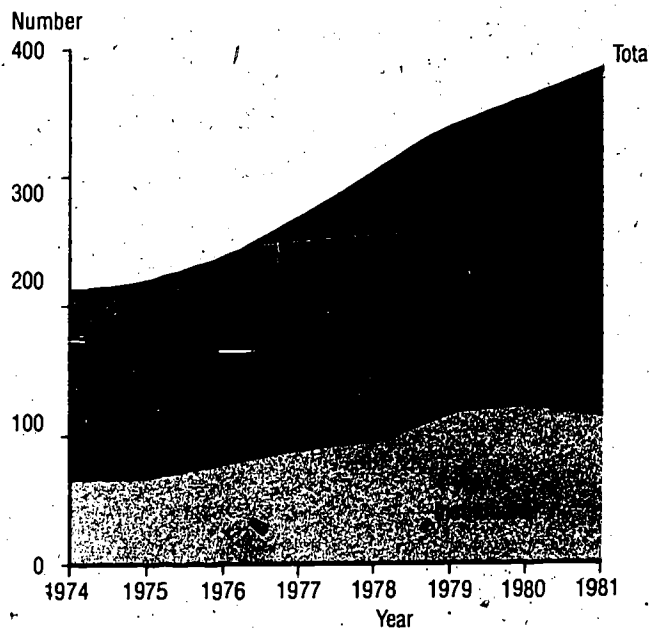
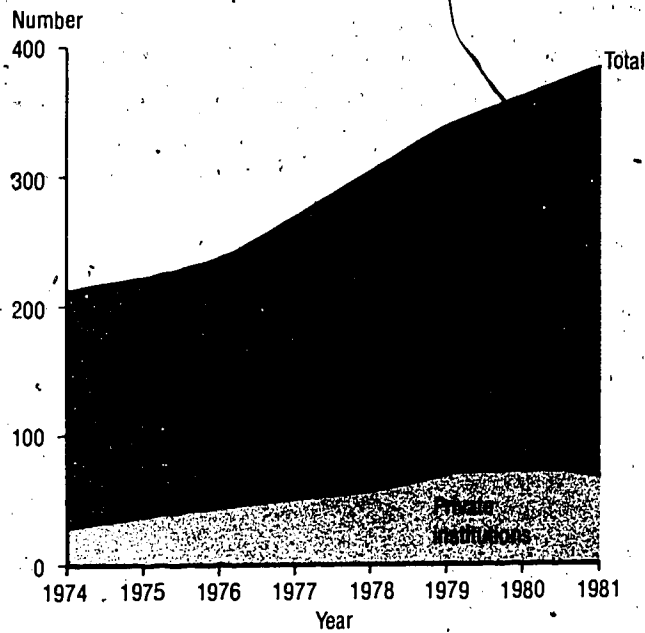
Number of Faculty Collective Bargaining Agreements and Bargaining Agents in Institutions of Higher Education, by Level and Control of Institution: 1974 to 1981

Year	All Institutions	Public Institutions	Private Institutions	4-Year Institutions	2-Year Institutions
Number of Collective Bargaining Agreements					
1974	211	181	30	66	145
1975	218	180	38	68	150
1976	234	191	43	76	158
1977	266	214	52	90	176
1978	301	244	57	93	208
1979	337	267	70	118	219
1980	359	285	74	123	236
1981	382	313	69	114	268
Number of Bargaining Agents					
1974	277	222	55	97	180
1975	301	235	66	111	190
1976	343	269	74	125	218
1977	343	267	76	119	224
1978	382	302	80	131	251
1979	406	318	88	145	261
1980	427	335	92	151	276
1981	422	336	86	138	284

NOTE: Data refer to total number of recognized bargaining agents and number of collective bargaining agreements with bargaining agents in the United States according to available information. A bargaining agent is an organization such as the National Education Association, American Federation of Teachers, etc., recognized by the institution either voluntarily or through agent elections as representing the interests of faculty in collective bargaining. As long as the certificate of recognition is in effect, the institution is designated as having a bargaining agent, even if no collective bargaining has ever taken place. Multi-campus units have been counted as a single institution with a single bargaining agent unless the individual campuses have separate agreements and bargaining agents in which case they are treated as separate institutions. If there is more than one bargaining unit and recognized bargaining agent in any particular institution, the total number of bargaining agents elected in that institution is the figure used.

SOURCE: Douglas, Joel M. with Steve Kramer, Baruch College, City University of New York, The National Center for the Study of Collective Bargaining in Higher Education and the Professions, *Directory of Faculty Contracts and Bargaining Agents in Institutions of Higher Education*, 1982.

Number of Faculty Collective Bargaining Agreements



Between 1974 and 1981, the number of collective bargaining agreements increased appreciably in public institutions of higher education, while it leveled off in private institutions after 1979. Unionization among faculty grew at a faster rate in 2-year institutions than in 4-year institutions.

Table 2.14

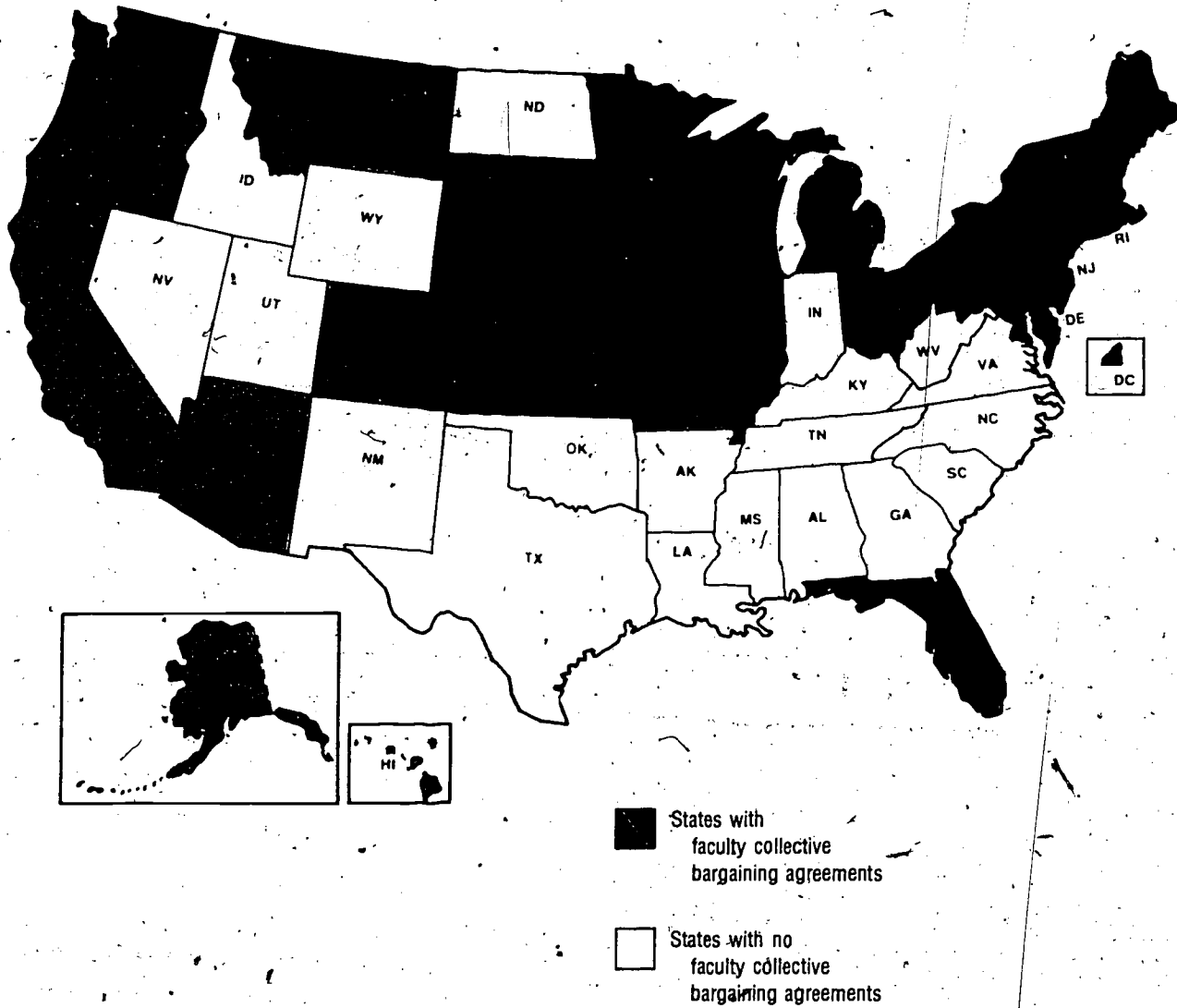
Number of Faculty Collective Bargaining Agreements and Bargaining Agents in Institutions of Higher Education, by Level of Institution and by State: 1981

State	All Institutions		4-Year Institutions		2-Year Institutions	
	Agreements	Agents	Agreements	Agents	Agreements	Agents
50 States and D.C.	382	422	114	136	268	286
Alabama	0	0	0	0	0	0
Alaska	1	1	0	0	1	1
Arizona	1	1	0	0	1	1
Arkansas	0	0	0	0	0	0
California	54	62	2	4	52	58
Colorado	2	4	2	3	0	1
Connecticut	11	13	8	10	3	3
Delaware	2	2	2	2	0	0
District of Columbia	2	2	2	2	0	0
Florida	8	10	2	3	6	7
Georgia	0	0	0	0	0	0
Hawaii	1	1	1	1	0	0
Idaho	0	0	0	0	0	0
Illinois	21	23	1	1	20	22
Indiana	0	0	0	0	0	0
Iowa	15	16	3	4	12	12
Kansas	13	15	0	1	13	14
Kentucky	0	0	0	0	0	0
Louisiana	0	0	0	0	0	0
Maine	3	3	2	2	1	1
Maryland	2	3	1	1	1	2
Massachusetts	13	13	9	9	4	4
Michigan	40	42	13	14	27	28
Minnesota	2	3	1	2	1	1
Mississippi	0	0	0	0	0	0
Missouri	3	4	2	3	1	1
Montana	5	6	3	4	2	2
Nebraska	7	7	2	2	5	5
Nevada	0	0	0	0	0	0
New Hampshire	2	2	2	2	0	0
New Jersey	27	28	8	9	19	19
New Mexico	0	0	0	0	0	0
New York	52	58	19	23	33	35
North Carolina	0	0	0	0	0	0
North Dakota	0	0	0	0	0	0
Ohio	11	11	7	7	4	4
Oklahoma	0	0	0	0	0	0
Oregon	16	16	4	4	12	12
Pennsylvania	21	23	8	9	13	14
Rhode Island	6	6	5	5	1	1
South Carolina	0	0	0	0	0	0
South Dakota	2	2	2	2	0	0
Tennessee	0	0	0	0	0	0
Texas	0	0	0	0	0	0
Utah	0	0	0	0	0	0
Vermont	1	2	1	2	0	0
Virginia	0	1	0	1	0	0
Washington	23	24	0	1	23	23
West Virginia	0	0	0	0	0	0
Wisconsin	14	17	1	2	13	15
Wyoming	0	0	0	0	0	0

NOTE: Data refer to total number of recognized bargaining agents and number of agreements with bargaining agents in the United States according to available information. A bargaining agent is an organization such as the National Education Association, American Federation of Teachers, etc., recognized by the institution either voluntarily or through agent elections as representing the interests of faculty in collective bargaining. As long as a certificate of recognition is in effect, the institution is designated as having a bargaining agent, even if no collective bargaining has ever taken place. Multi-campus units have been counted as a single institution with a single bargaining agent, unless the individual campuses have separate agreements and bargaining agents, in which case they are treated as separate institutions. If there is more than one bargaining unit and recognized bargaining agent in any particular institution, the total number of bargaining agents elected in that institution is the figure used.

SOURCE: Douglas, Joel M. with Steve Kramer, Baruch College, City University of New York, The National Center for the Study of Collective Bargaining in Higher Education and the Professions, *Directory of Faculty Contracts and Bargaining Agents in Institutions of Higher Education*, 1982.

Faculty Collective Bargaining Agreements in Institutions of Higher Education, by State



With the exception of Florida, unionization of faculty was less prominent in the South than in other regions in 1981.

Table 2.15

Sources of Current Funds Revenues for Institutions of Higher Education, by Control and Level of Institution: Fiscal Year 1971 and 1981

Fiscal Year and Source	Total, All Institutions	Public Institutions		Private Institutions	
		4-Year	2-Year	4-Year	2-Year
Amount, in Millions of Dollars					
1971:					
Total	\$23,879	\$13,260	\$2,266	\$8,115	\$237
Government ¹	11,087	7,774	1,775	1,521	16
Federal ²	4,601	2,616	153	1,819	13
State	6,595	5,528	924	140	3
Local	910	147	701	61	1
Private sources	1,227	348	11	838	31
Students	8,146	3,485	437	4,043	181
Tuition and fees	5,021	1,738	295	2,871	118
Auxiliary enterprises ³	3,125	1,748	143	1,173	62
Institutional ⁴	2,401	1,136	41	1,215	9
1981:					
Total	65,585	35,351	7,845	21,729	660
Government ¹	31,645	21,031	5,808	4,758	47
Federal ²	9,748	5,010	530	4,178	29
State	20,106	15,729	3,947	416	14
Local	1,791	292	1,331	464	4
Private sources	3,177	1,065	35	2,026	51
Students	21,061	8,484	1,701	10,357	518
Tuition and fees	13,773	4,374	1,196	7,781	422
Auxiliary enterprises ³	7,287	4,110	505	2,577	96
Institutional ⁴	9,703	4,770	301	4,588	43
Percentage Distribution					
1971:					
Total	100.0	100.0	100.0	100.0	100.0
Government ¹	50.7	62.5	78.5	24.9	6.8
Federal ²	19.3	19.7	6.8	22.4	5.5
State	27.6	41.7	40.8	1.7	1.1
Local	3.8	1.1	30.9	.8	.3
Private sources	5.1	2.6	.5	10.3	12.9
Students	34.1	26.3	19.3	49.8	76.3
Tuition and fees	21.0	13.1	13.0	35.4	49.9
Auxiliary enterprises ³	13.1	13.2	6.3	14.4	26.4
Institutional ⁴	10.1	8.6	1.8	15.0	3.9
1981:					
Total	100.0	100.0	100.0	100.0	100.0
Government ¹	48.2	59.5	74.0	21.9	7.2
Federal ²	14.9	14.2	6.8	19.2	4.4
State	30.7	44.5	50.3	1.9	2.1
Local	2.7	.8	17.0	.8	.6
Private sources	4.8	3.0	.4	9.3	7.7
Students	32.1	24.0	21.7	47.7	78.5
Tuition and fees	21.0	12.4	15.2	35.8	64.0
Auxiliary enterprises ³	11.1	11.6	6.4	11.9	14.6
Institutional ⁴	14.8	13.5	3.8	21.1	6.6

¹ Includes appropriations, restricted and unrestricted grants and contracts.

² Includes appropriations, restricted and unrestricted grants and contracts, and independent operations (FFRDC).

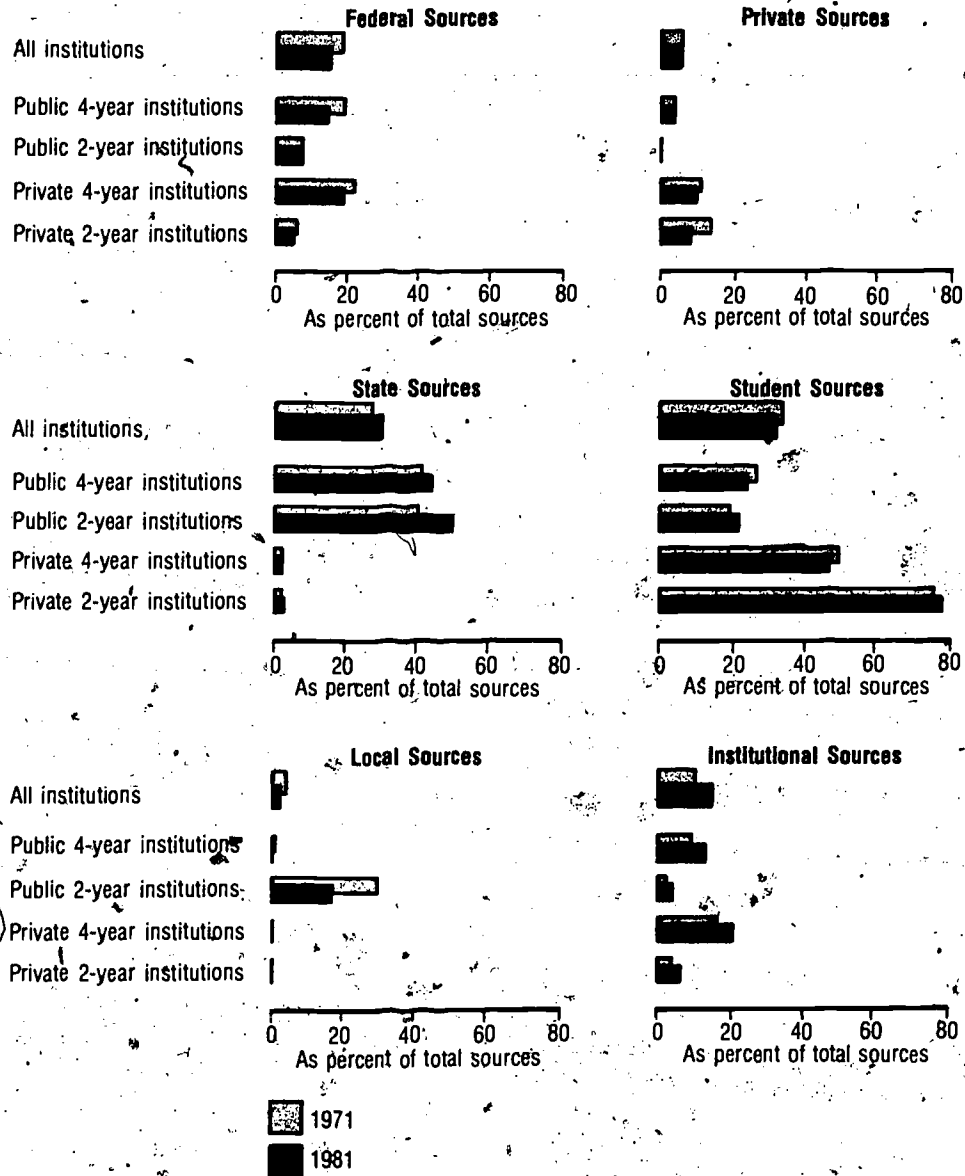
³ Includes revenues generated by operations that were essentially self-supporting within the institutions, such as residence halls, food services, student health services, and college unions. Nearly all such revenues are derived from students.

⁴ Includes endowment income, sales and services of educational activities, sales and services of hospitals, and other sources.

NOTE: Details may not add to totals because of rounding.

SOURCES: U.S. Department of Education, National Center for Education Statistics, *Financial Statistics of Institutions of Higher Education: Current Funds Revenues and Expenditures, 1970-71, 1974*, and Higher Education General Information Survey, *Financial Statistics of Institutions of Higher Education, for Fiscal Year 1981*, unpublished tabulations (November 1982).

Sources of Current Funds Revenues for Institutions of Higher Education



The predominant sources of current funds revenues differed considerably by institutional type and control in higher education. State revenues were the largest single source for public institutions and student sources the largest for private institutions.

Table 2.16

Current Funds Revenues for Institutions of Higher Education and Percent from State and Local Governments, by Control of Institution and by State: Fiscal Year 1981

State	Public Institutions		Private Institutions	
	Total Current Funds Revenues, in Millions of Dollars	Percent from State and Local Governments	Total Current Funds Revenues, in Millions of Dollars	Percent from State and Local Governments
50 States and D.C.	\$43,195	49.3	\$22,389	2.7
Alabama	889	43.8	117	2.8
Alaska	159	63.2	7	2.4
Arizona	720	48.5	25	.6
Arkansas	351	48.8	52	.5
California	5,907	60.5	2,192	.5
Colorado	447	34.3	118	.8
Connecticut	379	50.4	538	2.1
Delaware	169	35.5	15	.8
District of Columbia	66	80.1	862	.2
Florida	1,203	56.5	478	4.1
Georgia	766	54.0	418	.9
Hawaii	220	59.3	10	1.1
Idaho	169	58.0	37	.2
Illinois	1,810	55.0	1,935	1.6
Indiana	1,095	39.4	371	1.6
Iowa	785	41.1	241	.7
Kansas	594	51.0	83	.4
Kentucky	671	51.8	129	.6
Louisiana	735	56.0	216	1.6
Maine	157	40.9	83	.3
Maryland	819	44.8	538	2.6
Massachusetts	583	50.1	2,187	.6
Michigan	2,094	39.1	336	2.5
Minnesota	894	37.5	340	2.6
Mississippi	543	48.6	50	.6
Missouri	718	51.3	616	.3
Montana	124	51.5	17	.7
Nebraska	390	49.6	108	1.5
Nevada	113	55.3	(¹)	.0
New Hampshire	132	27.9	171	.3
New Jersey	917	55.0	511	4.5
New Mexico	334	42.0	14	1.8
New York	2,519	61.0	3,614	7.4
North Carolina	1,147	56.3	587	2.6
North Dakota	196	45.5	12	.2
Ohio	1,828	38.1	675	2.0
Oklahoma	589	46.2	136	.0
Oregon	647	44.2	117	2.7
Pennsylvania	1,575	38.3	1,977	3.8
Rhode Island	156	49.0	199	1.0
South Carolina	631	53.8	126	.5
South Dakota	128	40.5	41	.4
Tennessee	676	46.1	464	1.5
Texas	2,859	55.6	668	4.6
Utah	431	38.1	139	.0
Vermont	127	20.6	96	.0
Virginia	1,159	43.6	251	1.6
Washington	998	48.6	156	.1
West Virginia	319	51.6	56	1.0
Wisconsin	1,228	48.0	261	4.1
Wyoming	141	56.7	1	.0
U.S. Service Schools	586	.0	—	—

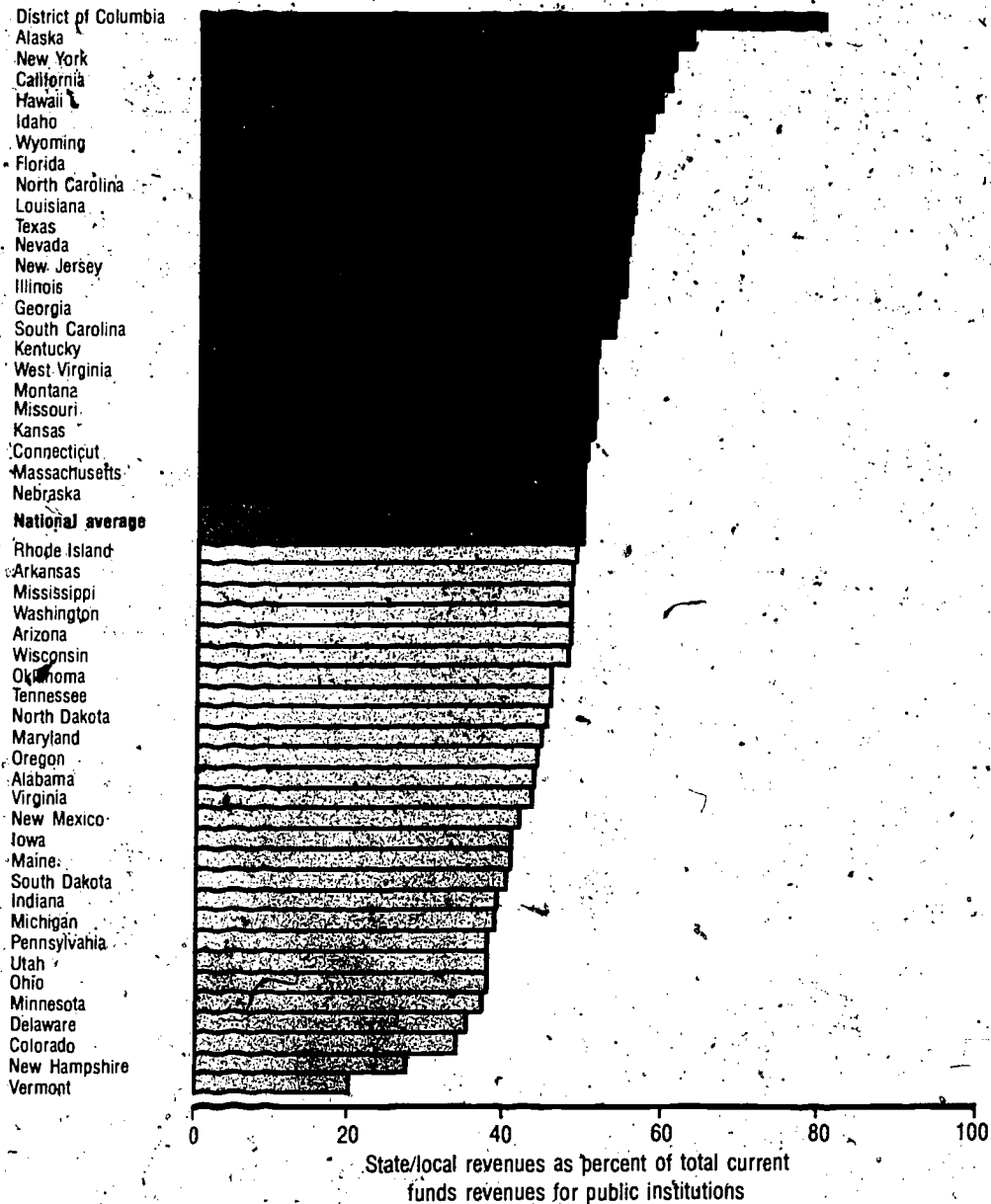
— Not applicable. ¹ Less than 0.5 million dollars.

NOTE: Details may not add to totals because of rounding.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Financial Statistics of Institutions of Higher Education, for Fiscal Year 1981, unpublished tabulations (November 1982).



Chart 2.16

State/Local Revenues as Percent of Total Current Funds Revenues for Public Higher Education Institutions



State and local revenues represented about 50 percent of monies received by public institutions of higher education, ranging from 21 percent in Vermont to over 60 percent in Alaska, California, New York, and the District of Columbia.

Table 2.17

Current Funds Expenditures and Mandatory Transfers by Institutions of Higher Education and Per Full-Time-Equivalent (FTE) Student, by Level and Control of Institution: Fiscal Year 1971 to 1981

Control of Institution and Year	All Institutions			4-Year Institutions			2-Year Institutions		
	Current Funds Expenditures, in Millions		Current Funds Expenditures per FTE Student, in	Current Funds Expenditures, in Millions		Current Funds Expenditures per FTE Student, in	Current Funds Expenditures, in Millions		Current Funds Expenditures per FTE Student, in
	Current Dollars	Constant ¹ Dollars	Constant ¹ Dollars	Current Dollars	Constant ¹ Dollars	Constant ¹ Dollars	Current Dollars	Constant ¹ Dollars	Constant ¹ Dollars
Public and Private									
1970-71 ²	\$23,375	\$47,513	\$7,052	\$21,049	\$42,785	\$8,196	\$2,327	\$4,730	\$3,116
1971-72 ²	25,560	49,238	6,888	22,851	44,019	8,107	2,709	5,219	3,036
1972-73	27,956	51,142	7,050	24,653	45,099	8,341	3,303	6,042	3,271
1973-74	30,714	52,481	7,041	26,912	45,984	8,355	3,802	6,496	3,332
1974-75	35,058	55,182	7,070	30,596	48,158	8,489	4,461	7,022	3,293
1975-76	38,903	57,432	6,773	33,811	49,915	8,460	5,092	7,517	2,914
1976-77	42,600	59,058	7,105	37,052	51,366	8,783	5,548	7,691	3,121
1977-78	45,971	59,742	7,099	39,899	51,851	8,736	6,072	7,891	3,182
1978-79	50,721	61,174	7,328	44,163	53,265	8,978	6,558	7,910	3,274
1979-80	56,914	62,479	7,361	49,661	54,517	9,062	7,253	7,962	3,222
1980-81	64,053	64,053	7,263	55,840	55,840	9,063	8,212	8,212	3,090
Public									
1970-71 ²	14,996	30,481	6,154	12,899	26,219	7,405	2,097	4,262	3,018
1971-72 ²	16,484	31,754	5,942	14,014	26,996	7,286	2,470	4,758	2,950
1972-73	18,204	33,302	6,107	15,146	27,708	7,476	3,058	5,594	3,203
1973-74	20,336	34,748	6,172	16,802	28,709	7,586	3,534	6,039	3,273
1974-75	23,490	36,973	6,219	19,309	30,393	7,766	4,181	6,581	3,240
1975-76	26,184	38,655	5,927	21,392	31,581	7,785	4,792	7,074	2,869
1976-77	28,635	39,698	6,252	23,411	32,455	8,117	5,224	7,242	3,080
1977-78	30,725	39,929	6,242	25,013	32,506	8,048	5,712	7,423	3,149
1978-79	33,733	40,685	6,479	27,600	33,288	8,330	6,132	7,396	3,240
1979-80	37,768	41,461	6,486	30,979	34,008	8,378	6,789	7,453	3,194
1980-81	42,280	42,280	6,365	34,677	34,677	8,339	7,602	7,602	3,061
Private									
1970-71 ²	8,379	17,031	9,543	8,150	16,568	9,864	230	468	4,428
1971-72 ²	9,075	17,482	9,690	8,837	17,023	10,021	239	460	4,354
1972-73	9,752	17,840	9,906	9,507	17,392	10,227	245	448	4,468
1973-74	10,377	17,731	9,722	10,110	17,275	10,046	267	456	4,376
1974-75	11,568	18,208	9,786	11,287	17,766	10,095	280	441	4,382
1975-76	12,719	18,777	9,593	12,419	18,334	9,943	300	443	3,901
1976-77	13,965	19,360	9,864	13,641	18,911	10,224	324	449	3,975
1977-78	15,246	19,813	9,814	14,885	19,344	10,203	360	468	3,810
1978-79	16,988	20,489	9,902	16,563	19,976	10,316	425	513	3,863
1979-80	19,146	21,018	10,034	18,682	20,509	10,481	464	509	3,691
1980-81	21,773	21,773	10,003	21,163	21,163	10,565	610	610	3,514

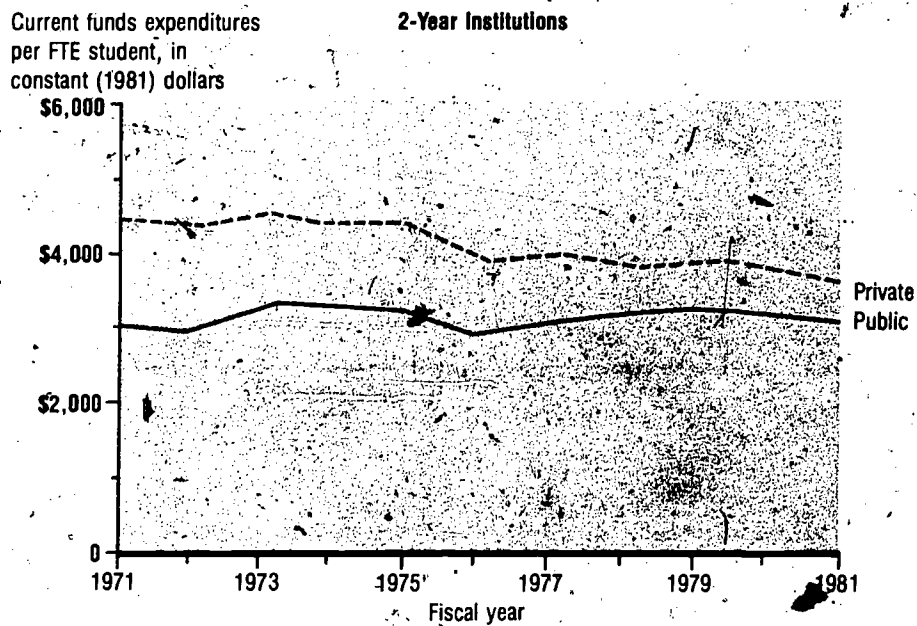
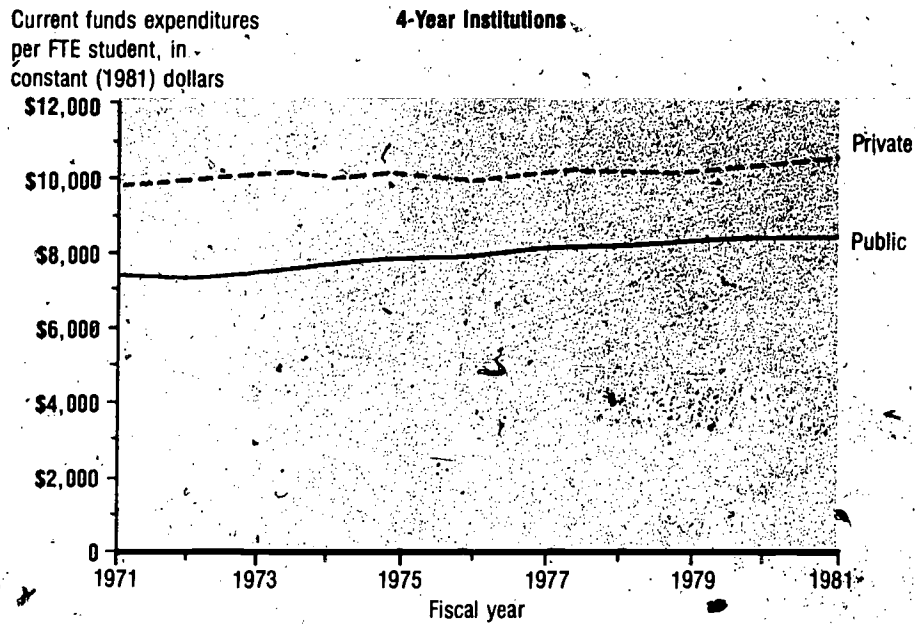
¹ Dollars adjusted using the Higher Education Price Index, available from the Research Associates of Washington.

² In 1970-71 and 1971-72 data for 2-year branch campuses of 4-year institutions are included with the 4-year institutions. In the following years, all 2-year institutions are included in the 2-year institution column.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Financial Statistics of Institutions of Higher Education and Fall Enrollment in Higher Education, unpublished tabulations (November 1982).

Higher Education Current Funds Expenditures Per Full-Time-Equivalent Student



When controlled for inflation between 1971 and 1981, current funds expenditures per full-time-equivalent student rose minimally among 4-year and public 2-year institutions. They fell somewhat in private 2-year institutions.

Table 2.18

Instruction Expenditures¹ as Percent of Educational and General Expenditures², by Type and Control of Institution and by State: Fiscal Year 1980-81

State	Total, all Institutions	Public Institutions		Private Institutions	
		4-Year	2-Year	4-Year	2-Year
50 States and D.C.	41.4	41.6	50.6	37.1	34.0
Alabama	43.4	44.1	48.1	35.7	30.9
Alaska	32.0	24.5	54.6	22.0	—
Arizona	43.3	40.2	54.3	34.0	22.6
Arkansas	41.8	41.7	50.1	38.8	28.4
California	43.3	41.8	52.9	36.3	32.7
Colorado	41.5	41.1	49.6	37.3	34.2
Connecticut	40.3	40.6	43.7	40.0	27.5
Delaware	48.7	48.8	61.5	29.6	33.8
District of Columbia	41.4	40.4	—	41.6	—
Florida	43.4	42.9	45.6	42.5	28.8
Georgia	41.0	40.1	47.1	42.3	33.6
Hawaii	40.8	38.3	54.1	38.8	—
Idaho	42.7	43.1	45.3	29.8	44.4
Illinois	42.1	38.2	49.6	43.5	42.3
Indiana	44.2	46.7	53.4	36.0	39.1
Iowa	41.8	40.6	54.3	36.4	38.3
Kansas	40.2	41.1	44.9	29.8	28.4
Kentucky	38.2	38.3	45.9	36.5	28.6
Louisiana	42.1	42.0	48.1	41.4	36.8
Maine	32.6	31.3	49.6	30.0	24.4
Maryland	43.3	41.2	48.5	43.5	39.2
Massachusetts	33.3	41.3	47.9	30.8	35.9
Michigan	43.6	43.1	50.6	37.3	31.5
Minnesota	39.0	41.5	41.2	32.3	43.4
Mississippi	42.2	39.1	57.9	34.7	27.1
Missouri	43.0	44.3	48.0	40.6	36.5
Montana	47.1	47.8	53.7	39.0	39.1
Nebraska	43.8	40.9	50.8	49.0	15.2
Nevada	37.4	34.8	51.5	37.3	—
New Hampshire	32.8	31.4	56.5	32.1	37.7
New Jersey	44.9	45.9	42.8	44.4	39.4
New Mexico	31.0	29.9	39.7	32.7	—
New York	39.7	42.8	47.5	36.2	34.5
North Carolina	43.6	42.9	54.1	40.0	29.6
North Dakota	45.3	44.0	57.6	37.6	29.6
Ohio	44.1	47.7	49.9	34.6	32.4
Oklahoma	44.6	45.1	56.7	36.4	26.0
Oregon	42.7	39.9	53.2	38.1	15.5
Pennsylvania	40.3	43.3	51.9	35.8	38.9
Rhode Island	37.3	34.3	51.9	37.5	39.2
South Carolina	41.0	42.2	45.4	31.6	36.0
South Dakota	34.8	33.3	53.5	39.7	28.0
Tennessee	43.8	48.5	58.0	33.5	24.8
Texas	43.4	44.2	48.8	36.0	26.0
Utah	41.4	35.5	51.1	56.5	44.7
Vermont	35.2	37.1	39.5	32.5	28.2
Virginia	43.0	42.3	52.8	38.9	20.9
Washington	42.0	38.1	53.3	40.9	—
West Virginia	38.9	39.6	48.2	33.1	28.6
Wisconsin	42.4	40.4	55.9	33.3	32.6
Wyoming	45.7	44.7	47.9	—	55.4
U.S. Service Schools	21.7	21.7	40.4	—	—

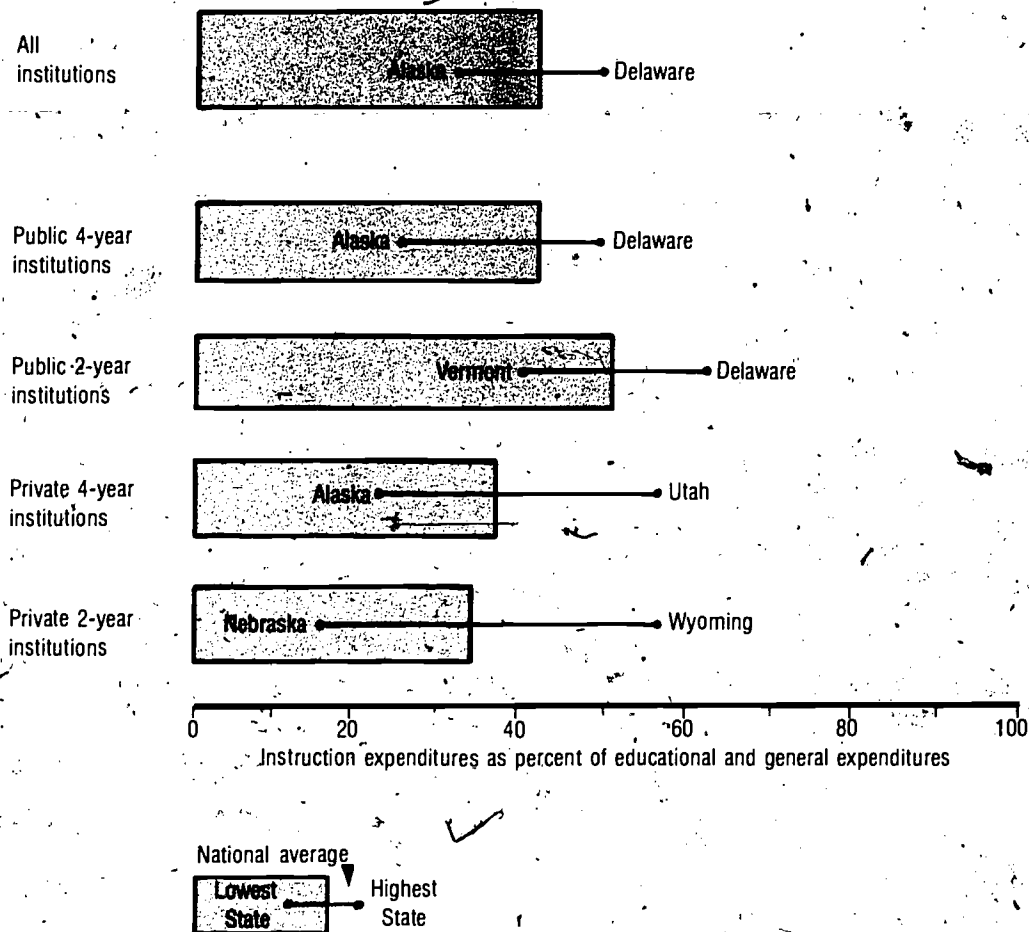
—Not applicable.

¹ Expenditures for instruction and expenditures for departmental research and public service which are not separately budgeted. Faculty salaries are a major component of instruction expenditures.

² General operating expenditures including instruction, research, public service, academic support, student services, institutional support, and operation and maintenance of plant.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Financial Statistics of Institutions of Higher Education, for Fiscal Year Ending 1981, unpublished tabulations (December 1982).

Instruction Expenditures as Percent of Educational and General Expenditures, by Type and Control of Institution



Public 2-year institutions generally devoted a greater proportion of their educational and general expenditures to instructional costs than other institutions. Some variations exist among States within each type of institution.

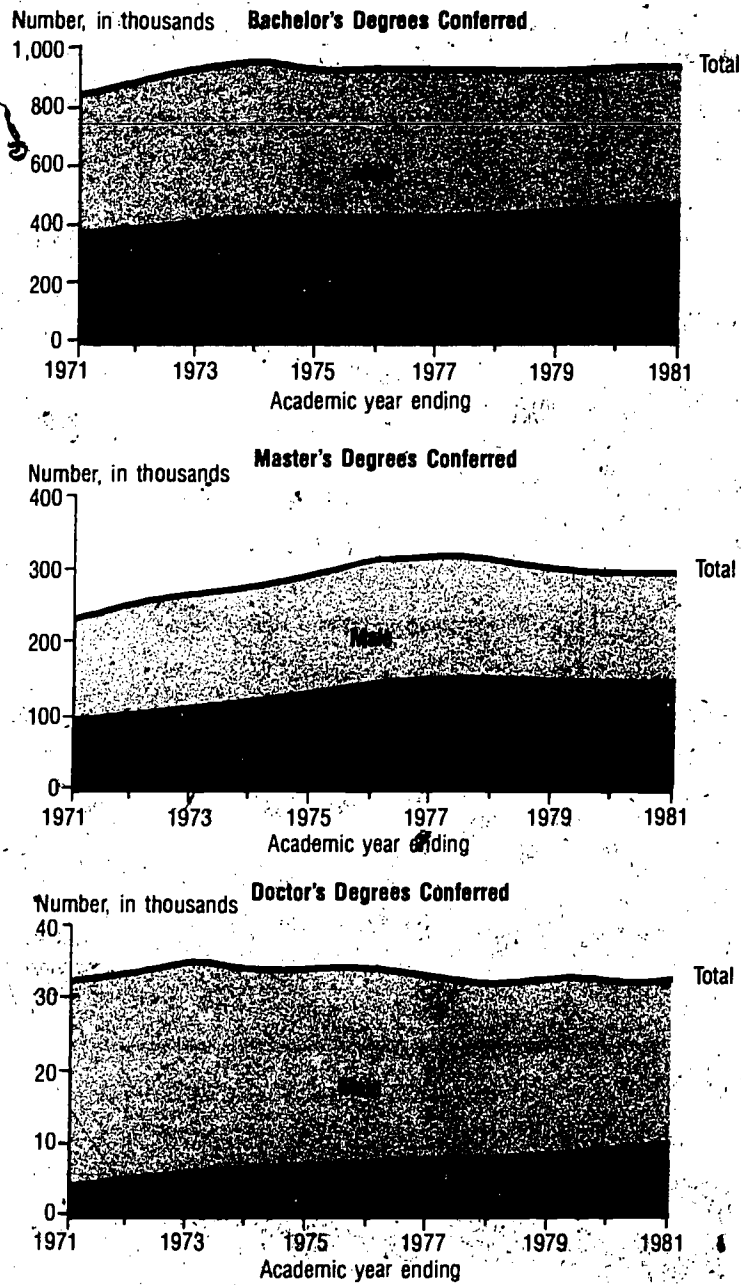
Table 2.19

Earned Degrees Conferred by Institutions of Higher Education, by Level of Degree and Sex of Recipient: Academic Year 1970-71 to 1980-81

Academic Year Ending	Total	Male	Female	Female as Percent of Total
Bachelor's degrees:				
1971	839,730	475,594	364,136	43.4
1972	887,273	500,590	386,683	43.6
1973	922,362	518,191	404,171	43.8
1974	945,776	527,313	418,463	44.2
1975	922,933	504,841	418,092	45.3
1976	925,746	504,925	420,821	45.5
1977	919,549	495,545	424,004	46.1
1978	921,204	487,347	433,857	47.1
1979	921,390	477,344	444,046	48.2
1980	929,417	473,611	455,806	49.0
1981	935,140	469,883	465,257	49.8
Master's degrees:				
1971	230,509	138,146	92,363	40.1
1972	251,633	149,550	102,083	40.6
1973	263,371	154,468	108,903	41.3
1974	277,033	157,842	119,191	43.0
1975	292,450	161,570	130,880	44.8
1976	311,771	167,248	144,523	46.4
1977	317,164	167,783	149,381	47.1
1978	311,620	161,212	150,408	48.3
1979	301,079	153,370	147,709	49.1
1980	298,081	150,749	147,332	49.4
1981	295,739	147,043	148,696	50.3
Doctor's degrees:				
1971	32,107	27,530	4,577	14.3
1972	33,363	28,090	5,273	15.8
1973	34,777	28,571	6,206	17.8
1974	33,816	27,365	6,451	19.1
1975	34,083	26,817	7,266	21.3
1976	34,064	26,267	7,797	22.9
1977	33,232	25,142	8,090	24.3
1978	32,131	23,658	8,473	26.4
1979	32,730	23,541	9,189	28.1
1980	32,615	22,943	9,672	29.7
1981	32,958	22,711	10,247	31.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Earned Degrees Conferred*, various years, and unpublished tabulations (September 1982).

Earned Degrees Conferred, by Level and Sex



Bachelor's degrees reached their highest production in 1974 and master's in 1977, fluctuating, as have doctor's degrees, in the ensuing years. Increased numbers of females earning degrees contributed greatly to the rise.

Table 2.20

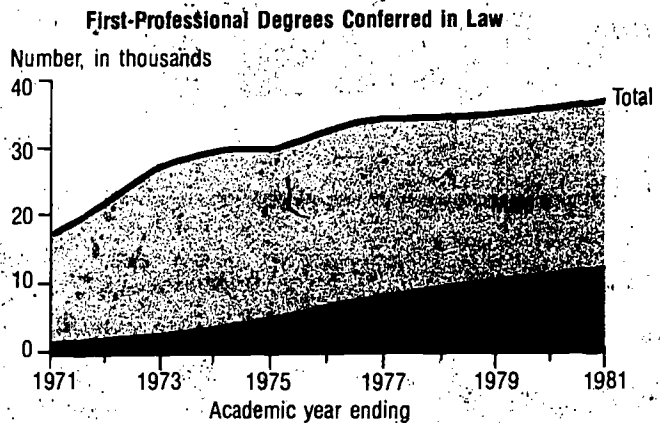
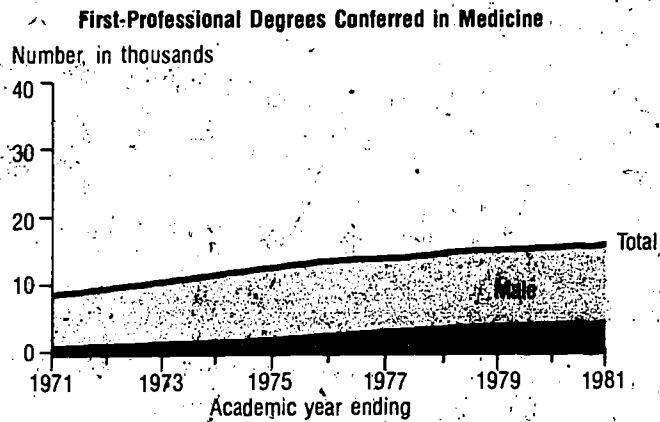
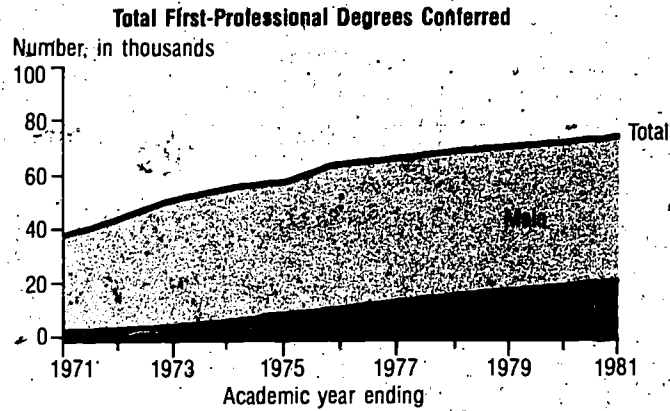
First-Professional Degrees Conferred by Institutions of Higher Education, by Sex of Recipient: Academic Year 1970-71 to 1980-81

Academic Year Ending	Total First-Professional Degrees			First-Professional Degrees in Medicine (M.D.)			First-Professional Degrees in Law (L.L.B. or J.D.)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971	37,946	35,544	2,402	8,919	8,110	809	17,421	16,181	1,240
1972	43,411	40,723	2,688	9,253	8,423	830	21,764	20,266	1,498
1973	50,018	46,489	3,529	10,307	9,388	919	27,205	25,037	2,168
1974	53,816	48,530	5,286	11,356	10,093	1,263	29,326	25,986	3,340
1975	55,916	48,956	6,960	12,447	10,818	1,629	29,296	24,881	4,415
1976	62,649	52,892	9,757	13,426	11,252	2,174	32,293	26,085	6,208
1977	64,359	52,374	11,985	13,461	10,891	2,570	34,104	26,447	7,657
1978	66,581	52,270	14,311	14,279	11,210	3,069	34,402	25,457	8,945
1979	68,848	52,652	16,196	14,786	11,381	3,405	35,206	25,180	10,026
1980	70,131	52,716	17,415	14,802	11,476	3,486	35,647	24,893	10,754
1981	71,956	52,792	19,164	15,585	11,672	3,833	36,331	24,563	11,768

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1982, 1982: Projections of Education Statistics to 1990-91, Volume 1, 1982*; and Higher Education General Information Survey, *Earned Degrees Conferred*, unpublished tabulations (September 1982).



First-Professional Degrees Conferred, by Sex



First-professional degrees awarded to women rose appreciably from 1970-71 to 1980-81, while those awarded to men began leveling off in 1976-77. Over the period, the number of female degree recipients quadrupled in medicine and increased by nine-fold in law.

Table 2.21

Bachelor's and Advanced Degrees Conferred by Institutions of Higher Education, by Control of Institution and State: Academic Year 1980-81

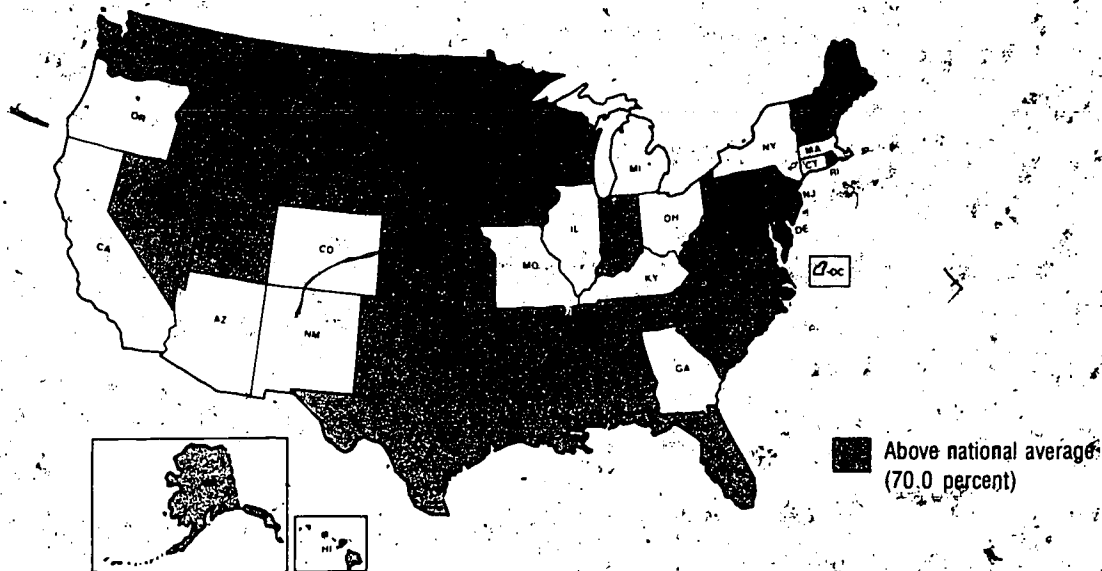
State	Total Degrees	Bachelor's Degrees	Advanced Degrees	Bachelor's Degrees as Percent of Total	Degrees Conferred by Public Institutions	Degrees Conferred by Public Institutions as Percent of Total
50 States and D.C.	1,335,793	935,140	400,653	70.0	860,859	64.4
Alabama	22,999	16,534	6,465	71.9	20,226	87.9
Alaska	657	465	192	70.8	647	98.5
Arizona	15,969	10,826	5,143	67.8	13,964	87.4
Arkansas	9,291	6,955	2,336	74.9	7,766	83.6
California	125,211	81,848	43,363	65.4	81,292	64.9
Colorado	21,038	14,677	6,361	69.8	17,587	83.6
Connecticut	20,784	13,312	7,472	64.0	10,192	49.0
Delaware	3,704	3,194	510	86.2	3,396	91.7
District of Columbia	15,514	6,807	8,707	43.9	797	5.1
Florida	41,734	29,988	11,746	71.9	27,703	66.4
Georgia	25,521	17,014	8,507	66.7	19,008	74.5
Hawaii	4,487	3,212	1,275	71.6	4,048	90.2
Idaho	3,594	2,759	835	76.8	3,277	91.2
Illinois	67,407	44,470	22,937	66.0	37,675	55.9
Indiana	35,432	24,834	10,598	70.1	25,327	71.5
Iowa	19,096	14,441	4,655	75.6	11,505	60.2
Kansas	15,814	11,672	4,142	73.8	13,699	86.6
Kentucky	17,610	11,509	6,101	65.4	14,120	80.2
Louisiana	20,442	14,821	5,621	72.5	16,197	79.2
Maine	5,452	4,817	635	88.4	3,406	62.5
Maryland	22,848	15,901	6,743	70.2	16,545	73.1
Massachusetts	58,343	38,792	19,551	66.5	15,696	26.9
Michigan	57,511	38,647	18,864	67.2	47,729	83.0
Minnesota	24,848	19,392	5,456	78.0	17,003	68.4
Mississippi	12,676	8,982	3,694	70.9	10,899	86.0
Missouri	32,404	22,041	10,363	68.0	18,370	56.7
Montana	4,593	3,815	778	83.1	4,177	90.9
Nebraska	10,073	7,404	2,669	73.5	7,548	74.9
Nevada	2,016	1,477	539	73.3	1,995	99.0
New Hampshire	7,252	6,025	1,227	83.1	3,353	46.2
New Jersey	34,538	24,474	10,064	70.9	22,291	64.5
New Mexico	6,652	4,543	2,109	68.3	6,269	94.2
New York	125,980	83,777	42,203	66.5	47,556	37.7
North Carolina	31,223	23,712	7,511	75.9	21,554	69.0
North Dakota	4,448	3,795	653	85.3	4,061	91.3
Ohio	59,610	41,306	18,304	69.3	40,028	67.1
Oklahoma	17,472	12,818	4,654	73.4	14,485	82.9
Oregon	14,265	9,783	4,482	68.6	10,855	76.1
Pennsylvania	73,004	54,446	18,558	74.6	36,186	49.6
Rhode Island	9,029	7,263	1,766	80.4	3,629	40.2
South Carolina	15,235	11,358	3,877	74.6	11,872	77.9
South Dakota	4,612	3,868	744	83.9	3,569	77.4
Tennessee	24,175	17,409	6,766	72.0	16,529	68.4
Texas	76,070	53,589	22,481	70.4	58,846	77.4
Utah	12,455	9,336	3,119	75.0	6,680	53.6
Vermont	5,354	3,971	1,383	74.2	2,630	49.1
Virginia	29,870	22,078	7,792	73.9	24,063	80.6
Washington	22,491	16,648	5,843	74.0	16,633	74.0
West Virginia	10,219	7,720	2,499	75.5	8,878	86.9
Wisconsin	28,907	22,026	6,881	76.2	23,030	79.7
Wyoming	1,794	1,320	474	73.6	1,794	100.0
U.S. Service Schools	4,274	3,269	1,005	76.5	4,274	100.0

*Includes master's, doctor's, and first-professional degrees.

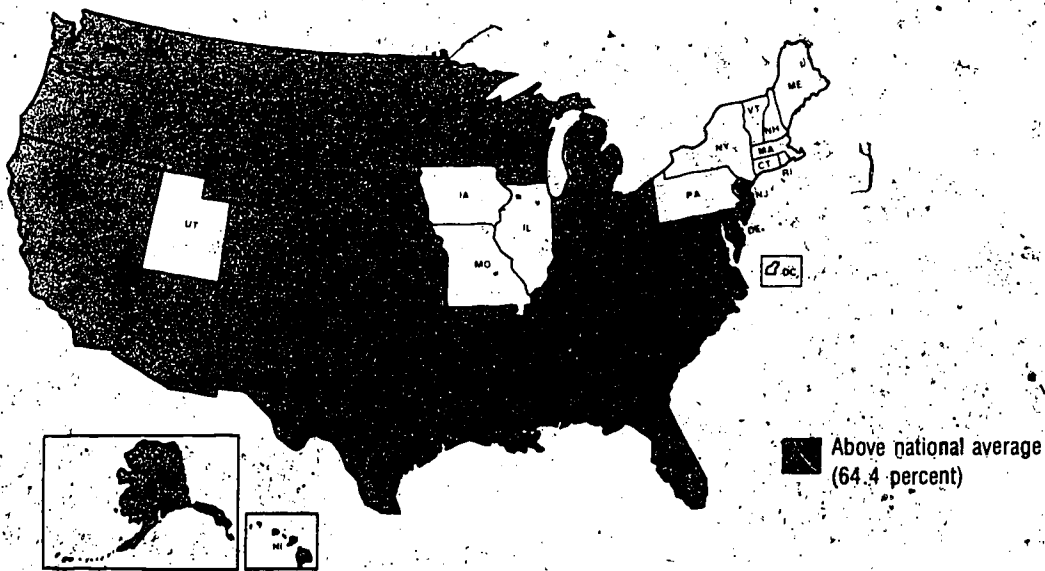
SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Earned Degrees Conferred, unpublished tabulations (September 1982).

Percent of Total Earned Degrees Conferred at Bachelor's Level and by Public Institutions, by State

States With Percent Conferred at Bachelor's Level Above National Average



States With Percent Conferred in Public Institutions Above National Average



While on the average, bachelor's degrees comprised 70 percent of total degree production, they represented generally higher proportions of the total in States with small populations or located in the South. States with higher than average proportions awarded from public institutions were generally located outside the Northeast.

Table 2.22

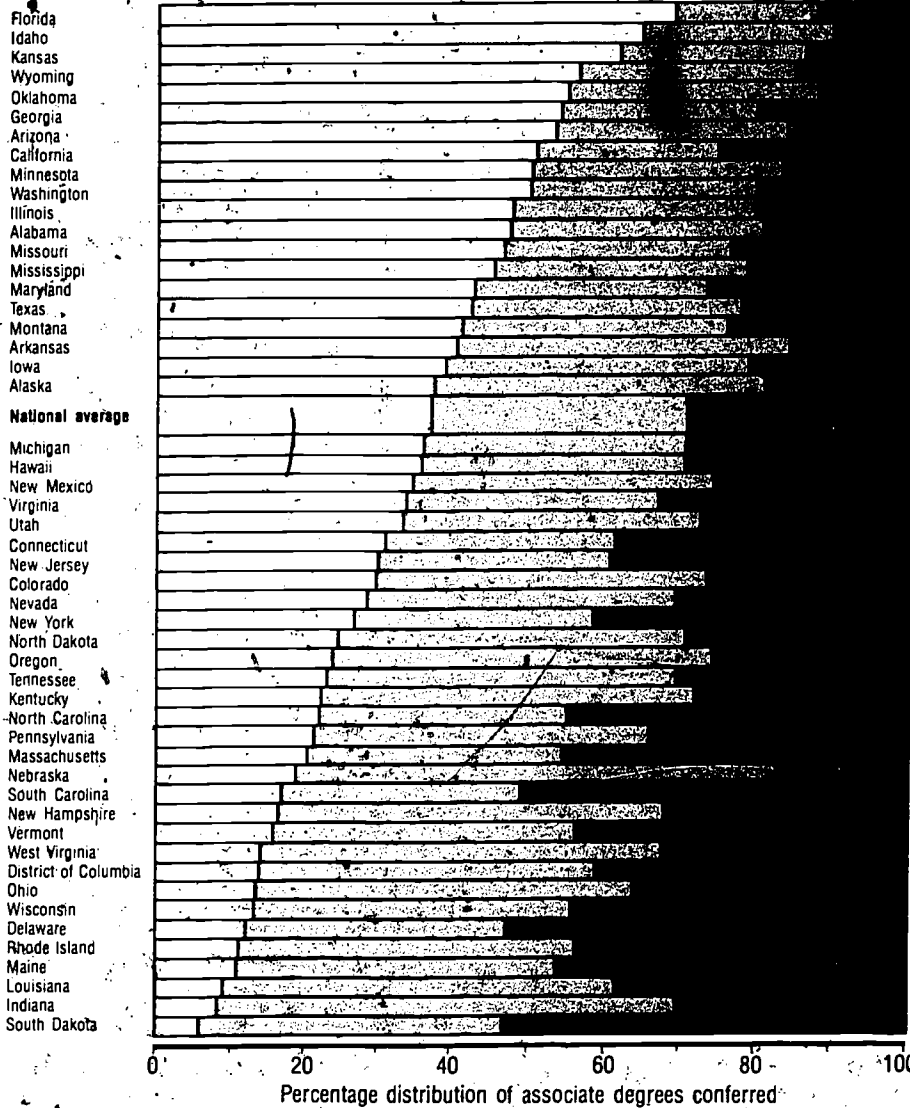
Associate Degrees Conferred by Institutions of Higher Education, by Type of Curricular Program and by State: Academic Year 1980-81

State	All Programs, Total	All Programs, Total	Arts and Sciences and General Programs	Occupational Programs		
				Occupational Programs, Total	Science or Engineering Related	Non-Science and Non-Engineering Related
	Number		Percentage Distribution			
50 States and D.C.	416,377	100.0	37.4	62.6	33.5	29.1
Alabama	4,839	100.0	47.7	52.3	39.2	19.1
Alaska	512	100.0	37.7	62.3	43.4	18.9
Arizona	5,180	100.0	53.7	46.3	30.4	15.9
Arkansas	1,785	100.0	40.8	59.2	43.6	15.5
California	59,490	100.0	51.4	48.6	23.5	25.1
Colorado	4,483	100.0	30.1	69.9	43.1	26.8
Connecticut	5,381	100.0	31.3	68.7	30.0	38.7
Delaware	1,195	100.0	12.1	87.9	35.1	52.7
District of Columbia	639	100.0	14.2	85.8	44.8	41.0
Florida	31,503	100.0	69.5	30.5	18.8	11.7
Georgia	5,978	100.0	54.4	45.6	25.4	20.2
Hawaii	2,120	100.0	36.3	63.7	34.3	29.4
Idaho	2,015	100.0	85.1	34.9	25.2	9.7
Illinois	21,173	100.0	48.0	52.0	31.4	20.6
Indiana	6,932	100.0	8.3	91.7	61.1	30.6
Iowa	5,603	100.0	39.5	60.5	39.5	21.0
Kansas	4,564	100.0	61.9	38.1	24.8	13.3
Kentucky	4,818	100.0	22.5	77.5	49.5	27.9
Louisiana	2,066	100.0	8.9	91.1	52.2	38.9
Maine	1,731	100.0	10.9	89.1	43.0	46.2
Maryland	6,778	100.0	43.1	56.9	30.3	26.6
Massachusetts	14,632	100.0	20.8	79.2	33.6	45.6
Michigan	18,938	100.0	36.4	63.6	33.4	30.2
Minnesota	6,590	100.0	50.6	49.4	32.9	16.4
Mississippi	4,190	100.0	45.7	54.3	33.0	21.3
Missouri	6,384	100.0	46.9	53.1	29.5	23.7
Montana	534	100.0	41.4	58.6	34.8	23.8
Nebraska	2,331	100.0	19.2	80.8	63.3	17.5
Nevada	641	100.0	28.7	71.3	40.7	30.6
New Hampshire	1,980	100.0	16.7	83.3	51.2	32.1
New Jersey	9,834	100.0	30.3	69.7	30.5	39.2
New Mexico	1,347	100.0	35.1	64.9	39.3	25.6
New York	48,679	100.0	27.0	73.0	31.7	41.3
North Carolina	10,608	100.0	22.2	77.8	32.8	45.1
North Dakota	1,695	100.0	24.7	75.3	45.7	29.6
Ohio	15,455	100.0	13.5	86.5	50.1	36.4
Oklahoma	3,947	100.0	55.1	44.9	33.3	11.6
Oregon	4,309	100.0	24.2	75.8	50.2	25.6
Pennsylvania	16,278	100.0	21.6	78.4	44.1	34.3
Rhode Island	3,150	100.0	11.2	88.8	45.0	43.8
South Carolina	5,501	100.0	17.1	82.9	32.0	50.9
South Dakota	1,272	100.0	5.9	94.1	40.6	53.5
Tennessee	5,659	100.0	23.6	76.4	45.7	30.7
Texas	17,626	100.0	42.8	57.2	35.1	22.1
Utah	2,410	100.0	33.8	66.2	38.7	27.5
Vermont	1,285	100.0	16.0	84.0	40.0	44.0
Virginia	6,755	100.0	34.1	65.9	32.6	33.3
Washington	1,097	100.0	50.3	49.7	29.4	20.3
West Virginia	2,386	100.0	14.3	85.7	53.1	32.6
Wisconsin	7,222	100.0	13.3	86.7	42.3	44.3
Wyoming	838	100.0	56.6	43.4	28.6	14.8
U.S. Service Schools	4,019	100.0	0	100.0	64.7	35.3

NOTE: Data include only degrees requiring at least 2 years but less than 4 years of work beyond high school.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Associate Degrees and Other Formal Awards Below the Baccalaureate, 1980-81, unpublished tabulations (December 1982).

Distribution of Associate Degrees Conferred by Institutions of Higher Education, by Type of Curricular Program



- Arts and sciences and general (non-occupational) programs
- Science- or engineering-related occupational programs
- Other occupational programs

Nationwide in 1980-81, associate degrees were conferred about evenly in each of the three curricular programs. However, States differed considerably in the proportions awarded in arts and sciences as compared with occupational programs.

Table 2.23

Labor Force Status of Recent Bachelor's Degree Recipients, by Major Field of Study: February 1978 and May 1981

Major Field of Study	Total Bachelor's Recipients		Labor Force Participation Rate		Unemployment Rate ¹	
	1976-77	1979-80	1976-77	1979-80	1976-77	1979-80
			Graduates in February 1978	Graduates in May 1981	Graduates in February 1978	Graduates in May 1981
Percent						
Recent bachelor's recipients	897,800	905,700	85	86	5	5
Professions	402,700	476,900	92	91	3	4
Arts and sciences	406,500	307,500	79	77	7	6
Other	88,600	121,300	87	88	6	5
Newly qualified to teach	171,100	132,200	91	94	4	3
Professions	120,700	110,700	92	94	3	3
Arts and sciences	44,000	17,400	88	95	7	0
Other	6,400	4,100	89	83	0	0
Not newly qualified to teach	726,800	773,500	84	85	5	5
Professions	282,000	368,200	92	91	3	4
Engineering	51,100	67,000	90	88	4	4
Business and management	153,600	186,300	92	91	3	3
Health	54,900	63,800	92	94	3	3
Education ²	22,400	23,900	90	89	5	9
Public affairs and services	—	25,200	—	90	—	6
Arts and sciences	362,500	290,100	78	76	7	7
Biological sciences	62,100	52,100	66	67	10	6
Physical sciences and mathematics	30,800	87,600	78	76	2	3
Psychology	52,200	38,800	78	79	5	8
Social sciences	137,300	89,300	79	77	7	7
Humanities	80,200	72,300	84	79	8	8
Other	82,200	117,200	87	88	6	5
Communications	26,800	20,200	96	95	9	8
Miscellaneous	55,400	97,900	83	87	5	4

—Not available.

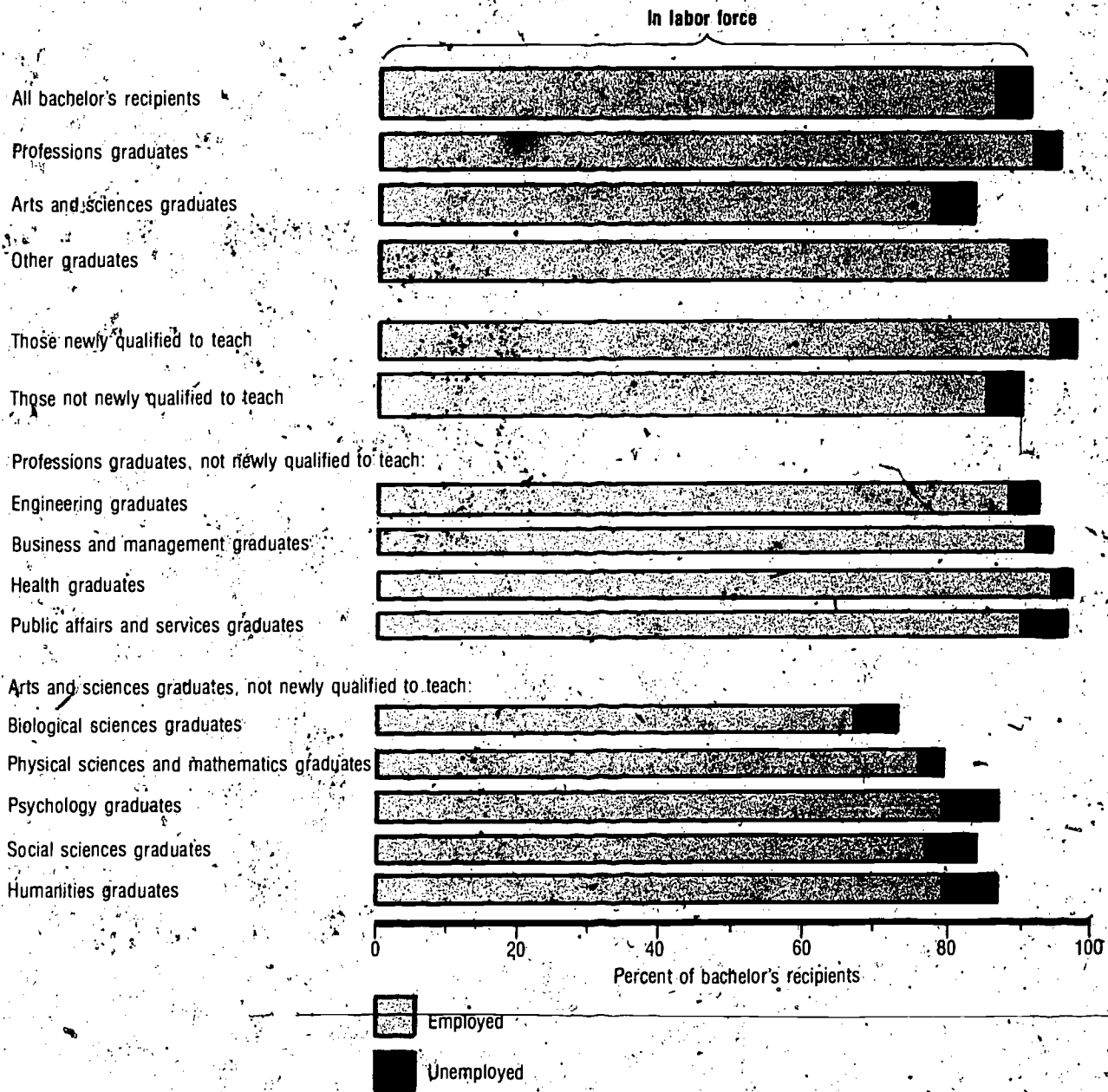
¹ Unemployed graduates were those who, during the survey week, were in the labor force, had no employment, were available for work, and had engaged in job-seeking activities within the past 4 weeks.

² Includes those who had not finished all requirements for teaching certification or were previously qualified to teach.

NOTE: Data exclude bachelor's recipients from U.S. Service Schools. Also do not include deceased graduates and graduates living at foreign addresses at the time of the survey. Data only approximate the totals for bachelor's recipients, 919,549 in 1976-77 and 929,417 in 1979-80, reported elsewhere. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *New Teachers in the Job Market, 1980* and *New Teachers in the Job Market: 1981 Update*, forthcoming.

Labor Force Status of Recent Bachelor's Degree Recipients, by Major-Field of Study



Bachelor's recipients who majored in professional fields or who were newly qualified to teach were more likely to go directly into the labor force than those who majored in arts and sciences. In addition, they were also less likely to be unemployed than were arts and sciences majors.

Table 2.24

Full-Time Employment Status of Recent Bachelor's Degree Recipients; by Major Field of Study: February 1978 and May 1981

Major Field of Study	Employed Full-Time		Employed Full-Time in Closely Related Field		Employed Full-Time in Non-Professional Jobs ¹	
	1976-77	1979-80	1976-77	1979-80	1976-77	1979-80
	Graduates in February 1978	Graduates in May 1981	Graduates in February 1978	Graduates in May 1981	Graduates in February 1978	Graduates in May 1981
	Percent of Bachelor's Recipients					
Recent bachelor's recipients	68	71	35	38	16	13
Professions	79	80	52	51	10	10
Arts and sciences	57	56	19	17	20	15
Other	67	74	31	43	20	20
Newly qualified to teach	72	76	48	54	11	10
Professions	75	78	55	55	10	9
Arts and sciences	63	66	32	45	11	6
Other	66	56	40	48	18	17
Not newly qualified to teach	67	70	32	36	17	13
Professions	81	81	52	50	11	10
Engineering	81	84	56	55	5	3
Business and management	83	83	49	44	15	14
Health	81	77	74	66	1	4
Education ²	71	68	41	41	16	11
Public affairs and services	71	78	—	46	—	10
Arts and sciences	56	55	17	15	21	15
Biological sciences	44	45	17	18	12	9
Physical sciences and mathematics	56	57	20	28	13	2
Psychology	55	55	16	17	20	17
Social sciences	60	61	18	10	25	21
Humanities	60	55	17	13	23	18
Other	67	75	31	43	21	20
Communications	75	71	33	31	21	24
Miscellaneous	63	76	30	46	20	19

— Not available.

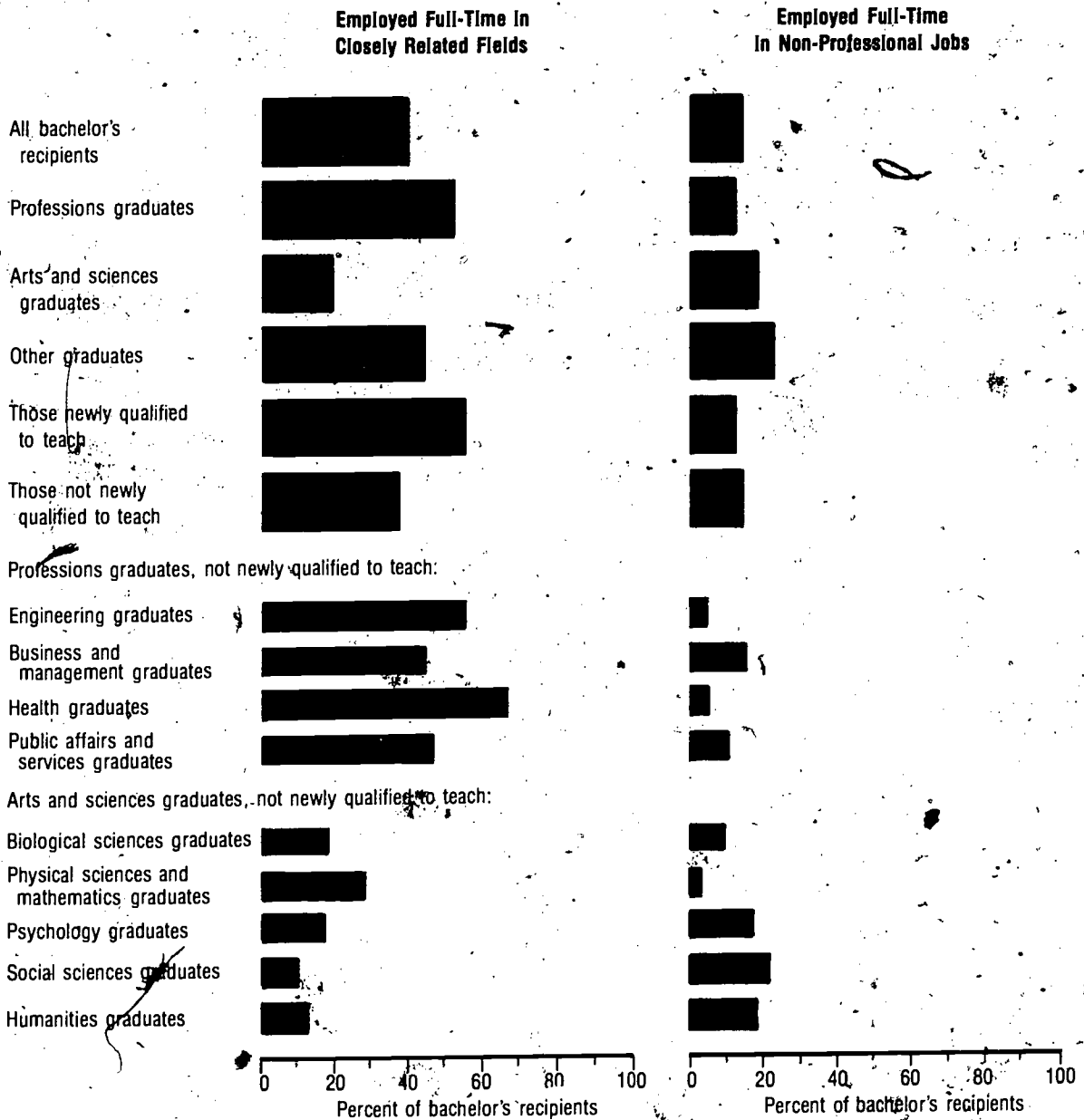
¹ Includes those not working in technical, managerial, or administrative types of jobs and who reported that they did not need a college degree to obtain their job.

² Includes those who have not finished all requirements for teaching certification or were previously qualified to teach.

NOTE: Data exclude bachelor's recipients from U.S. Service Schools. Also do not include deceased graduates and graduates living at foreign addresses at the time of the survey. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *New Teachers in the Job Market*, 1980, and *New Teachers in the Job Market: 1987 Update*, forthcoming.

Percent of Recent Bachelor's Recipients Who Are Employed Full-Time in Closely Related Fields and Percent Employed Full-Time in Non-Professional Jobs



Bachelor's degree recipients who majored in one of the professions were more likely to have jobs in fields closely related to their college majors than those who majored in an arts and sciences field. Employment in non-professional jobs was also lower for the former group than for the latter.

Table 2.25**Occupational Distribution and Average Annual Salaries of Recent Bachelor's Degree Recipients Working Full-Time: February 1978 and May 1981**

Occupation	1976-77 Recipients in February 1978		1979-80 Recipients in May 1981	
	Employed Full-Time	Average Annual Salary ¹ in Constant (1981) Dollars	Employed Full-Time	Average Annual Salary ¹ in Constant (1981) Dollars
Total	610,600	\$16,000	632,500	\$15,300
Business	123,200	17,800	151,600	16,400
Education	100,400	13,100	88,800	11,200
Engineering	36,700	22,400	51,200	22,900
Health professional	43,400	17,700	42,600	17,400
Public affairs	22,300	12,100	28,100	11,800
Biological and physical sciences	7,400	16,800	9,600	15,400
Fine arts	10,800	15,300	15,100	18,700
Social sciences and psychology	6,200	17,200	2,100	15,900
Research	3,600	12,700	10,500	13,400
Communications	11,200	13,600	8,300	13,000
Computer science	12,000	20,400	21,400	19,800
Technician	27,800	14,600	25,000	14,700
Other professional	9,200	16,600	10,900	14,500
Sales	44,300	17,400	58,400	16,300
Clerical and secretarial	76,000	13,100	61,300	11,400
Crafts and operatives	33,000	17,500	16,800	15,900
Other nonprofessional	41,700	15,400	30,900	12,000
Occupation not reported	1,400	17,500	—	—

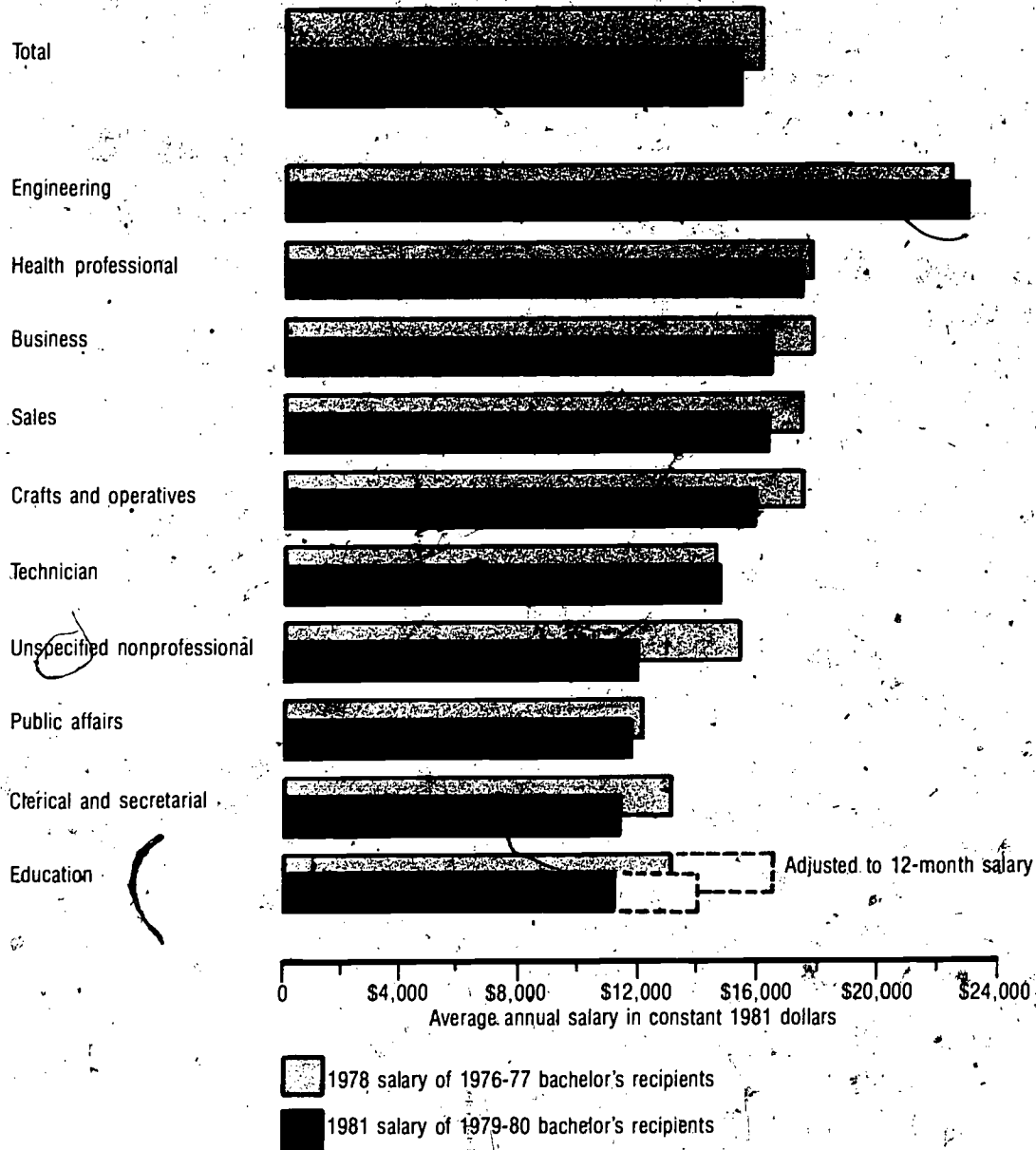
¹ Reported salaries of full-time workers under \$3,000 in 1978 and \$4,200 in 1981 were excluded from the tabulations.

² Most educators work 9- to 10-month contracts. Their salaries when adjusted for a 12-month period averaged \$16,300 in February 1978 and \$14,000 in May 1981 in constant (1981) dollars.

NOTE: Data exclude bachelor's recipients from U.S. Service Schools. Also do not include deceased graduates and graduates living at foreign addresses at the time of the survey. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1978 and 1981, unpublished tabulations (December 1982).

Average Annual Salaries of Recent Bachelor's Degree Recipients Working Full-Time, by Occupation



When adjusted for inflation, average salaries earned by recent bachelor's degree recipients declined in most occupational fields between 1978 and 1981. Graduates working in engineering continued to earn substantially more than their former classmates employed full-time in other fields.

Chapter 3 Vocational and Adult Education

Vocational and adult education demonstrate both the varied uses of educational experiences and the growing options for obtaining education. Occupational schooling at secondary and postsecondary levels may contribute to improved prospects for employment or job advancement. Adult part-time education, serving an expanding clientele through a diverse network of providers, supplements previous schooling and training, assists in overcoming previous education and language deficiencies, and offers opportunities for personal development. Chapter 3 presents profiles of these two aspects of education as offered by schools and other institutions. The first half of the chapter on vocational education at the secondary and postsecondary levels highlights participation in high schools and under the Vocational Education Act, while the second half examines adult education as it relates to the characteristics and needs of participants.

Vocational Education

Vocational education is a diverse enterprise offered by a large number of institutions. There is no single data collection which covers the entire spectrum of participants, providers, and offerings. Information on this complex area is derived from various sources. The two most comprehensive collections are High School and Beyond (HSB), a longitudinal study of 1980 high school students, and the Vocational Education Data System (VEDS), collecting institutional data at the State level. Certain information may differ because the HSB data are derived from student self-reports and the VEDS data from institutions as reported and certified by the States in their vocational program plans. Considerable work is being done, however, to enhance these data collections. A high school transcript study will be available shortly from HSB that will go beyond student responses to report high school participation in curricular programs and courses with considerable accuracy and detail. Followup studies will also provide information on subsequent vocational training and the realization of high school expectations. The Vocational Education Data System is in the process of working with the States to improve the consistency of reporting. Problems still exist in some State reports because of duplicated counting and the inclusion of some nonoccupational courses.

An examination of provider institutions supplies the basis for a composite picture of vocational education's scope and characteristics. The components include secondary and postsecondary institutions, comprising the more than 27,000 identified providers of vocational education in the United States. Since several different and occasionally overlapping data bases were used to assemble this profile, the figures presented here may depart somewhat from other sources.

Of 27,000 institutions offering vocational education in 1978-79, the largest single provider, public comprehensive and vocational secondary schools, made up more than half of the total, with some 15,700 schools (entry 3.1). Specialized high schools called area vocational centers also provide vocational instruction to secondary students who receive the academic portion of their education in regular high schools or other institutions. Private noncollegiate postsecondary schools comprised the second largest group of vocational education providers, with a total of about 6,800 institutions. These non-degree granting institutions provide specialized instruction for preparation for a single or group of occupations. They may include vocational/technical institutes and business, trade, and health schools. Many 2- and 4-year institutions of higher education also offer degrees in vocational and technical fields, as well as academic and general education. In 1978-79, some 1,100 2-year institutions and 600 4-year institutions offered vocational programs.

These institutions in 1978-79 totalled some 19 million aggregate program enrollments over the 12-month period. The distribution of enrollments among the provider institutions differed from the distribution of numbers of institutions. Size differences among the types of institutions were responsible for some of this variation. At the secondary level, the public secondary schools, area centers, and secondary level adult programs accounted for virtually all secondary vocational enrollments (entry 3.2). Distribution of enrollments at the postsecondary level departed markedly from the distribution of institutions. The 2-year institutions of higher education accounted for by far the largest single portion of the postsecondary enrollments, enrolling 68 percent of all postsecondary students. Private noncollegiate postsec-

ondary schools enrolled the second largest share (15 percent of postsecondary students).

Secondary vocational education

Information on participation in vocational programs in general at the secondary level is available from the National Center for Education Statistics' High School and Beyond Study. When asked to describe their high school program, one-fourth of high school seniors checked a vocational (occupational) program. According to their responses, approximately equal proportions of males and females were enrolled in vocational curricular programs (entry 3.3). At the secondary level, females outnumbered males in office occupations programs, whereas the males predominated in trade and industrial enrollments. Yet, almost as many males participated in office occupations as in technical vocational education.

When considering all students in all curricula by racial/ethnic group, greater proportions of blacks, Hispanics, and American Indians participated in vocational programs. Higher proportionate enrollment in vocational education was also characteristic of students in low ability groups and from lower socioeconomic status.

While about one-fourth of high school students indicated that they were enrolled in vocational programs, many more said that they had taken a vocational course that could prepare them for entry-level work. On the student survey, high school seniors were asked to respond to the question, "Have you taken any high school courses in the following areas which have equipped you for a beginning job in that area?" More than 87 percent said they had. In fact, regardless of sex or region, four in five high school seniors said they had taken at least one vocational course that prepared them for a beginning job. This proportion, however, may include students who took a single course that they believed prepared them for an entry-level job. For male seniors, at least one in four had been enrolled in carpentry, drafting, machine shop, or secretarial/office work (entry 3.4). Among female seniors, 71 percent had taken a secretarial/office work course. The next largest category for females was home economics (47 percent) followed by sales/merchandising (22 percent).

Of the approximately 25 percent of 1980 high school seniors who were enrolled in vocational curricular programs, about half expected to begin working immediately after graduation (entry 3.5). Lower percentages were noted for seniors enrolled in general (40 percent) and academic (11 percent) programs. The proportion of seniors who expected to continue some type of vocational education after high school was 22 percent for students in vocational programs, 8 percent for students in academic programs, and 16 percent for students in general programs. Almost 19 percent of vocational students planned to attend college in an academic field, compared to 76 percent of academic students and 34 percent of general program students. Only small proportions of 1980 high school seniors expected to participate in apprenticeship/training programs.

For many students, starting salary plays an important part in career choice. To evaluate the relationship between high school program and income for 1972 high school graduates, earnings and hourly wages for initial jobs obtained after completing education were adjusted to 1980 dollars (entry 3.6). This adjustment compensates for inflation and permits fair comparisons among students who enter the labor force at different times. Graduates who had been enrolled in vocational programs earned salaries per hour comparable to those of graduates in academic and general programs, \$5.38 compared to \$5.48 (academic) and \$5.25 (general). Initial average yearly earnings were highest for graduates enrolled in academic programs (\$11,337), followed by those in general programs (\$10,961) and vocational programs (\$10,880). Differences by sex were evident in that males worked longer hours and earned more per hour and per year than females regardless of high school program.

Vocational education under the Vocational Education Act (VEA)

A high proportion of the vocational education offered in the Nation receives funds under the Federal Vocational Education Act, designated in this section as VEA programs. Data on these programs are collected annually by the National Center for Education Statistics through the Vocational Education Data System (VEDS). In 1979-80,

virtually all public secondary schools received some assistance under the VEA, and while private secondary schools were not included, their students can participate through the public school system. About two-thirds of all postsecondary schools were covered under VEA, most of which were 2-year institutions of higher education or public noncollegiate postsecondary schools.

The range of vocational education programs is suggested by the nine program areas used to group enrollment (see the Definitions of Selected Terms in the Appendix). Of the nine, office occupations, consumer and homemaking, and trade and industrial programs continued to dominate enrollments in federally-funded vocational education in 1981 (entry 3.7). Overall, VEA enrollments rose steadily between 1975 and 1979, then dropped slightly for 1981. The decrease between 1979 and 1981 occurred primarily in the areas of agriculture and consumer and homemaking, while health and technical program enrollments actually increased. From 1975 to 1981, significant increases in enrollment overall were recorded in the areas of health (51 percent), occupational home economics (25 percent), office occupations (20 percent), and technical programs (15 percent).

Funding by the Federal government for VEA programs almost doubled in current dollars between 1972 and 1981, from \$466 million to \$854 million (entry 3.8). State and local expenditures more than tripled from \$2 billion to \$6.5 billion, in terms of current dollars. Since 1979, however, growth in State and local expenditures has slowed down somewhat. When expressed in constant 1981 dollars, Federal contributions actually decreased in terms of buying power from \$981 million in 1972 to \$854 million in 1981, a decrease of 13 percent, while State and local support increased from \$4.5 to \$6.5 billion, an increase of 44 percent during the same period. For each year from 1972 through 1978, there was an increased expenditure of State and local dollars for each Federal dollar. In 1978, for every 1 Federal dollar spent, 10 State/local dollars were expended. However, from 1979 to 1981, the State/local contribution decreased slightly to 8 State/local dollars spent for every 1 Federal dollar.

Minority enrollment in VEA programs appears to be closely tied to the minority composition of the general population (entry 3.9). The Sunbelt States have larger minority populations and greater enrollment proportions for minorities than other areas of the country. Enrollments of minorities from 15 to 30 percent of the total enrollment occurred in several East North Central and Mid-Atlantic States. Lower minority populations in the West North Central and Northern Mountain and Pacific States yielded generally lower enrollments in those areas. Because several States reported that student racial/ethnic status was unknown for more than 10 percent of their students, the accurate determination of minority proportions is not possible for these States.

Followup data on the 1980 high school seniors are not yet available by which to measure further vocational training or the realization of vocational plans. Data on completers of VEDS programs also are not final. However, as shown in the Higher Education Chapter, data on associate degrees awarded in occupational programs do provide one measure of completions in vocational education, at least in the higher education sector. Of the 416,000 associate degrees awarded in 1980-81, about two-thirds were conferred in occupational programs. Of these, science- and engineering-related specialties represented at least half.

Adult Education

Participation by adults in part-time instruction increased considerably over the past decade and is expected to continue to grow through the 1980's and into the 1990's. This development was registered in the large numbers of adults participating and the myriad of educational activities offered. Documenting this component of education in the early 1980's, this section profiles participant characteristics and course objectives and describes the providers and funding for adult education.

The term adult education is used to describe all part-time instruction, including nonacademic as well as degree-credit activities engaged in by adults. Specifically as defined in the 1981 Adult Education Participation Survey and used throughout this section, it refers to all courses and organized educational activities, excluding those

taken by full-time students in programs leading to a high school diploma or an academic degree. It also excludes courses taken as part of occupational training programs of 6 months or more duration.¹ For the purposes of the survey, adults were defined as persons 17 years of age and older. Full-time students also engaged in part-time adult education activities were included as participants.

While specific figures from surveys before 1978 are not strictly comparable to more recent data, gross measures suggest a steady rate of growth in adult education over the past 12 years. In part, the aging of the U.S. population contributed to this growth, directly, by expanding the pool of participants, and indirectly, by encouraging schools and colleges to seek new markets beyond that of traditional college age. Also contributing to its growth were the demands of the workplace to upgrade and update the occupational skills of American workers, as evidenced in the abundance of educational activities offered by employers. In addition, the expansion and heightened importance of leisure time also may have encouraged the growth of educational activities. Since these features are expected to characterize American life into the 1990's, people may continue to seek adult education for learning, training, and enjoyment in the future.

For the year ending in May 1981, over 21 million persons participated in adult education programs, an increase of over 3 million since 1978, or almost 17 percent (entry 3.10). A portion of this increase can be explained simply by increases in the adult population; in 1978, 72 percent of the population was 17 years old and over, compared to 74 percent in 1981. However, even accounting for the effects of population growth, the rate of participation in adult education also increased, by over 8 percent. In 1981, almost 13 percent of all adults chose to further their education through participation in part-time instruction.

¹Before 1978, the definition of adult education included full-time students in occupational programs of 6 months or more duration as adult education participants, and excluded full-time students who were also engaged in part-time adult education activities. Therefore, specific data items from the 1969, 1972, and 1975 adult education surveys are not directly comparable with data from the later surveys.

The rate of participation in adult education varied substantially by age. By far the most active participants in adult education were 25- to 34-year-olds. For example, almost one of every five adults between the ages of 25 and 34 participated in some form of adult education program, and over 15 percent of persons aged 35 to 54 were participants. The lowest participation rates were registered by older persons; less than 8 percent of those between the ages of 55 and 64, and only 3 percent of persons 65 and over participated. While the 55-and-over age group comprised 28 percent of the total adult population, this group represented only slightly more than 11 percent of all adult education participants.

Although the older age groups reported lower rates than 25- to 34-year-olds in 1981, it was the older groups that showed real growth in the rate of participation over the 1978 figures. Any growth in the number of 25- to 34-year-old participants was attributable solely to the increasing pool of persons in this age group. Among the population 35 years old and over, however, increases were due to both growing size and higher rates of participation. The participation rate rose by some 15 percent among the 35- to 64-year-old group between 1978 and 1981 and by about 29 percent among the 65-year-old-and-over group. Given that the total adult population is projected to increase during the 1980's, and that rates remain at the same high level among younger adults and increase among older adults, participation in adult education should continue to grow.

Higher participation rates among 25- to 34-year-olds held across racial/ethnic groups and the sexes. Whites in this age group participated at a rate of almost 22 percent, with 20 percent of all adult white males participating and nearly 24 percent of all white females, the highest participation rate of any subgroup (entry 3.11). It was only among the 25- to 34-year-old group that blacks and Hispanics approached the average participation rate for all age groups. Over 12 percent of blacks in this age group participated, slightly under the participation rate for the entire population. Hispanics in this age range also participated at a relatively high rate among their racial/ethnic group, almost 12 percent.

These figures, however, show a marked disparity in participation by various racial/ethnic groups. As documented in past surveys, whites continued in 1981 to participate in adult education programs at a much higher rate than blacks and Hispanics. However, the participation rate of blacks increased in 1981, rising from under 6 percent in 1978 to almost 8 percent in 1981, an increase of almost 400,000 black participants in adult education. Despite the increase, blacks still represented only 6 percent of all adult education participants, compared to 10 percent of the total adult population. The participation rate of Hispanics remained virtually constant at slightly over 8 percent. And while the proportion of white adult education participants decreased somewhat from 1978, they made up almost 88 percent of all participants in adult education.

Females accounted for 56 percent of participants in adult education in 1981, about the same proportion as 3 years earlier. Their rates were about 2 percentage points higher than male rates overall and in each of the younger age groups. Among the older age groups, participation rates for females were only slightly higher than those for males, but because there were more women in the older population, they represented a disproportionate share of participants.

One of the most significant factors influencing participation in adult education activities is a person's level of education attainment. For both 1978 and 1981, there was a direct positive relationship between the number of years of schooling and the rate of participation in adult education. Persons with an eighth grade education or less participated in adult education at a rate of only 2 percent in 1981 (entry 3.12). On the other hand, 31 percent of persons with more than 4 years of college had taken part in an adult education activity during the year. A little over 11 percent of high school graduates with no college experience participated in adult education, while over 26 percent of those with 4 years of college participated.

The correspondence between higher educational attainment and greater participation in adult education was evident across all racial/ethnic groups and was most notable among females. Within each racial/ethnic group,

the more well-educated an individual was, the more likely he or she would participate in adult education activities. The relationship between greater attainment and participation was even more pronounced among females than among males. Male participation rates ranged from 2 percent for those with less than 9 years of formal schooling to over 28 percent for those with 5 or more years of college. While women with an eighth grade education or less also participated at a rate of only 2 percent, those with 5 or more years of college participated at a rate of almost 36 percent, 8 percentage points higher than men with the same level of schooling.

The relationship between attainment and participation holds further for participants who were not currently enrolled in college. Excluding the 5 million participants in adult education who were part-time college students, over 44 percent of the participants had at least 1 year of college compared with 29 percent of the total population.

Another factor associated with participation in adult education is the level of family income. As with educational levels, the higher the level of family income, the greater the rate of participation in education programs. In 1981, only 6 percent of the total population with family incomes less than \$7,500 participated in adult education. At the same time, persons with family incomes of at least \$50,000 participated in adult education programs at a rate of nearly 19 percent (entry 3.13). While it is generally true that persons from lower economic levels participated less frequently in adult education programs, women in the lower income groups participated at a higher rate than men in these same income groups. For example, of the 1.7 million adult education participants in the income category under \$7,500, 69 percent were women. This relationship also held true for women in the income categories of \$7,500 to \$9,999 and \$10,000 to \$14,999, where the proportion of female participants was 64 percent in both categories. In income categories at or above \$25,000, the proportions of male and female participants in adult education were virtually equal.

As in the general population, the majority of participants in adult education resided in metropolitan areas—over 72 percent, compared with 68 percent of the total popula-

tion, for a participation rate of almost 14 percent (entry 3.14). However, some striking differences are apparent among regions. For example, the Western States, representing 19 percent of the population, had 27 percent of the adult education participants, or a participation rate of nearly 18 percent. The North Central States had a participation rate of almost 14 percent; in contrast, the Northeast and the South had less-than-average rates of 10 and 11 percent, respectively.

Participants in adult education were more likely than the general population to be in the labor force. In May 1981, 83 percent of participants were in the labor force compared with 65 percent of the overall population. Of those in the labor force, employed persons were much more likely to participate than the unemployed: almost 17 percent of the former participated compared to 11 percent of the latter. By comparison, only 8 percent of persons keeping house were adult education participants.

Of the 17 million employed persons who took adult education courses, 70 percent were in white-collar jobs compared with 53 percent of the general population in these jobs. Among persons in white-collar occupations, professional, technical, and kindred workers accounted for the large percent difference between the participants and the total population. Professional and technical workers, such as teachers, physicians, and other health workers, are in occupations that require frequent refresher or upgrading courses, and about a third of all workers in these fields took an adult education course in 1981. Among individual occupations, 43 percent of health workers, 39 percent of physicians and dentists, and 37 percent of teachers (except college teachers) took at least one course.

The more than 21 million participants in adult education took over 37 million courses during the year ending May 1981—an average of almost 2 courses per participant. The types of courses taken by adults ranged from hobby and recreational activities to highly technical training. Nearly half of the courses taken by adults were in three fields: business (23 percent), health (14 percent, including health care and health education), and engineering (10 percent) (entry 3.15). Over 54 percent of the courses

taken by males and 41 percent of those taken by females were in these fields. Courses in business were the most popular for both men and women. By contrast, 81 percent of the engineering courses were taken by men and the majority of the health courses were taken by women. Among the rest of the courses, the number taken by women exceeded those taken by men in almost every field except agriculture, social sciences, and "other" courses. Very few courses in home economics were taken by men, and three times as many courses in physical education were taken by women than by men.

Job-related reasons were most often cited as the purpose for taking an adult education course. Of the 37 million courses, 60 percent were taken to advance in a job, to get a new job, or for some other job-related reason. Males and females each took about 11 million job-related courses, but this figure represents a higher proportion for men than for women, 69 percent compared with 54 percent (entry 3.16). Most non-job-related courses were taken for personal or social reasons; 19 percent of the courses taken by men and 34 percent of those taken by women were for these reasons. Most courses were not taken for school credit or other scholastic recognition. Only about 6 percent of the courses were taken for credit leading to an elementary or secondary school diploma or vocational certificate, while 18 percent were applied to a college degree at any level. Although a majority of courses were job-related, only 15 percent of the courses were taken to obtain or renew a license in a profession or trade.

Despite the fact that only 24 percent of the courses applied to school credit, nearly 54 percent of the courses were provided by schools (entry 3.17). The rest was given by business or industry, community organizations, government agencies, and other non-schools. Over 58 percent of the courses provided by schools and 62 percent of those given by other providers were for job-related reasons. Nearly a fourth of all courses were provided by the employer of the respondent. Nearly half of the adult education courses were paid for solely by the participant or family—39 percent of the courses taken by men and 54 percent by women. The remaining courses

were paid for through other sources such as government funds or business/industry. Employers were one source of funding, in full or part, for 41 percent of the courses taken by men and 26 percent of those taken by women. The average amount of money paid per course by the

participant or family was \$120. Men reported paying an average of \$165, women \$95. The total amount of money spent by participants or their families for adult education courses represented a national expenditure of \$2.2 billion for the year ending May 1981.

Table 3.1

Number of Secondary and Postsecondary Institutions¹ Offering Vocational Education Programs, by Type of Institution and by State: School Year 1978-79

State	Total	Public Comprehensive or Vocational Secondary Schools	Public Area Vocational Centers (Secondary)	Private Secondary Schools	Public Noncollegiate Postsecondary Institutions	Private Noncollegiate Postsecondary Institutions	2-Year Institutions of Higher Education	4-Year Institutions of Higher Education
50 States and D.C.	27,014	15,706	1,394	588	811	6,766	1,118	633
Alabama	615	369	113	9	24	65	23	12
Alaska	190	150	2	2	3	22	10	1
Arizona	338	150	3	8	6	154	14	3
Arkansas	464	333	9	5	28	67	10	12
California	2,331	1,117	63	56	23	939	111	22
Colorado	414	252	17	7	9	102	16	11
Connecticut	344	167	16	6	17	109	18	11
Delaware	65	28	4	2	0	22	6	3
District of Columbia	57	16	1	4	2	27	0	7
Florida	665	316	28	18	30	231	30	12
Georgia	595	333	26	10	39	148	23	16
Hawaii	71	38	0	2	1	21	6	3
Idaho	174	124	2	0	11	30	3	4
Illinois	1,270	776	32	24	18	349	55	16
Indiana	605	358	31	19	10	144	17	26
Iowa	701	565	0	10	2	94	23	7
Kansas	383	246	14	5	14	65	24	15
Kentucky	479	252	72	9	24	96	10	16
Louisiana	611	389	18	11	36	135	5	17
Maine	155	62	22	11	7	37	6	10
Maryland	434	252	19	7	3	126	21	6
Massachusetts	541	247	22	24	30	164	41	13
Michigan	886	436	44	23	13	304	56	28
Minnesota	673	422	61	7	41	110	23	9
Mississippi	378	228	61	8	3	52	21	5
Missouri	687	359	55	12	36	178	17	30
Montana	170	120	0	1	5	37	3	4
Nebraska	356	255	0	12	5	61	10	13
Nevada	91	50	1	1	0	34	3	2
New Hampshire	153	80	20	3	1	27	10	12
New Jersey	622	311	35	17	22	203	20	14
New Mexico	169	95	3	3	8	46	7	7
New York	998	420	72	52	22	317	79	36
North Carolina	608	386	8	8	5	109	74	18
North Dakota	209	148	9	5	0	34	7	6
Ohio	1,292	735	76	19	50	336	46	30
Oklahoma	683	475	35	5	30	110	19	9
Oregon	343	199	4	3	1	117	13	6
Pennsylvania	1,265	663	67	62	35	351	46	41
Rhode Island	106	51	0	6	1	38	2	8
South Carolina	397	242	33	4	25	56	26	11
South Dakota	222	160	6	7	8	27	2	12
Tennessee	572	287	62	7	44	125	23	24
Texas	2,436	1,769	117	17	55	397	61	20
Utah	159	85	2	1	9	50	7	5
Vermont	101	49	15	9	2	16	3	7
Virginia	492	252	39	9	7	152	25	8
Washington	528	302	4	13	5	173	27	4
West Virginia	300	150	50	3	25	50	8	14
Wisconsin	535	380	0	116	15	98	19	7
Wyoming	81	57	1	4	1	11	7	0

¹ Does not include correspondence schools or State correctional facilities.

NOTE: Includes all providers, whether or not they are covered under State VEA plans. VEA programs are those receiving Federal assistance administered by the States under the provisions of the Vocational Education Act, as amended. Virtually all public secondary schools received assistance, and while private secondary schools were not included, their students may have been enrolled through the public school system. About two-thirds of all postsecondary schools were covered under VEA, most of which were 2-year institutions of higher education or public noncollegiate postsecondary schools. None of the private noncollegiate postsecondary schools and only about 5 percent of the 4-year institutions of higher education were included in VEA provisions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Directory of Postsecondary Schools with Occupational Programs, 1978, Education Directory: Colleges and Universities 1978-79*; Survey of nonpublic elementary and secondary schools, 1978, and discussions with State personnel; U.S. Department of Education, Office for Civil Rights, Vocational Education Civil Rights Survey, 1979; and Killalea Associates, Inc., *Counts of Providers of Vocational Education*, August 1980.

Providers of Vocational Education

Secondary

1 Public comprehensive or vocational secondary schools: 15,706

2 Public area vocational centers: 1,394

3 Private secondary schools: 586

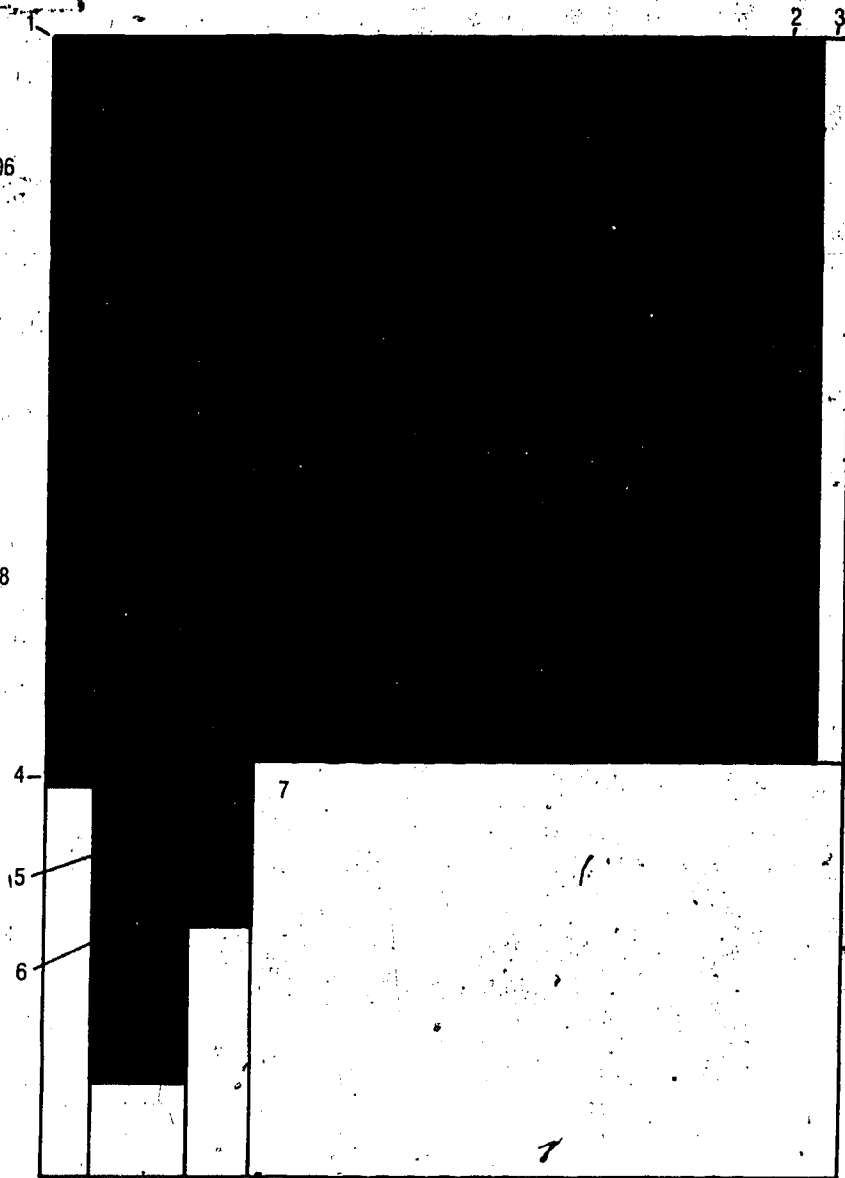
Postsecondary

4 4-year institutions of higher education: 633

5 2-year institutions of higher education: 1,118

6 Public noncollegiate postsecondary institutions: 811

Private noncollegiate postsecondary institutions: 6,766



Providers Included in State Plans for Vocational Education (VEA)

Approximately two-thirds of the more than 27,000 institutions offering vocational programs did so at the secondary level. Virtually all secondary schools received Federal funds under the Vocational Education Act (VEA), while more limited numbers of postsecondary institutions received VEA funds.

Table 3.2

Estimated Enrollment in Vocational Education, by Provider and by State: 1978-79

State	Total	Public Secondary Schools ¹	Private Secondary Schools ²	Number, in Thousands			
				Public Noncollegiate Postsecondary Institutions	Private Noncollegiate Postsecondary Institutions	2-Year Institutions of Higher Education	4-Year Institutions of Higher Education
50 States and D.C.	19,339	12,513	22	741	989	4,423	309
Alabama	239	167	(6)	26	9	32	5
Alaska	42	25	(6)	1	1	15	(6)
Arizona	280	162	(6)	4	32	76	2
Arkansas	163	138	(6)	11	6	4	3
California	2,434	1,141	2	43	171	1,004	14
Colorado	215	98	(6)	14	36	60	5
Connecticut	236	198	(6)	3	14	17	5
Delaware	72	50	(6)	0	1	16	1
District of Columbia	62	22	(6)	1	6	0	2
Florida	1,237	861	(6)	65	32	262	11
Georgia	459	378	(6)	348	20	10	2
Hawaii	64	42	(6)	(6)	4	16	3
Idaho	48	31	(6)	4	1	9	2
Illinois	935	572	1	3	66	229	11
Indiana	250	124	(6)	5	13	94	11
Iowa	336	112	(6)	(6)	6	216	(6)
Kansas	129	92	(6)	6	7	18	4
Kentucky	314	230	(6)	11	44	52	7
Louisiana	298	245	(6)	21	13	8	10
Maine	47	26	(6)	1	2	15	1
Maryland	317	218	(6)	(6)	14	83	1
Massachusetts	417	326	1	5	35	44	5
Michigan	532	247	1	3	43	125	32
Minnesota	500	215	(6)	247	16	19	2
Mississippi	185	146	(6)	1	3	33	(6)
Missouri	283	208	1	5	24	33	11
Montana	31	24	(6)	4	2	1	1
Nebraska	133	69	(6)	9	7	32	4
Nevada	41	30	(6)	0	6	6	(6)
New Hampshire	53	42	(6)	(6)	2	6	2
New Jersey	890	740	1	6	38	74	2
New Mexico	68	55	(6)	6	3	2	2
New York	1,620	1,344	2	2	70	176	14
North Carolina	658	283	(6)	1	13	356	5
North Dakota	50	39	(6)	0	1	9	1
Ohio	960	764	1	9	37	109	29
Oklahoma	224	153	(6)	16	12	36	6
Oregon	245	140	(6)	(6)	22	77	6
Pennsylvania	581	376	4	12	58	74	32
Rhode Island	52	32	(6)	1	5	10	3
South Carolina	305	171	(6)	8	6	118	2
South Dakota	39	29	(6)	2	3	1	4
Tennessee	332	240	(6)	17	15	46	13
Texas	1,125	776	(6)	595	39	203	10
Utah	93	65	(6)	4	2	17	5
Vermont	37	30	(6)	(6)	1	3	3
Virginia	502	364	(6)	1	23	105	5
Washington	423	135	(6)	7	17	263	1
West Virginia	149	119	(6)	9	6	7	8
Wisconsin	613	398	1	4	10	199	1
Wyoming	25	19	(6)	(6)	1	5	(6)

¹ Includes individuals enrolled in public comprehensive or vocational secondary schools, public area vocational centers (secondary), and secondary level programs at adult facilities. Numbers represent enrollments covered by the Vocational Education Act only.

² Includes individuals enrolled in secondary level programs at adult facilities. Numbers represent enrollments covered by the Vocational Education Act only.

³ Includes 5,000 enrollments reported through the Vocational Education Data System which cannot be independently verified from other sources.

⁴ Includes 210,000 enrollments reported through the Vocational Education Data System which cannot be independently verified from other sources.

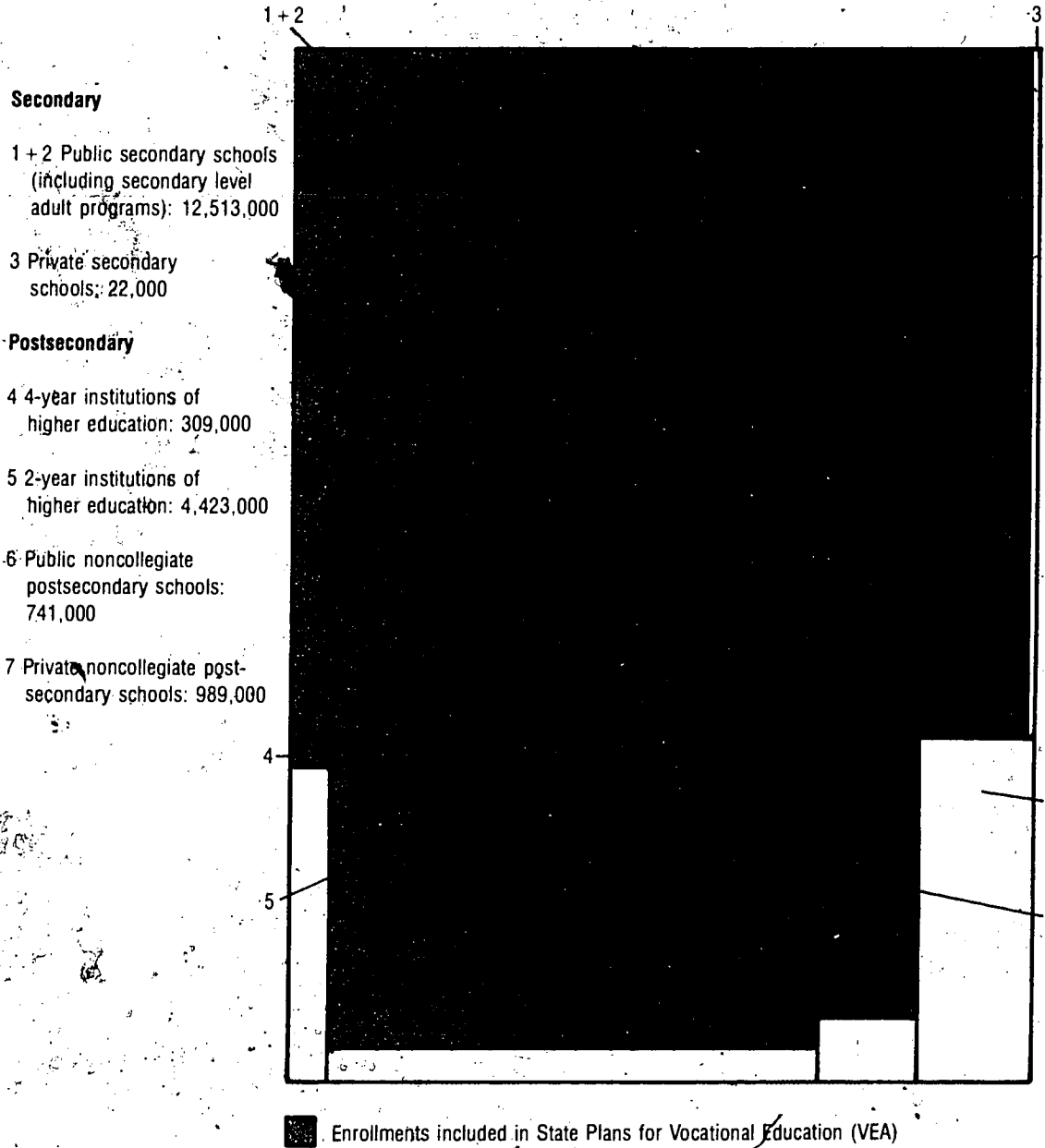
⁵ Includes 77,000 enrollments reported through the Vocational Education Data System which cannot be independently verified from other sources.

⁶ Less than 500.

NOTE: Virtually all public secondary programs were included in State Plans for Vocational Education administered under the VEA in 1978-79, while almost all private programs at the secondary level were excluded. At the postsecondary level, about 80 percent of the vocational students in public noncollegiate postsecondary schools and about 90 percent of similar students at 2-year institutions of higher education were enrolled in programs administered under the VEA. An estimated 5 percent of the enrollments in 2-year vocational programs at 4-year institutions of higher education were included while virtually all private noncollegiate school enrollments were excluded. Serious attempts were made to remove duplications among various data sources. Duplications may remain, however, in VEDS data because of the difficulty in reporting unduplicated headcounts.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Vocational Education Data System; Survey of Noncollegiate Postsecondary Schools; Survey of Nonpublic Elementary and Secondary Schools; Higher Education General Information Survey, Earned Degrees and Other Formal Awards Conferred; U.S. Department of Education, Office for Civil Rights, Vocational Education Civil Rights Survey; and estimates by the National Center for Education Statistics derived from the above sources.

Estimated Enrollments in Vocational Education



Approximately 88 percent of the more than 19 million vocational students were enrolled in programs administered under the Vocational Education Act (VEA) in 1978-79. Virtually all public secondary programs were included while more limited numbers of postsecondary programs were included in State Plans for Vocational Education administered under the VEA.

Table 3.3

**Curricular Programs¹ of 1980 High School Seniors, by Sex, Racial/
Ethnic Group, Ability, and Socioeconomic Status (SES): Spring 1980**

Characteristic	Total	Academic	General	Vocational							Sample Size	
				Total Vocational	Agriculture	Office Occupations	Distribution	Health	Occupational Home Economics	Technical		Trade and Industrial
Percentage Distribution												
Total	100.0	38.7	36.9	24.5	2.7	9.8	2.1	1.1	1.3	2.1	5.4	27,775
Sex:												
Male	100.0	39.0	38.0	23.0	3.9	3.3	1.9	.4	.4	3.6	9.5	12,724
Female	100.0	38.4	35.9	25.8	1.6	15.7	2.3	1.7	2.1	.7	1.7	13,878
Racial/ethnic group:												
White non-Hispanic	100.0	39.8	37.1	23.1	2.5	9.4	2.0	1.0	.9	2.0	5.3	19,618
Black non-Hispanic	100.0	33.0	35.2	31.8	3.7	11.9	3.0	1.6	3.6	1.8	6.2	3,695
Hispanic	100.0	26.9	41.6	31.5	4.4	10.5	2.2	1.4	2.3	2.8	7.9	3,107
American Indian/ Alaskan Native	100.0	24.4	45.5	30.1	4.7	9.2	1.3	1.4	.7	1.3	11.5	211
Asian or Pacific Islander	100.0	52.4	29.0	18.6	1.8	8.2	1.6	1.2	1.3	3.0	1.5	362
Ability ² :												
Low	100.0	13.8	47.1	39.0	5.4	13.1	3.5	1.9	3.2	2.2	9.7	6,796
Middle	100.0	33.5	40.9	25.8	2.7	11.5	2.2	1.0	.9	2.2	5.3	12,081
High	100.0	72.3	20.0	7.8	.4	3.2	.7	.3	.1	1.5	1.6	5,822
SES ³ :												
Low	100.0	21.1	43.4	35.4	4.4	13.6	2.8	1.8	2.4	2.5	7.9	8,237
Middle	100.0	36.3	38.4	25.2	2.8	10.2	2.2	1.0	1.0	2.2	5.8	12,655
High	100.0	62.0	27.4	10.5	.8	4.2	1.2	.4	.4	1.2	2.3	6,129

¹Curricular programs can be generally defined as follows: academic—those preparing students for college; vocational—those preparing students for employment immediately following high school graduation; general—those with students considering themselves to be in neither academic nor vocational programs. For specific vocational programs, see the Definitions of Selected Terms in the Appendix.

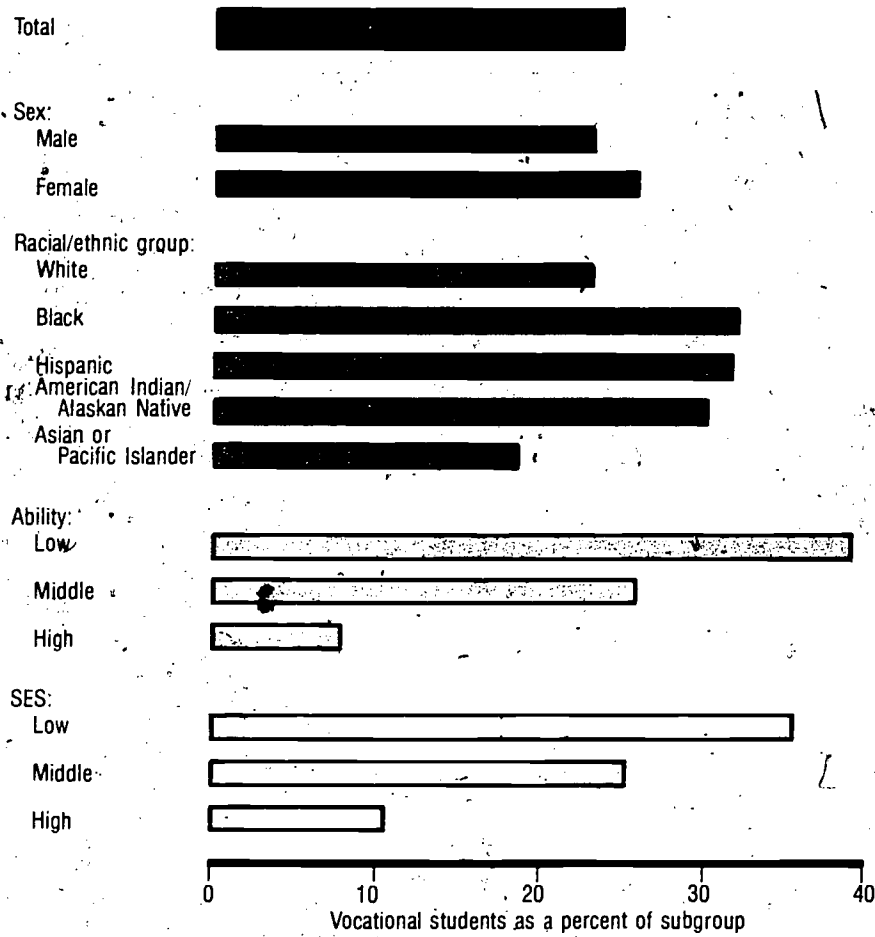
²The general academic ability index was derived from four base-year "Test Book" scores: vocabulary, reading, letter groups, and mathematics.

³The SES index was based on a composite score involving five components: father's education, mother's education, parental income, father's occupation, and a household items index.

NOTE: Precision of the estimates may be calculated using the sample size following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations (August 1982).

Participation in Vocational Education Curricular Programs by 1980 High School Seniors



Blacks, Hispanics, and American Indians were more likely to be enrolled in vocational education curriculums than whites or Asian Americans from the high school class of 1980. Seniors of low ability or low socioeconomic status were also more likely than other students to be in vocational programs.

Table 3.4

High School Seniors Who Took Vocational Courses Preparing Them for Beginning Job¹, by Sex and Region: Spring 1980

Subject Area	Total	Male	Female	Region ²			
				Northeast	South	North Central	West
				Percent of Seniors			
Total	87.4	85.3	89.6	84.0	88.0	88.2	89.2
Agriculture	8.3	12.2	4.7	4.1	10.6	9.2	9.3
Auto mechanics	11.2	21.4	1.9	8.1	7.8	14.2	17.4
Commercial arts	16.2	17.6	15.0	14.8	13.8	17.1	21.6
Computer programming/operations	12.9	13.7	12.2	15.7	10.2	13.7	12.0
Carpentry	14.8	28.2	2.5	13.3	12.2	17.5	17.8
Electrical	8.6	17.1	.9	7.6	7.6	11.1	8.6
Masonry	3.0	6.0	.2	2.5	3.9	3.2	2.1
Plumbing	2.3	4.6	.2	1.9	2.5	2.8	2.0
Cosmetology/barbering	2.6	.7	4.3	2.4	2.9	2.0	3.5
Drafting	17.4	31.0	4.9	16.7	13.7	20.6	19.5
Electronics	7.8	15.0	1.2	6.8	6.2	9.4	9.8
Home economics, including							
dietetics and child care	31.9	14.9	47.4	23.0	34.9	34.0	35.0
Machine shop	13.3	25.5	2.1	11.1	11.4	16.9	15.0
Medical/dental assisting	4.2	2.3	5.9	3.7	4.1	4.8	4.1
Practical nursing	4.2	1.3	6.9	3.7	4.1	4.6	4.2
Quantity foods occupations	11.6	7.7	15.2	7.7	12.4	13.1	13.4
Sales/merchandising	49.2	16.0	22.1	15.9	19.2	21.0	20.3
Secretarial/office work	51.5	29.4	71.4	46.8	53.4	50.4	53.7
Welding	12.1	23.9	1.3	7.8	11.7	15.4	14.0
Other	27.7	31.4	24.4	25.8	25.8	28.8	32.8
Sample size	24,816	11,815	13,001	5,396	8,891	7,812	4,927

¹On the student survey, high school seniors were asked to respond to the question, "Have you taken any high school courses in the following areas which have equipped you for a beginning job in that area?". More than one area could be checked.

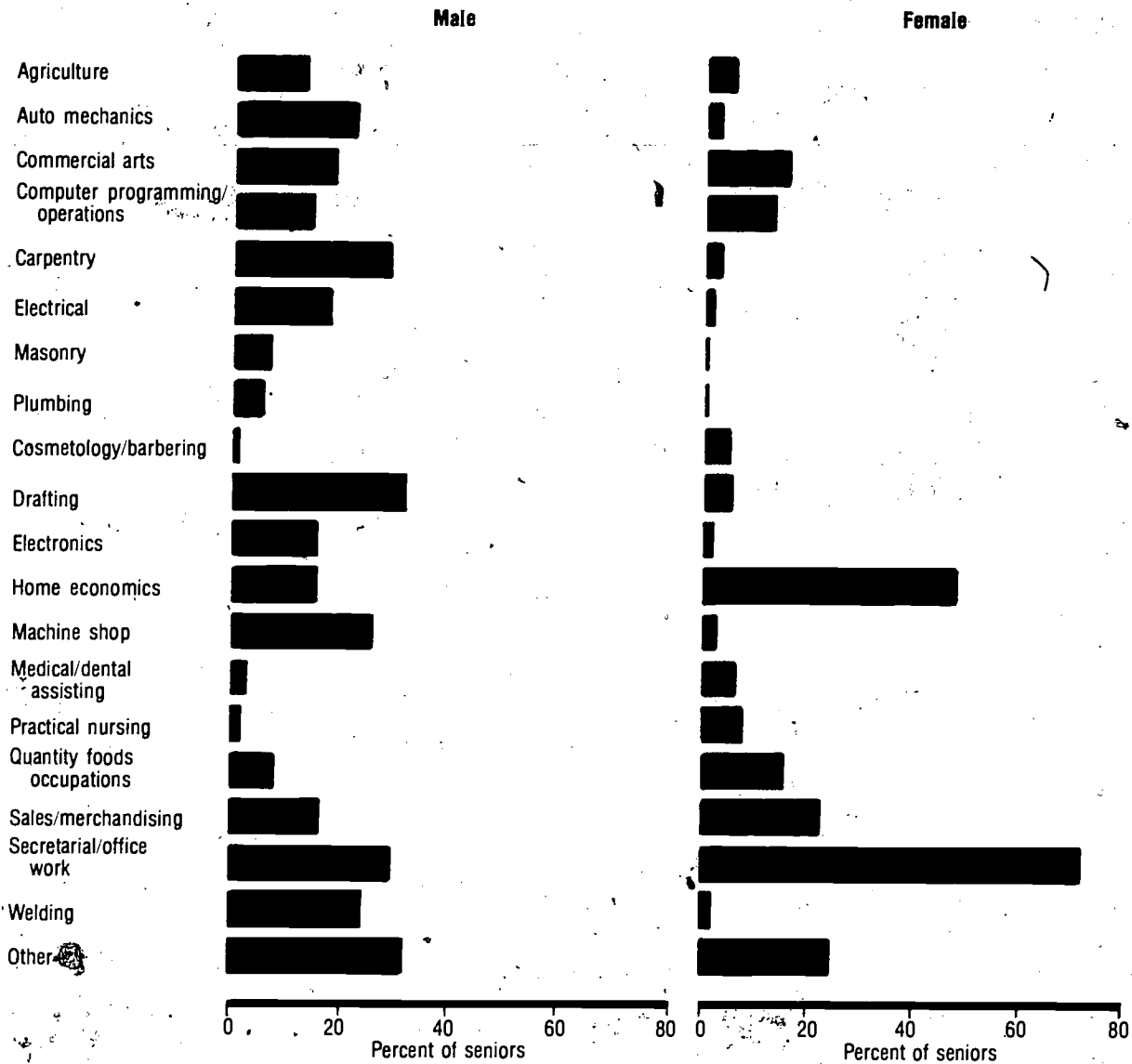
²The regions correspond to the U.S. Bureau of the Census definitions. See the Definitions of Selected Terms in the Appendix.

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations (September 1982).

Chart 3.4

Percent of High School Seniors Who Took Vocational Courses That Prepared Them for Beginning Job, by Sex



High school seniors who participated in courses that would prepare them for a beginning job generally did so along sex stereotypical lines, with males disproportionately higher in auto mechanics, building trades, and electronics and females in home economics and secretarial/clerical work. Courses which enrolled male and female seniors about evenly included commercial arts, computer programming/operations, and sales/merchandising.

Table 3.5

Expected Activities of 1980 High School Seniors in Year Following High School Graduation, by Curricular Program: Spring 1980

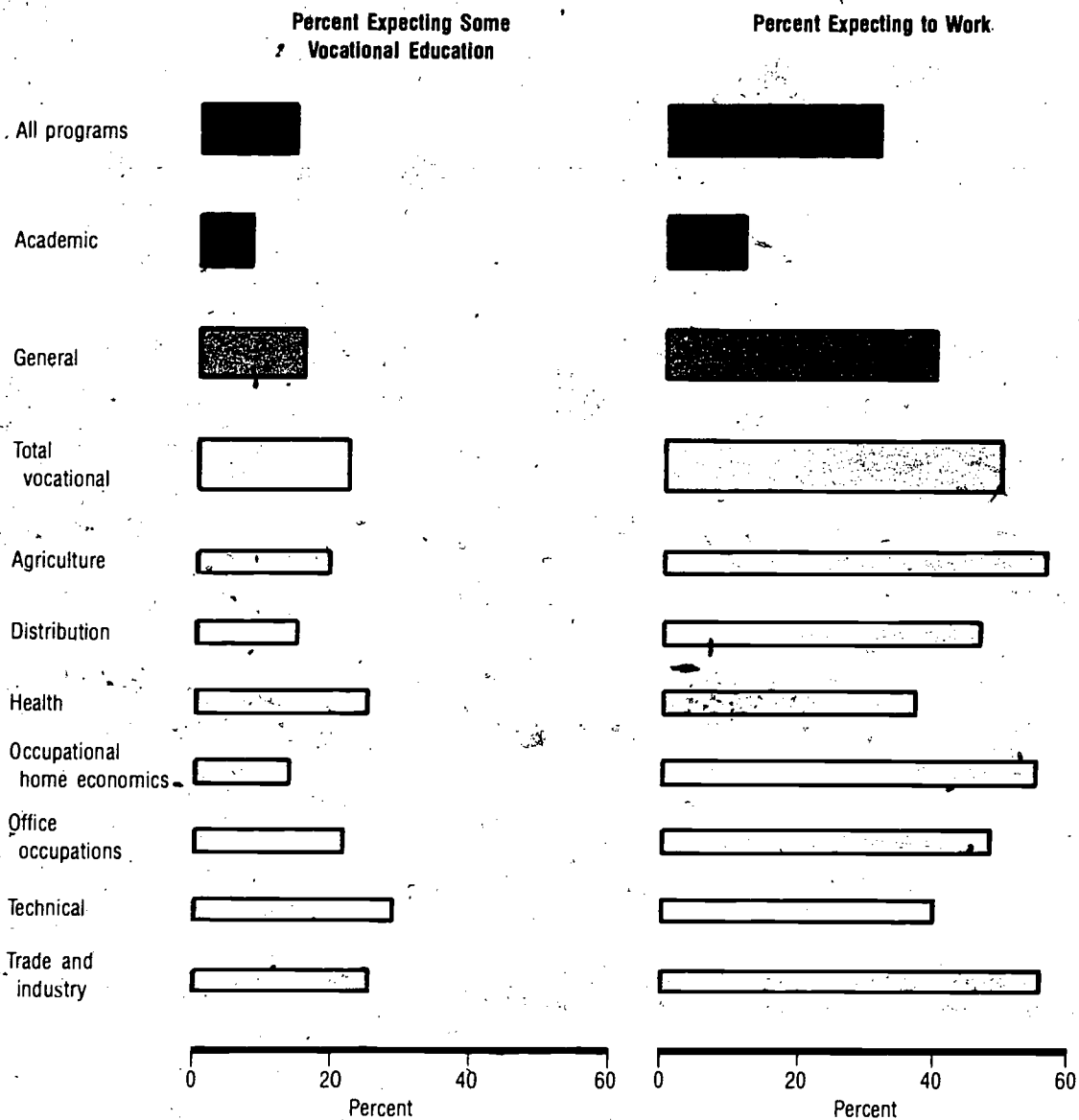
High School Curricular Program ¹	Expected Activity								Sample Size	
	Total	Some Postsecondary Education				Working	Academic Program at			
		Total	Apprenticeship/ Training Program	Vocational/ Technical Education	Vocational Program at College		College	Other		
		Percentage Distribution								
All programs	100.0	14.3	2.4	6.1	5.8	31.2	46.6	7.8	27,433	
Academic	100.0	8.0	1.1	2.8	4.1	11.3	76.5	4.1	10,390	
General	100.0	15.6	2.6	6.8	6.2	39.6	34.0	10.8	9,983	
Total vocational	100.0	22.0	4.1	10.2	7.7	49.9	18.7	9.3	6,685	
Agriculture	100.0	19.7	4.8	9.2	5.7	56.6	14.7	9.0	756	
Distribution	100.0	14.9	2.2	7.1	5.6	46.7	27.7	10.7	582	
Health	100.0	25.1	2.0	6.1	17.0	37.1	26.8	11.0	304	
Occupational home economics	100.0	14.0	3.7	5.8	4.5	54.9	17.2	13.9	384	
Office occupations	100.0	21.6	1.8	11.8	8.0	48.2	23.1	7.1	2,626	
Technical	100.0	28.9	3.9	11.4	13.6	39.9	18.9	12.2	537	
Trade and industry	100.0	25.5	9.1	10.4	6.0	55.9	8.3	10.3	1,496	

¹Curricular programs can be generally defined as follows: academic—those preparing students for college; vocational—those preparing students for employment immediately following high school graduation; general—those with students considering themselves to be in neither academic nor vocational programs. For specific vocational programs, see the Definitions of Selected Terms in the Appendix.

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

²SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations (September 1982).

Expected Activities After Graduation of 1980 High School Seniors, by Curricular Program



Almost half of 1980 seniors enrolled in vocational programs expected to be working and one-fifth expected to continue their vocational education in the year after high school, somewhat higher proportions than among seniors in general programs and much higher than those in academic programs.

Table 3.6

Earnings of and Hours Worked by 1972 High School Graduates in Initial Job After Completing Formal Schooling, by Sex and High School Program: 1972 to 1979

Program and Sex	Earnings ¹ , Weeks, and Hours Worked				
	Average Hours Worked Per Week	Average Weeks Worked Per Year	Average Hourly Wage	Average Yearly Earnings ²	Sample Size
All programs:					
Total	38.9	44.7	\$5.44	\$11,085	22,458
Male	41.4	46.2	6.01	12,906	11,139
Female	36.4	43.2	4.88	9,087	11,276
Academic:					
Total	38.9	44.8	5.50	11,311	9,343
Male	41.2	46.1	6.04	13,021	4,766
Female	36.4	43.4	4.90	9,244	4,565
General:					
Total	39.1	44.6	5.29	10,942	7,490
Male	41.7	46.3	5.89	12,786	3,566
Female	36.7	43.1	4.74	9,096	3,901
Vocational:					
Total	38.7	44.5	5.55	10,864	5,625
Male	41.3	45.9	6.09	12,836	2,807
Female	36.2	43.0	5.04	8,812	2,810

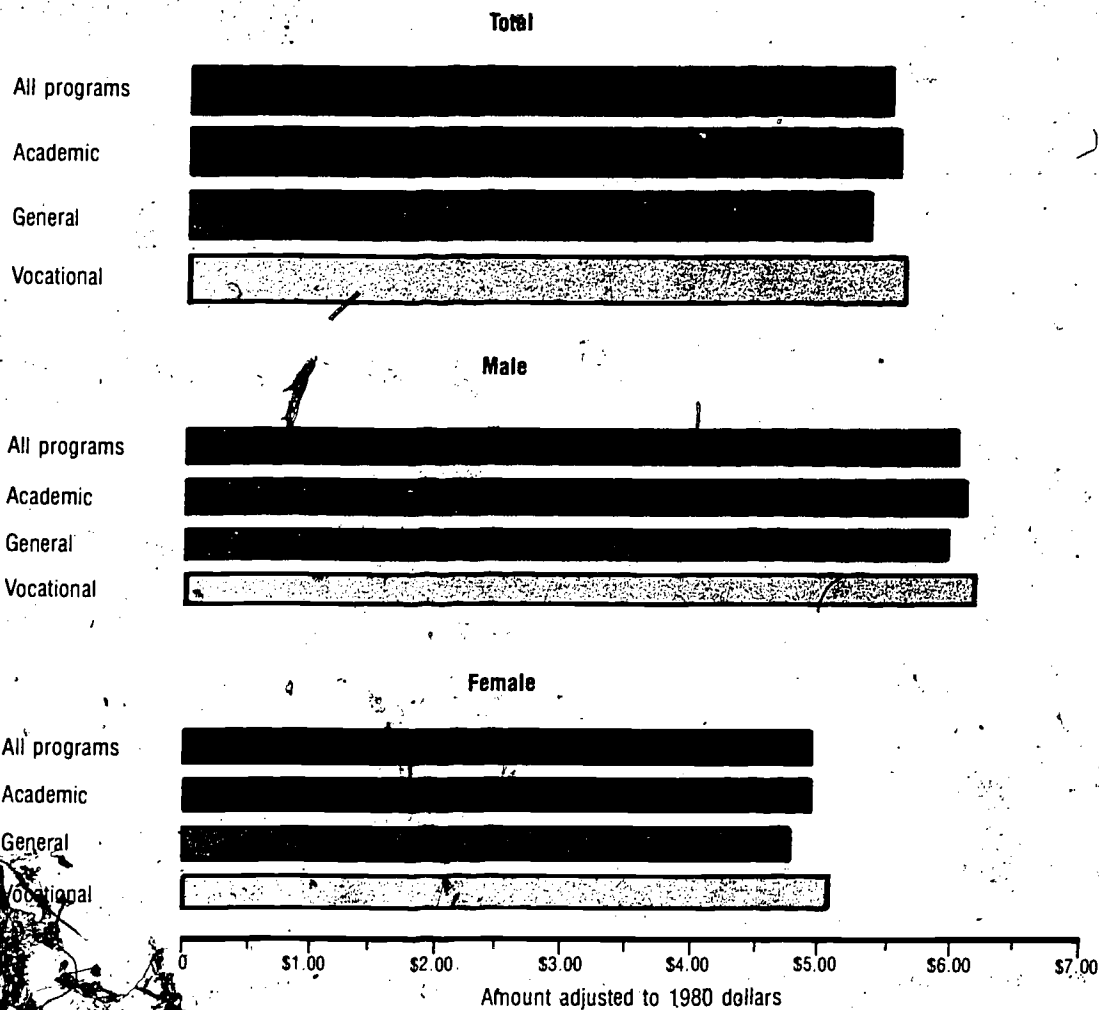
¹ Earnings and hourly wages have been adjusted to 1980 dollars.

² Average yearly earnings are derived using raw data and would only approximate yearly earnings calculated by multiplying average hours by weeks worked by hourly wage.

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study of the High School Class of 1972, First through Fourth Followups: 1972 to 1979, unpublished tabulations (October 1982).

Average Hourly Wage Earned by 1972 High School Graduates in Initial Job



When adjusted for when graduates entered the work force, the average hourly wage of vocational program graduates was comparable to that of those who graduated in academic programs. Males earned significantly higher wages than did females, regardless of high school program.

Table 3.7

Distribution of Enrollment in Vocational Education (VEA) and Percent Change, by Program Area: Fiscal Year 1975, 1977, 1979, and 1981

Program Area ¹	Number, in Thousands				Percent Change			
	1975	1977	1979	² 1981	1975 to 1977	1977 to 1979	1979 to 1981	1975 to 1981
Total³	15,165	15,895	16,827	16,293	4.8	5.9	-3.2	7.4
Agriculture	1,007	1,051	959	843	4.4	-8.8	-12.1	-16.3
Distribution	867	956	914	924	10.3	-4.4	-1.1	6.6
Health	615	739	789	929	20.2	6.8	17.7	51.1
Consumer and homemaking	3,222	3,547	3,594	3,173	10.1	1.3	-11.7	-1.5
Occupational home economics	458	509	577	572	11.1	13.4	- .9	24.9
Office occupations	2,930	3,253	3,422	3,517	11.0	5.2	2.8	20.0
Technical	446	517	469	513	15.9	-9.3	9.4	15.0
Trade and industrial	2,992	3,225	3,386	3,161	7.8	5.0	-6.6	5.6
Other	2,789	2,425	2,716	2,616	-13.1	12.0	-3.7	-6.2
	Percentage Distribution							
Total	100.0	100.0	100.0	100.0				
Agriculture	6.6	6.5	5.7	5.2				
Distribution	5.7	5.9	5.4	5.7				
Health	4.0	4.6	4.7	5.7				
Consumer and homemaking	21.0	21.9	21.4	19.5				
Occupational home economics	3.0	3.1	3.4	3.5				
Office occupations	19.1	20.1	20.3	21.6				
Technical	2.9	3.2	2.8	3.1				
Trade and industrial	19.5	19.9	20.1	19.4				
Other	18.2	14.9	16.1	16.1				

¹ Some categories may include duplicate counts.

² Preliminary data.

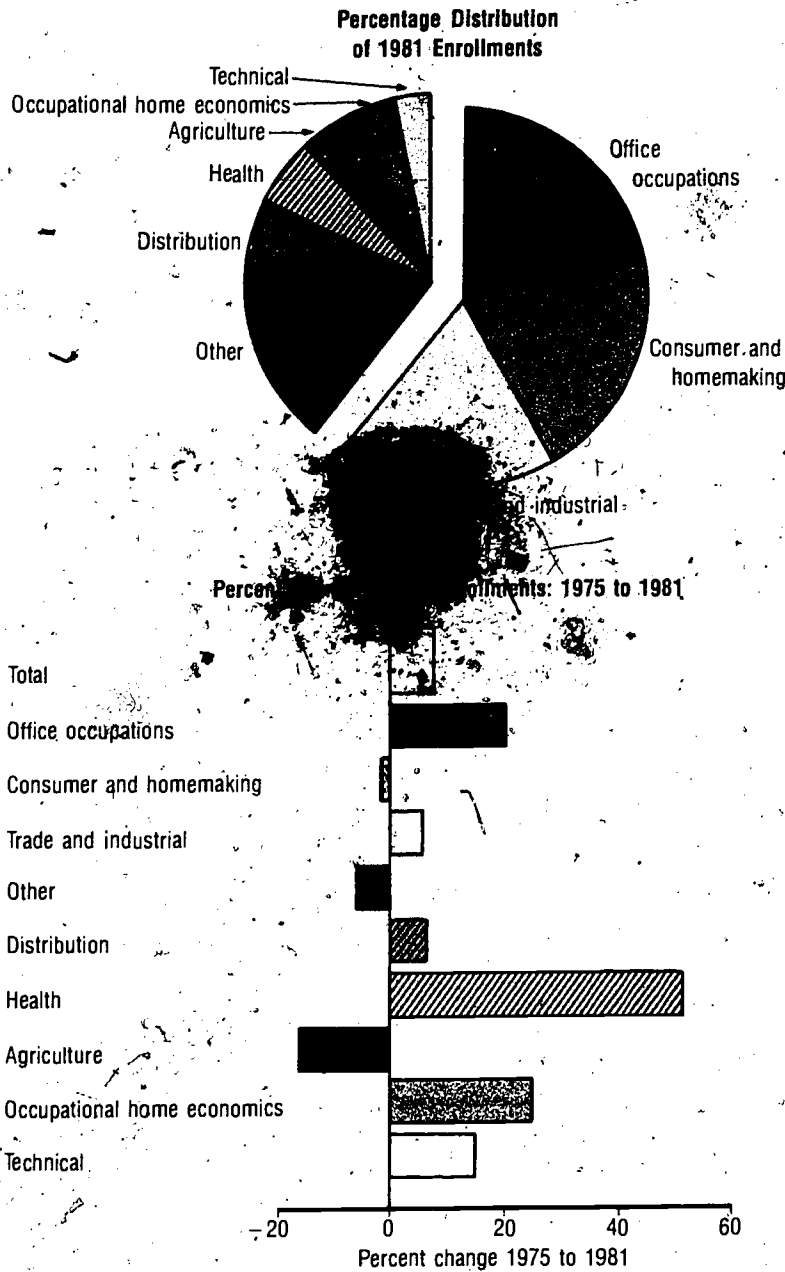
³ Totals are unduplicated counts; details may exceed totals because participants can be enrolled simultaneously in consumer and homemaking or industrial arts and in another program area.

⁴ Includes industrial arts.

NOTE: VEA programs are those receiving Federal assistance administered by the States under the provisions of the Vocational Education Act, as amended. Virtually all public secondary schools received assistance, and while private secondary schools were not included, their students may have been enrolled through the public school system. About two-thirds of all postsecondary schools were covered under VEA, most of which were 2-year institutions of higher education or public noncollegiate postsecondary schools. Data shown for the years 1975 and 1977 were collected through the Bureau of Occupational and Adult Education and are not directly comparable to VEDS data shown for 1979 and 1981.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Vocational and Technical Education Selected Statistical Tables, 1975 and 1977*; U.S. Department of Education, National Center for Education Statistics, Vocational Education Data System, "Vocational Education Enrollment Remains Steady", NCES 83-306.

Percentage Distribution and Percent Change in Vocational Education Enrollments (VEA)



Office occupations, consumer and homemaking, and trade and industrial programs continued to dominate enrollments in Federally funded vocational education programs in 1981. The percent change for enrollment in VEA programs from 1975 to 1981 showed increases for most program areas.

Table 3.8**Total Expenditures¹ for Vocational Education (VEA), by Source of Funds, in Current and Constant (1981) Dollars: Fiscal Year 1972 to 1981**

Year	Current Dollars			Constant (1981) Dollars			State/Local Dollars per Federal Dollar
	Total	Federal	State/Local	Total	Federal	State/Local	
	Amount, in Thousands			Amount, in Thousands			
1972	\$2,660,759	\$466,030	\$2,194,729	\$5,600,099	\$980,853	\$4,619,246	4.7
1973	3,033,658	482,391	2,551,267	6,137,090	975,877	5,161,213	5.3
1974	3,433,820	468,197	2,965,623	6,376,260	869,395	5,506,865	6.3
1975	4,037,277	536,140	3,501,137	6,750,731	896,480	5,854,251	6.5
1976	4,713,577	543,211	4,170,366	7,359,308	848,115	6,511,193	7.7
1977	4,962,556	539,611	4,428,945	7,323,244	787,450	6,535,794	8.3
1978	5,673,527	499,106	5,174,421	7,845,352	690,163	7,155,189	10.4
1979	6,657,210	658,120	5,999,090	8,415,379	831,929	7,583,450	9.1
1980	6,914,090	745,481	6,168,609	7,713,359	831,659	6,881,700	8.3
1981	7,513,591	853,677	6,659,914	7,513,591	853,677	6,659,914	7.8

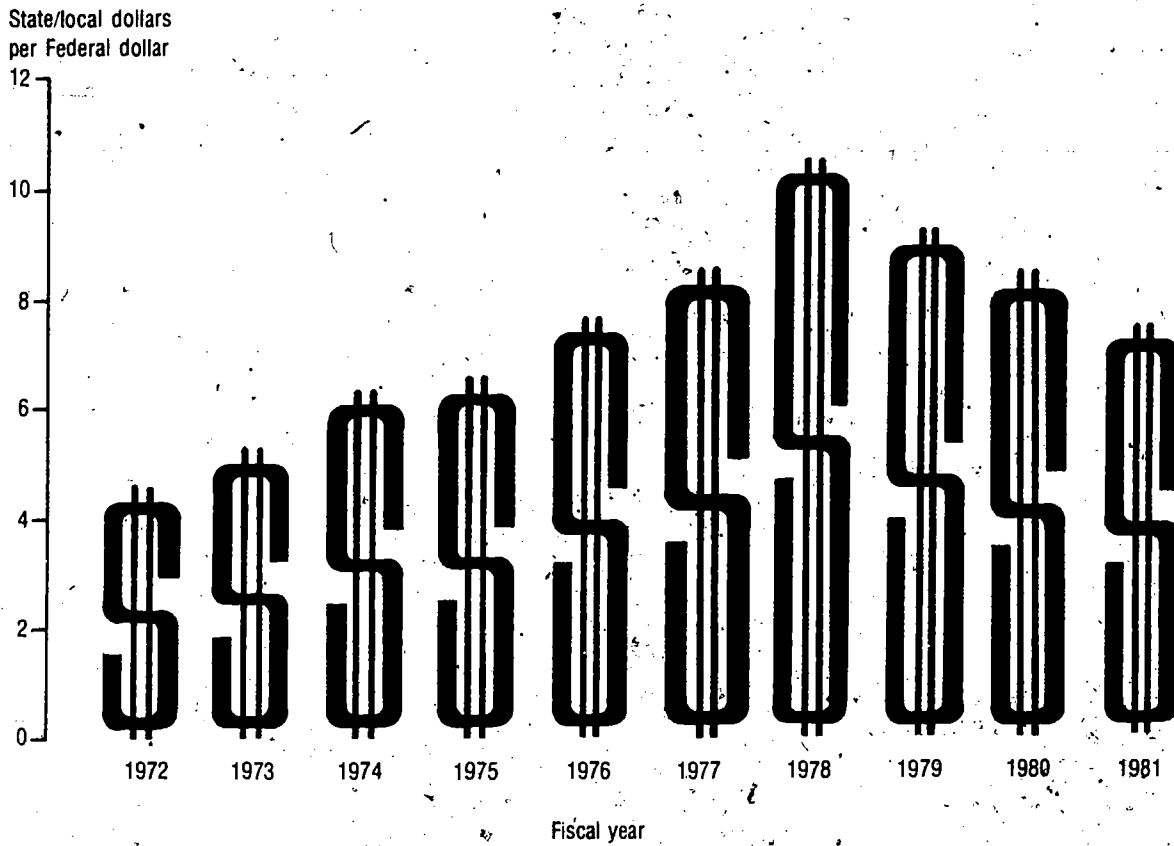
¹As reported by States.

NOTE: VEA programs are those receiving Federal assistance administered by the States under the provisions of the Vocational Education Act, as amended. Virtually all public secondary schools received assistance, and while private secondary schools were not included, their students may have been enrolled through the public school system. About two-thirds of all postsecondary schools were covered under VEA, most of which were 2-year institutions of higher education or public noncollegiate postsecondary schools. Data shown for the years 1972 to 1978 were collected through the Bureau of Occupational and Adult Education (BOAE) and are not directly comparable to Vocational Education Data System (VEDS) data shown for 1979 to 1981.

SOURCE: U.S. Department of Health, Education, and Welfare, Division of Vocational and Technical Education, *Statistics of Vocational Education in 1978*; U.S. Department of Education, National Center for Education Statistics, Vocational Education Data System, unpublished tabulations (December 1982).

Chart 3.8

Total State/Local Dollars Spent for Each Federal Dollar Under Vocational Education Act (VEA)



The ratio of State/local dollars spent per Federal dollar rose from 4.7 in 1972 to 10.4 in 1978 but has declined since then.

Table 3.9

Minority Enrollment in Vocational Education (VEA), by State: School Year 1979-80

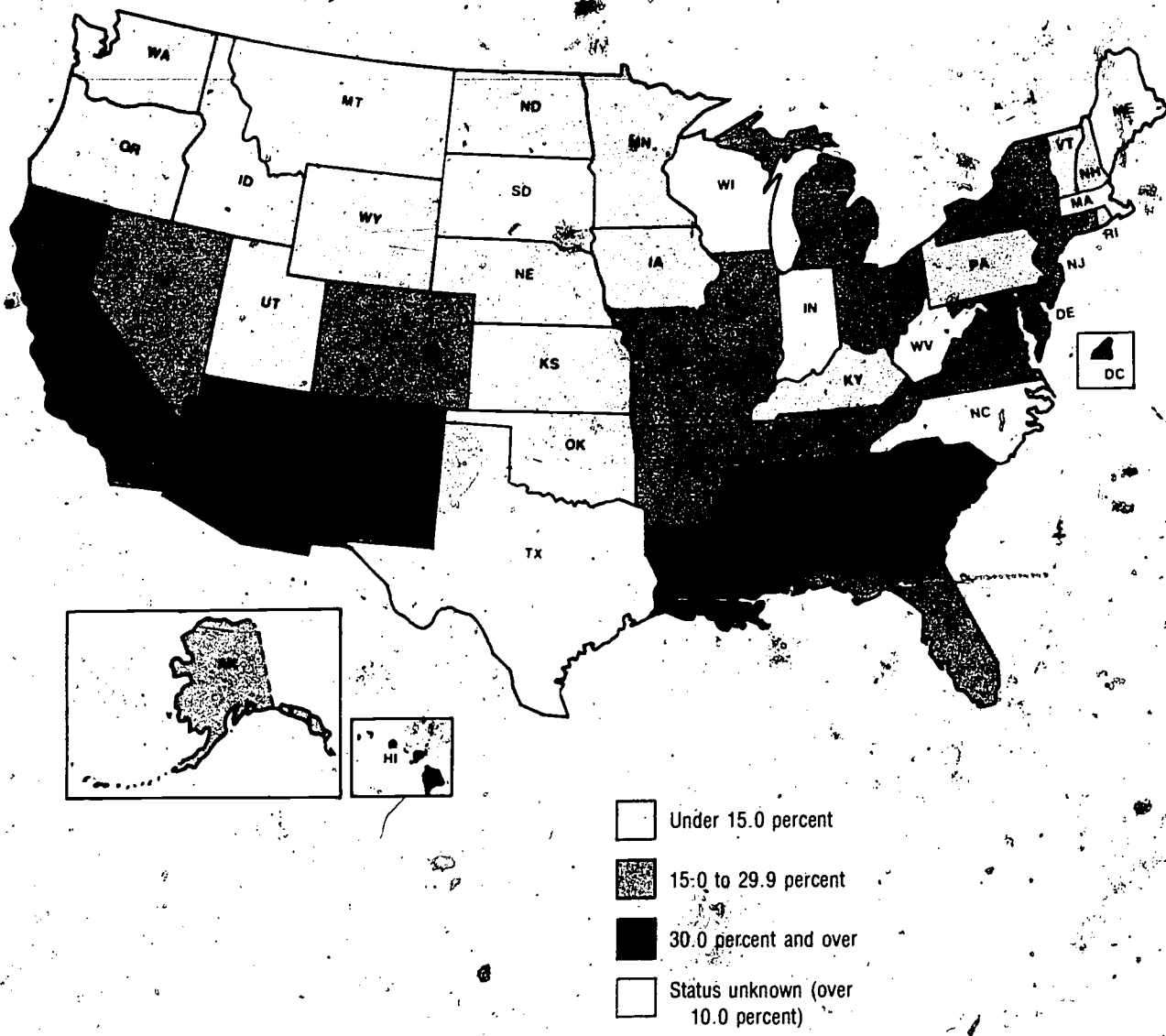
State	Total Enrollment, in Thousands	Total	Percentage Distribution		Status Unknown
			White Non-Hispanic	Minority ¹	
50 States and D.C.	16,453	100.0	71.8	22.4	5.8
Alabama	233	100.0	65.6	34.4	.0
Alaska	11	100.0	82.1	17.9	.0
Arizona	228	100.0	69.5	30.5	.0
Arkansas	141	100.0	78.7	21.3	.0
California	2,143	100.0	65.0	32.0	3.0
Colorado	141	100.0	79.3	20.7	.0
Connecticut	213	100.0	83.6	16.4	.0
Delaware	47	100.0	77.0	23.0	.0
District of Columbia	35	100.0	.9	99.1	.0
Florida	1,186	100.0	72.1	27.9	.0
Georgia	526	100.0	66.2	33.8	.0
Hawaii	51	100.0	18.7	81.3	.0
Idaho	47	100.0	95.8	4.2	.0
Illinois	762	100.0	79.0	21.0	.0
Indiana	149	100.0	33.0	5.6	61.4
Iowa	370	100.0	96.4	3.6	.0
Kansas	104	100.0	88.1	11.9	.0
Kentucky	298	100.0	91.0	9.0	.0
Louisiana	258	100.0	61.8	38.2	.0
Maine	47	100.0	52.5	.4	47.0
Maryland	268	100.0	66.2	29.8	4.0
Massachusetts	363	100.0	79.3	4.9	15.8
Michigan	324	100.0	79.3	18.0	2.7
Minnesota	243	100.0	96.5	3.5	.0
Mississippi	177	100.0	55.6	44.4	.0
Missouri	256	100.0	84.4	15.6	.0
Montana	16	100.0	1.4	0.0	98.6
Nebraska	98	100.0	91.3	6.7	1.9
Nevada	37	100.0	79.8	16.3	3.9
New Hampshire	41	100.0	99.3	.7	.0
New Jersey	629	100.0	70.2	24.1	5.7
New Mexico	56	100.0	45.7	54.3	.0
New York	1,293	100.0	68.6	24.6	6.8
North Carolina	638	100.0	43.2	12.0	44.8
North Dakota	43	100.0	84.5	2.9	12.5
Ohio	961	100.0	80.4	19.6	.0
Oklahoma	160	100.0	85.3	14.7	.0
Oregon	175	100.0	91.5	7.0	1.5
Pennsylvania	436	100.0	87.8	12.2	.0
Rhode Island	85	100.0	92.3	7.7	.0
South Carolina	207	100.0	55.3	43.4	1.3
South Dakota	28	100.0	81.5	4.3	14.2
Tennessee	322	100.0	77.8	22.2	.0
Texas	1,096	100.0	52.4	33.3	14.3
Utah	104	100.0	92.9	7.1	.0
Vermont	21	100.0	99.1	.9	.0
Virginia	329	100.0	74.9	25.1	.0
Washington	441	100.0	91.0	9.0	.0
West Virginia	133	100.0	70.7	4.2	25.2
Wisconsin	476	100.0	83.4	3.9	12.7
Wyoming	5	100.0	93.8	6.2	.0

¹ Includes nonresident aliens.

NOTE: Details may not add to totals because of rounding. VEA programs are those receiving Federal assistance administered by the States under the provisions of the Vocational Education Act, as amended. Virtually all public secondary schools received assistance, and while private secondary schools were not included, their students may have been enrolled through the public school system. About two-thirds of all postsecondary schools were covered under VEA, most of which were 2-year institutions of higher education or public noncollegiate postsecondary schools. Some duplication may exist in the enrollments reported because of the difficulty in reporting unduplicated headcounts.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Vocational Education Data System, unpublished tabulations (September 1982).

Minority Enrollment as Percent of Total Vocational Education Enrollment (VEA)



Minority enrollment in vocational programs (VEA) was highest in the Sunbelt States and lowest in the West North Central States.

Table 3.10

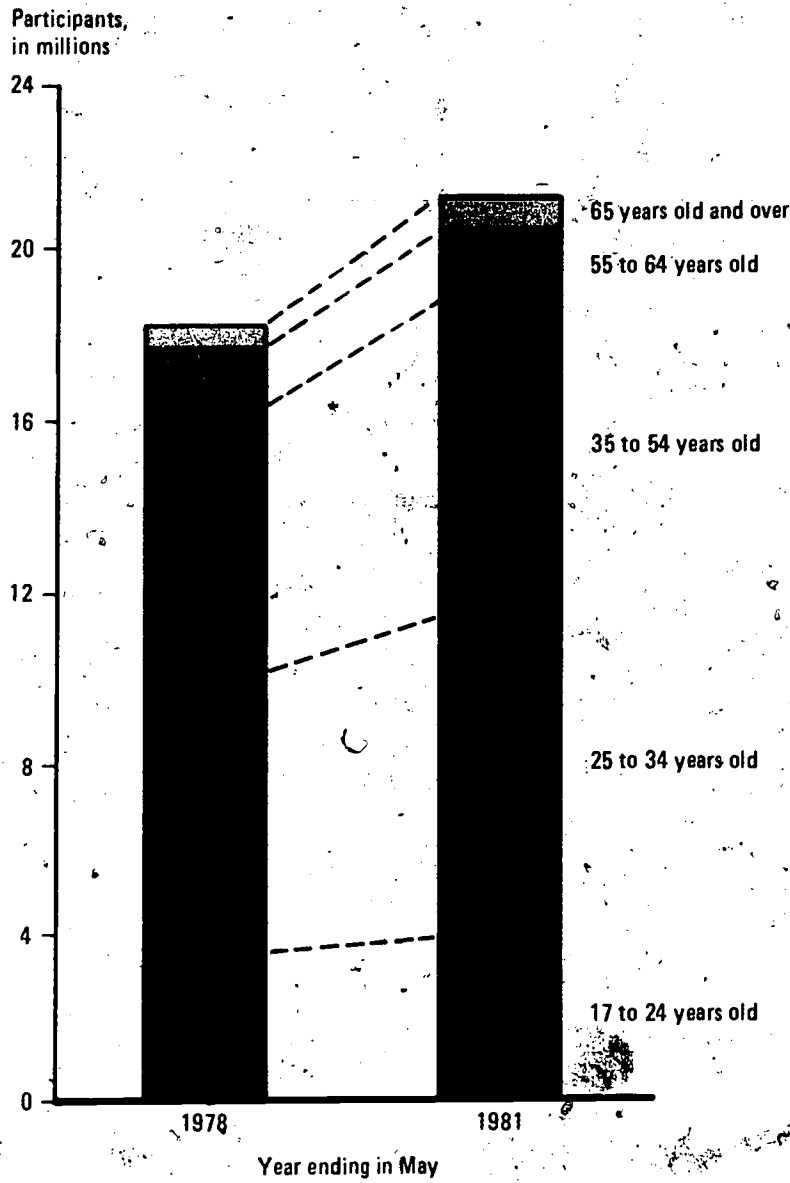
Age Distribution of Participants in Adult Education¹ Compared With Population 17 Years Old and Over: Years Ending May 1978 and 1981

Item	Total Population		Participants in Adult Education		Participants as Percent of Population	Percent Change in Participation Rate From 1978
	Number, in Thousands	Percentage Distribution	Number, in Thousands	Percentage Distribution		
1978:						
Total	154,496	100.0	18,197	100.0	11.8	—
17 to 24 years old	31,730	20.3	3,563	19.6	11.2	—
25 to 34 years old	32,881	21.3	6,596	36.2	20.1	—
35 to 54 years old	46,787	30.3	6,091	33.4	13.0	—
55 to 64 years old	20,391	13.2	1,395	7.7	6.8	—
65 years old and over	22,707	14.7	551	3.0	2.4	—
1981:						
Total	165,830	100.0	21,252	100.0	12.8	8.5
17 to 24 years old	33,073	19.9	3,941	18.5	11.9	6.3
25 to 34 years old	37,711	22.7	7,309	35.5	19.9	-1.0
35 to 54 years old	48,568	29.3	7,333	34.5	15.1	16.2
55 to 64 years old	21,722	13.1	1,702	8.0	7.8	14.7
65 years old and over	24,753	14.9	768	3.6	3.1	29.2

All courses and organized educational activities, excluding those taken by full-time students in programs leading to a high school diploma or an academic degree, and other than courses taken as part of occupational training programs of 6 months or more duration. Full-time students who were also engaged in part-time adult education activities were included as participants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education, Final Report, 1978* and 1981 Survey of Participation in Adult Education, unpublished tabulations (November 1982).

Participants in Adult Education, by Age Group



Over 21 million persons participated in adult education activities in 1981, 3 million more than in 1978. Participation by all age groups grew in absolute numbers and, with the exception of the 25- to 34-year-old group, increased faster than the population.

167

Table 3.11

Participants in Adult Education¹, by Sex, Age Group, and Racial/Ethnic Group: Year Ending May 1978 and 1981

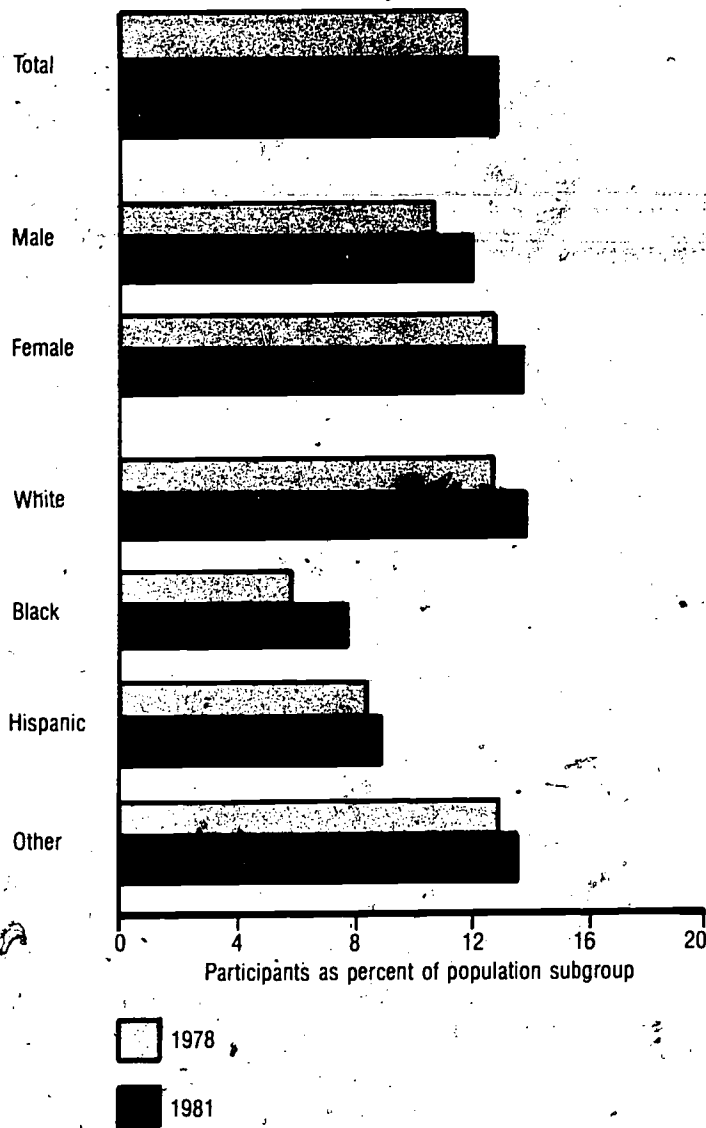
Sex and Racial/Ethnic Group	Participants in 1981, by Age Group							Participants in 1978
	Total	17-24 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65 years and Over	
Number, in Thousands								
Total	21,252	3,941	7,509	4,512	2,821	1,702	768	18,197
White non-Hispanic	18,674	3,369	6,494	4,010	2,505	1,574	723	16,350
Black non-Hispanic	1,298	283	510	250	158	73	25	900
Hispanic	770	192	300	147	92	25	12	613
Other	510	96	204	105	67	31	8	334
Male	9,358	1,640	3,385	2,075	1,240	739	278	7,820
White non-Hispanic	8,279	1,412	2,935	1,870	1,104	697	261	7,094
Black non-Hispanic	1,505	104	214	98	64	16	10	338
Hispanic	333	78	137	58	48	7	4	260
Other	242	46	98	49	25	20	3	128
Female	11,893	2,300	4,123	2,437	1,581	962	490	10,377
White non-Hispanic	10,395	1,957	3,559	2,140	1,401	877	462	9,255
Black non-Hispanic	793	179	296	152	94	57	15	562
Hispanic	437	114	163	89	44	18	8	353
Other	269	50	106	56	42	11	5	207
Participants as Percent of Population Subgroup								
Total	12.8	11.9	19.9	11.0	12.6	7.8	3.1	11.8
White non-Hispanic	13.8	13.2	21.8	19.0	13.5	8.4	3.3	12.7
Black non-Hispanic	7.5	6.6	12.1	9.3	7.1	3.8	1.2	5.7
Hispanic	8.6	7.9	11.9	9.3	8.3	3.5	2.1	8.3
Other	13.4	10.6	18.6	15.0	14.2	9.2	2.7	12.8
Male	12.0	10.2	18.4	16.4	11.5	7.3	2.7	10.7
White non-Hispanic	12.9	11.3	19.8	18.0	12.2	7.9	2.9	11.6
Black non-Hispanic	6.6	5.3	11.4	8.2	6.4	1.9	1.2	4.8
Hispanic	7.7	6.3	11.2	7.9	9.1	2.1	1.6	7.4
Other	13.3	10.0	20.5	14.1	11.4	12.4	2.2	10.8
Female	13.6	13.6	21.4	18.1	13.6	8.3	3.4	12.7
White non-Hispanic	14.6	15.1	23.7	19.9	14.7	8.8	3.6	13.7
Black non-Hispanic	8.2	7.7	12.6	10.1	7.6	5.4	1.2	6.4
Hispanic	9.4	9.6	12.5	10.5	7.5	4.8	2.5	9.2
Other	13.5	11.3	17.1	15.8	16.7	6.2	3.2	14.6

¹Data refer to participants in courses and organized educational activities, excluding those taken by full-time students in programs leading to a high school diploma or an academic degree, and other than courses taken as part of occupational training programs of 6 months or more duration. Full-time students who were also engaged in part-time adult education activities were included as participants.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education, May 1981*, and unpublished tabulations (June 1982).

Participants in Adult Education, by Sex and Racial/Ethnic Group



Participation increased in adult education among both males and females and in all racial/ethnic groups from 1978 to 1981. In 1981, whites and females continued to have the highest rates of participation.

Table 3.12

Educational Attainment of Participants in Adult Education¹, by Sex and Racial/Ethnic Group Compared With Population 17 Years Old and Over: Year Ending May 1981

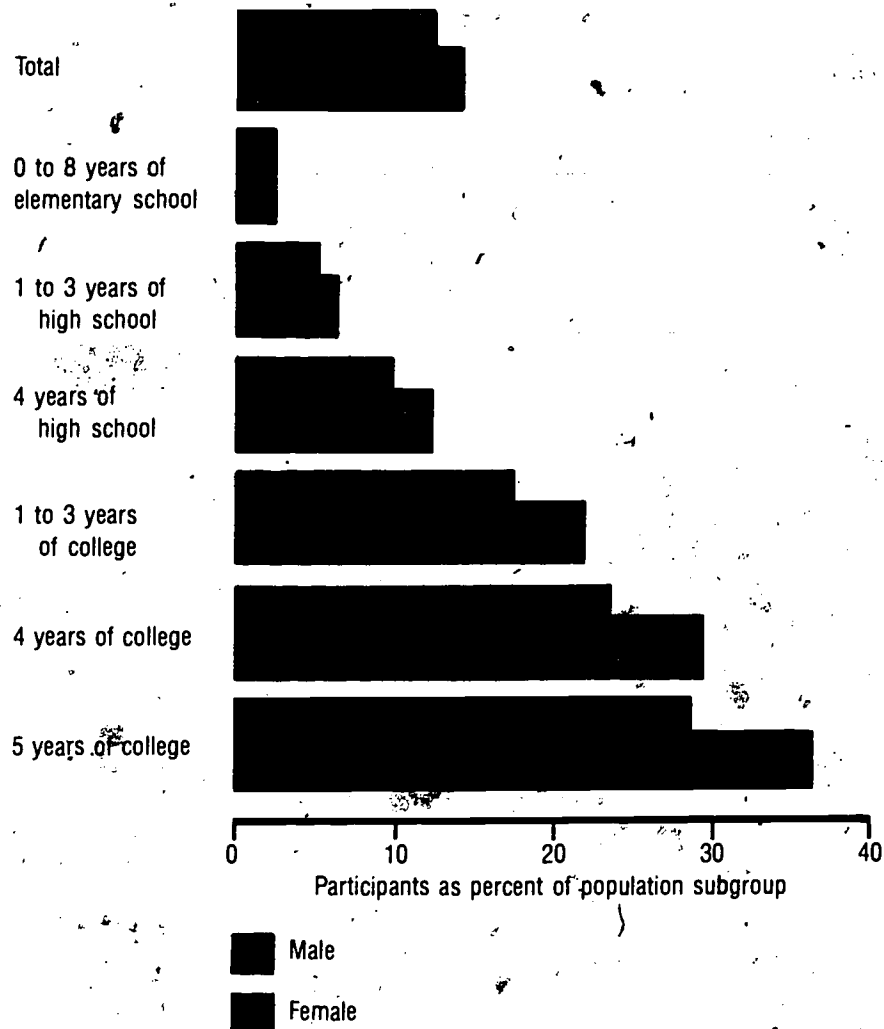
Characteristic	Total	0 to 8 Years of Elementary School	1 to 3 Years of High School	4 Years of High School	1 to 3 Years of College	4 Years of College	5 or More Years of College
= Number, in Thousands							
Total population	165,830	23,292	27,751	63,208	27,052	14,714	9,812
Sex:							
Male	77,983	11,318	12,857	27,340	13,006	7,821	6,197
Female	87,449	12,182	14,951	35,917	14,083	6,877	3,583
Racial/ethnic group:							
White non-Hispanic	135,675	16,007	21,016	53,754	22,953	13,133	8,764
Black non-Hispanic	17,381	3,500	4,394	5,862	2,409	786	449
Hispanic	8,992	3,160	1,839	2,481	995	320	184
Other	3,816	625	515	1,104	685	471	411
Adult education participants							
Sex:	21,252	517	1,542	6,998	5,307	3,839	3,050
Male	9,358	249	630	2,652	2,237	1,830	1,760
Female	11,893	268	912	4,346	3,070	2,008	1,290
Racial/ethnic group:							
White non-Hispanic	18,674	272	1,234	6,185	4,701	3,528	2,753
Black non-Hispanic	1,298	65	185	444	312	157	135
Hispanic	770	112	90	271	178	61	57
Other	511	68	33	98	115	92	104
Participants as Percent of Population Subgroup							
Adult education participants	12.8	2.2	5.6	11.1	19.6	26.1	31.1
Sex:							
Male	12.0	2.2	4.9	9.7	17.2	23.4	28.4
Female	13.6	2.2	6.1	12.1	21.8	29.2	36.0
Racial/ethnic group:							
White non-Hispanic	13.8	1.7	5.9	11.5	20.5	26.9	31.4
Black non-Hispanic	7.5	1.9	4.2	7.6	13.0	20.0	30.1
Hispanic	8.6	3.5	4.9	10.9	17.9	19.1	31.0
Other	13.4	3.9	4.2	5.7	11.1	19.5	25.3

¹Data refer to participants in courses and organized educational activities, excluding those taken by full-time students in programs leading to a high school diploma or an academic degree, and other than courses taken as part of occupational training programs of 6 months or more duration. Full-time students who were also engaged in part-time adult education activities were included as participants.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education Survey, May 1981* and unpublished tabulations (June 1982).

Participants in Adult Education, by Educational Attainment



Participation in adult learning programs increased substantially from one educational attainment level to the next. Rates more than doubled for both males and females from the high school graduate level to the college graduate level, from 11 percent to 26 percent.

Table 3.13

Family Income Levels of Participants in Adult Education¹ Compared With Population 17 Years Old and Over: Year Ending May 1981

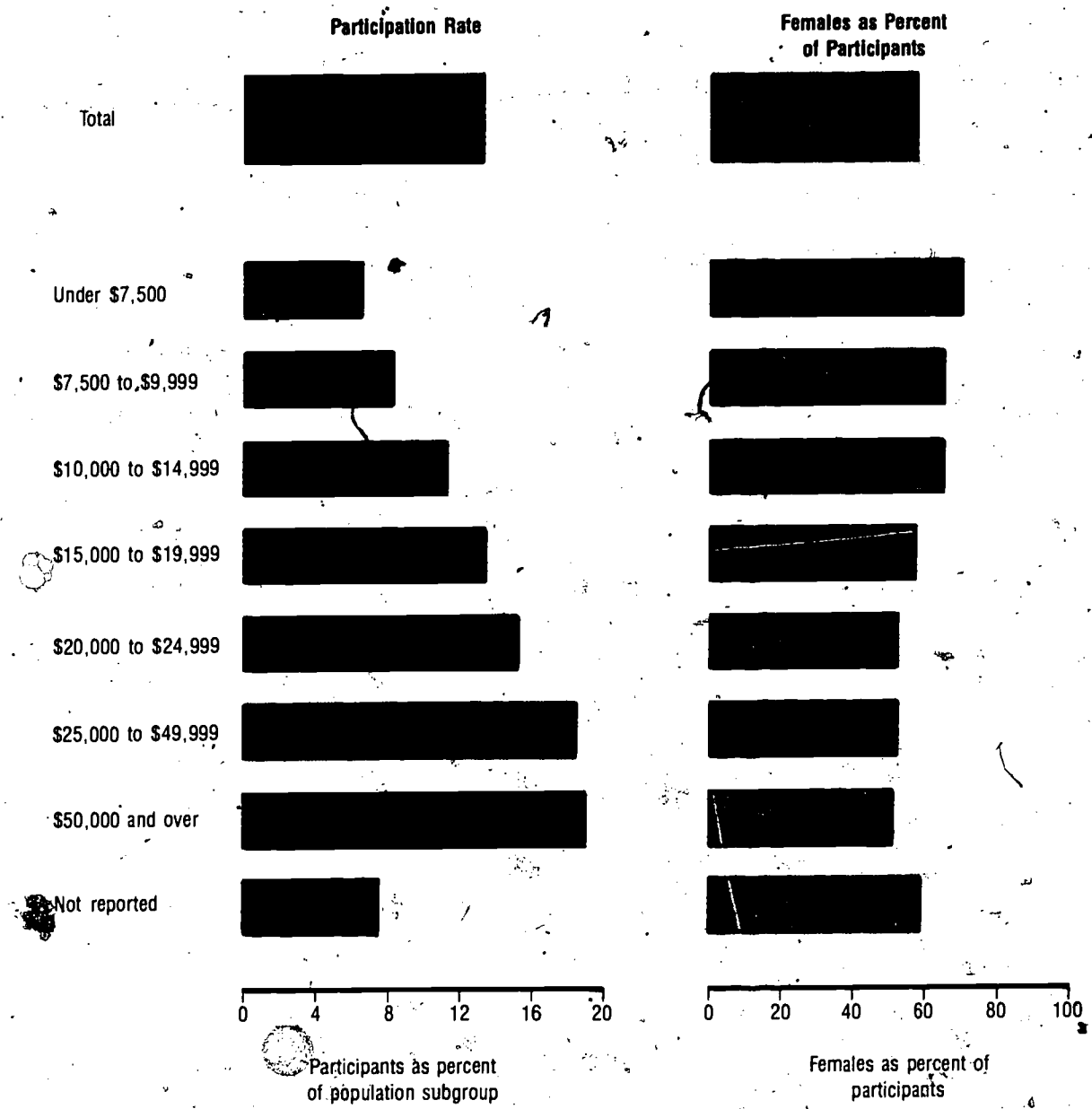
Annual Family Income	Total		Participation	Total	Male	Female
	Population	Participants	Rate			
	Number, in Thousands			Percentage Distribution		
Total	165,830	21,252	12.8	100.0	44.0	56.0
Under \$7,500	27,326	1,726	6.3	100.0	31.0	69.0
\$7,500 to \$9,999	10,903	888	8.1	100.0	35.9	64.1
\$10,000 to \$14,999	25,440	2,791	11.0	100.0	36.3	63.7
\$15,000 to \$19,999	21,173	2,784	13.2	100.0	43.6	56.4
\$20,000 to \$24,999	22,257	3,366	15.1	100.0	48.6	51.4
\$25,000 to \$49,999	39,933	7,307	18.3	100.0	48.1	51.9
\$50,000 and over	8,673	1,634	18.8	100.0	49.5	50.5
Not reported	10,124	755	7.5	100.0	41.7	58.3

¹Data refer to participants in courses and organized educational activities, excluding those taken by full-time students in programs leading to a high school diploma or an academic degree, and other than courses taken as part of occupational training programs of 6 months or more duration. Full-time students who were also engaged in part-time adult education activities were included as participants.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education, May 1981*, and unpublished tabulations (June 1982).

Participants in Adult Education and Percent Female, by Family Income



Participation in adult education rose with each higher income level. Females were more likely to predominate in adult education in the lower income categories.

Table

Labor Force Participation, Occupational Status, Metropolitan Status, and Regional Distribution of Participants in Adult Education¹ Compared With Population 17 Years Old and Over: Year Ending May 1981

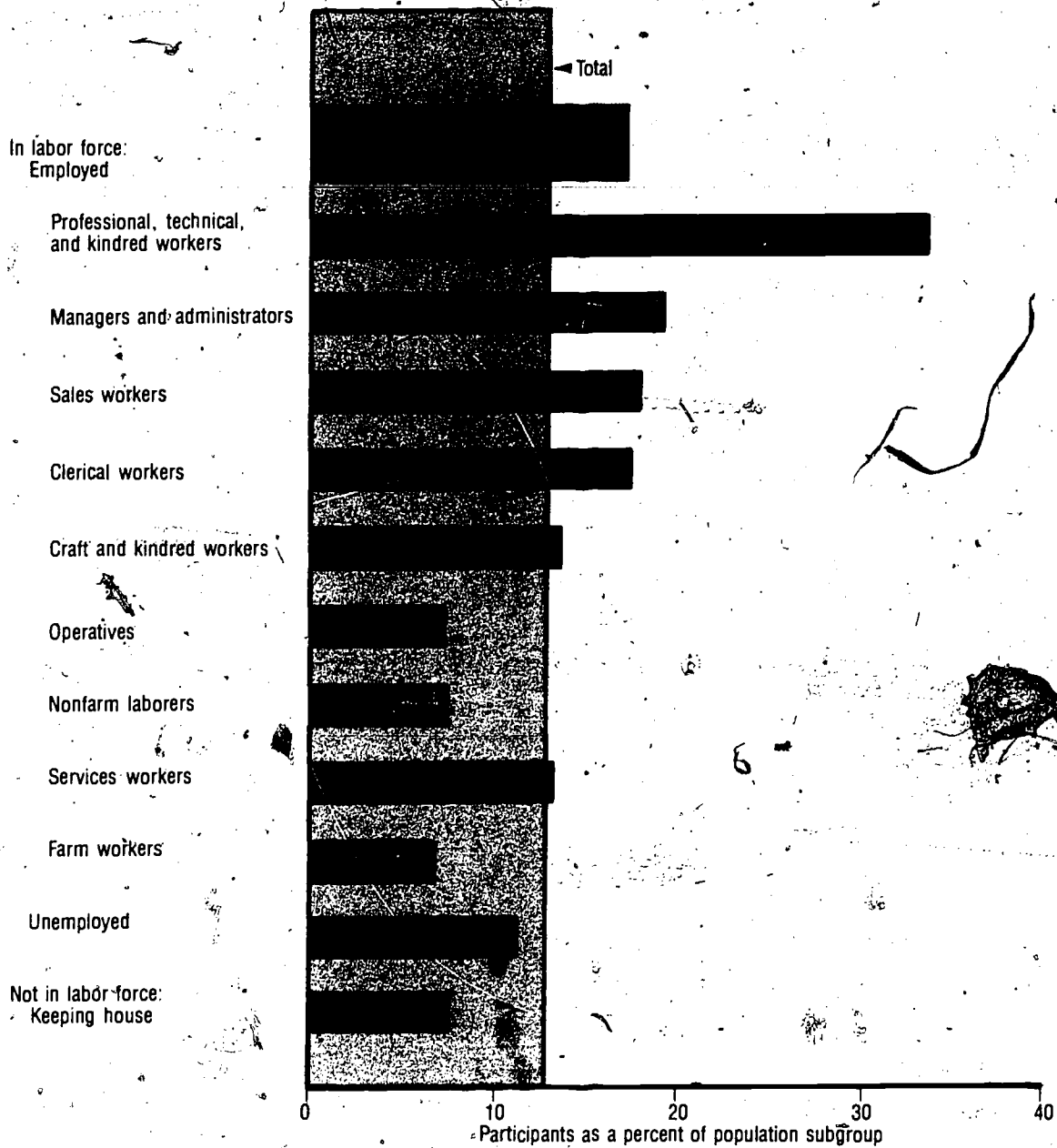
Characteristic	Total Population		Participants in Adult Education		Participants as a Percent of Population Subgroup
	Number, in Thousands	Percentage Distribution	Number, in Thousands	Percentage Distribution	
Labor force status, total	165,830	100.0	21,252	100.0	12.8
In labor force	107,394	64.8	17,640	83.0	16.4
Employed	99,862	60.2	16,798	79.0	16.8
Unemployed	7,531	4.5	842	4.0	11.2
Not in labor force	58,436	35.2	3,612	17.0	6.2
Keeping house	31,923	19.3	2,397	11.3	7.5
Going to school	6,633	4.0	517	2.4	7.8
Other	19,880	12.0	698	3.3	3.5
Occupation of employed persons	99,862	100.0	16,798	100.0	16.8
Professional, technical, and kindred workers	16,148	16.2	5,352	31.9	33.1
Teachers, except college	3,396	3.4	1,264	7.5	37.2
College teachers	595	0.6	164	1.0	27.6
Physicians, dentists, and related practitioners	763	0.8	301	1.8	39.4
Health workers, except practitioners	2,276	2.3	979	5.8	43.0
Other	9,117	9.1	2,644	15.7	29.0
Managers and administrators, except farm	11,371	11.4	2,145	12.8	18.9
Sales workers	6,401	6.4	1,132	6.7	17.7
Clerical workers	18,573	18.6	3,193	19.0	17.2
Craft and kindred workers	12,908	12.9	1,732	10.3	13.4
Operatives, except transport	10,654	10.7	770	4.6	7.2
Transport equipment operatives	3,444	3.4	244	1.5	7.1
Nonfarm laborers	4,662	4.7	342	2.0	7.3
Service workers, including private household	12,965	13.0	1,703	10.1	13.1
Farm workers (farmers, managers, laborers, and supervisors)	2,737	2.7	186	1.1	6.8
Type of area and region	165,830	100.0	21,251	100.0	12.8
Metropolitan	113,464	68.4	15,387	72.4	13.6
Nonmetropolitan	52,365	31.6	5,865	27.6	11.2
Northeast	36,370	21.9	3,747	17.6	10.3
North Central	42,507	25.6	5,741	27.0	13.5
South	54,928	33.1	6,133	28.9	11.2
West	32,025	19.5	5,630	26.5	17.6

¹ Participants in courses and organized educational activities, excluding those taken by full-time students in programs leading to a high school diploma or an academic degree, and other than courses taken as part of occupational training programs of 6 months or more duration. Full-time students who were also engaged in part-time adult education activities were included as participants.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education, May 1981*, and unpublished tabulations (June 1982).

Participants in Adult Education, by Labor Force Status



Employed persons were much more likely to participate in adult education than the unemployed or persons keeping house. Among occupational groups, professional, technical, and kindred workers had the highest participation rates; about one-third were engaged in adult education in 1981.

Table 3.15**Courses Taken by Participants in Adult Education, by Field: Year Ending May 1981**

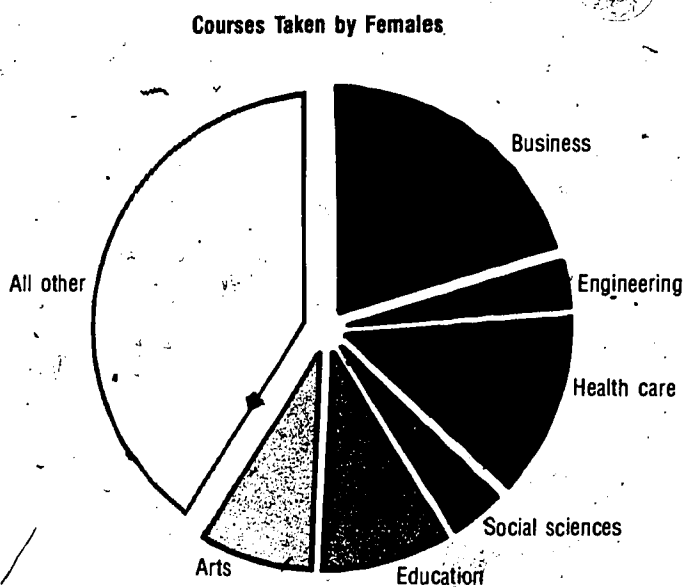
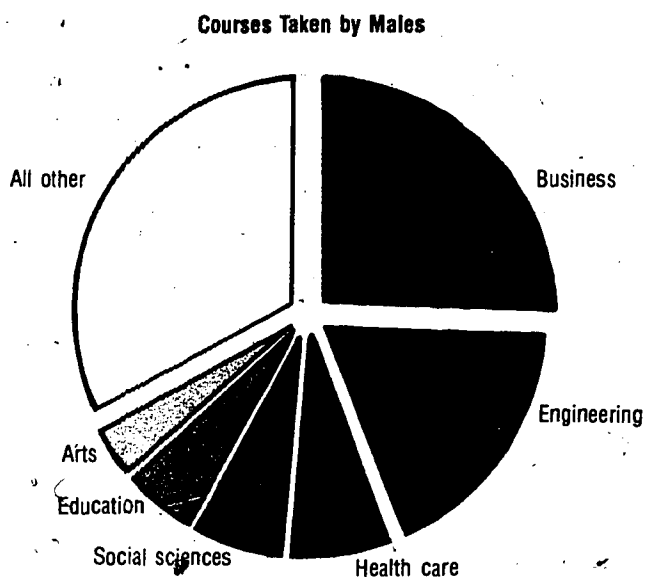
Field of Course	Total Courses Taken		Courses Taken by Males		Courses Taken by Females		Percent Taken by Females
	Number, in Thousands	Percentage Distribution	Number, in Thousands	Percentage Distribution	Number, in Thousands	Percentage Distribution	
Total courses	37,381	100.0	16,182	100.0	21,199	100.0	56.7
Agriculture	449	1.2	326	2.0	123	.6	27.4
Arts	2,373	6.3	576	3.6	1,797	8.5	75.7
Business	8,564	22.9	4,171	25.8	4,393	20.7	51.3
Education	2,926	7.8	897	5.4	2,028	9.6	69.3
Engineering	3,654	9.8	2,970	18.4	683	3.2	18.7
Health care	3,993	10.7	1,236	7.6	2,757	13.0	69.0
Health education	1,150	3.1	361	2.2	789	3.7	68.6
Home economics	1,245	3.3	84	.5	1,162	5.5	99.3
Language and literature	2,184	5.8	813	5.0	1,371	6.5	62.8
Life sciences	1,205	3.2	594	3.7	611	2.9	50.7
Personal services	713	1.9	296	1.8	417	2.0	58.5
Physical education	2,377	6.4	621	3.8	1,756	8.3	73.9
Social sciences	1,929	5.2	1,072	6.6	856	4.0	44.4
Interdisciplinary studies	337	.9	132	.8	205	1.0	60.8
Other	1,678	4.5	998	6.2	680	3.2	40.5

¹Courses and organized educational activities taken part-time at any level by persons 17 years old and over. Excluded are courses taken by full-time students leading to a high school diploma or an academic degree or taken as part of occupational training programs of 6 months or more duration. Included, however, are any courses taken part-time by full-time students.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education, 1981, 1982*.

Courses Taken by Adult Education Participants, by Field



Business represented the largest single area of courses taken by both male and female adult education participants. Other popular areas were engineering among males and health care among females.

Table 3.16

Main Reason for Taking Adult Education Courses¹, School Credit Objectives, and Trade or Professional Certification Objectives: Year Ending May 1981

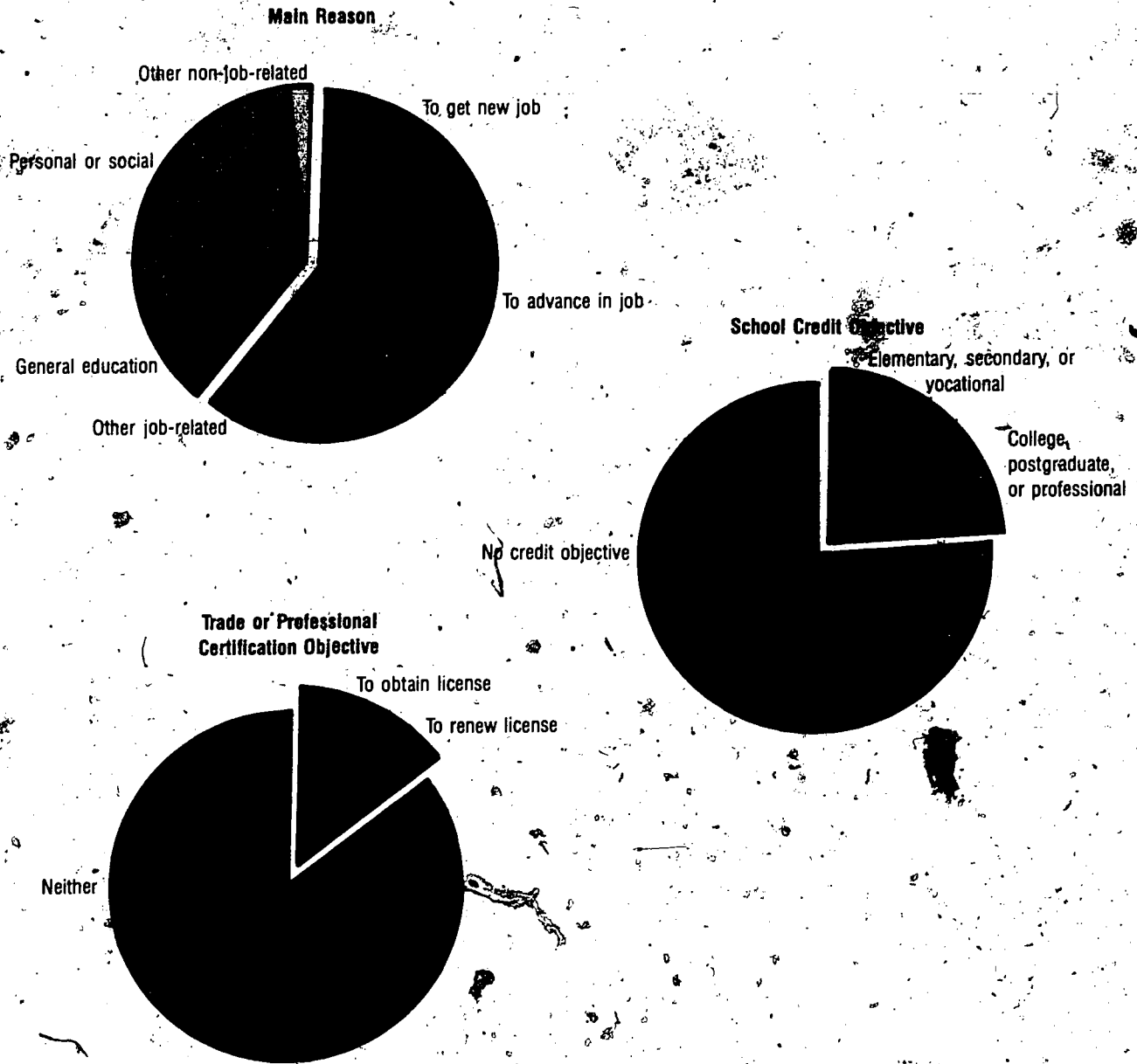
Item	Total Courses Taken		Courses Taken by Males		Courses Taken by Females		Percent Taken by Females
	Number, in Thousands	Percentage Distribution	Number, in Thousands	Percentage Distribution	Number, in Thousands	Percentage Distribution	
Total	37,381	100.0	16,182	100.0	21,199	100.0	56.7
Main reason for taking courses:							
Job-related	22,534	60.3	11,202	69.2	11,332	53.5	50.3
To get new job	4,398	11.8	1,699	10.5	2,699	12.7	61.4
In current occupation	741	2.0	268	1.7	473	2.2	63.8
In new occupation	3,657	9.8	1,431	8.8	2,226	10.5	60.9
To advance in job	16,659	44.6	8,748	54.1	7,911	37.3	47.5
Other job-related	1,477	4.0	754	4.7	723	3.4	49.0
Non-job-related	14,738	39.4	4,950	30.6	9,788	46.2	66.4
American citizenship	60	.2	21	.1	39	.2	65.0
General education	3,603	9.6	1,511	9.3	2,092	9.9	58.1
Volunteer work	490	1.3	245	1.5	245	1.2	50.0
Personal or social	10,187	27.3	3,011	18.6	7,176	33.9	70.4
Other non-job-related	398	1.1	161	1.0	237	1.1	59.5
Not reported	108	.3	30	.2	78	.4	72.2
School credit objectives:							
Elementary or high school diploma	1,017	2.7	342	2.1	675	3.2	66.4
Vocational certificate	1,190	3.2	553	3.4	637	3.0	53.5
2-year college degree	2,204	5.9	770	4.3	1,434	6.8	65.1
4-year college degree	2,531	6.8	1,202	7.4	1,329	6.3	52.5
Postgraduate/professional	1,974	5.3	927	5.7	1,047	4.9	53.0
None or not reported	28,465	76.1	12,385	76.5	16,080	75.9	56.5
Trade or professional certification objectives:							
To obtain license	2,584	6.9	1,297	8.0	1,287	6.1	49.8
To renew license	2,835	7.6	1,225	7.6	1,610	7.6	56.8
Neither	31,961	85.5	13,660	84.4	18,301	86.3	57.3

¹Courses and organized educational activities taken part-time at any level by persons, 17 years old and over. Excluded are courses taken by full-time students leading to a high school diploma or an academic degree, or taken as part of occupational training programs of 6 months or more duration. Included, however, are any courses taken part-time by full-time students.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education, 1981, 1982*.

Reason and Objectives for Taking Adult Education Courses



Adult education courses were taken most often for job-related reasons, usually to advance in a current job. Courses taken, however, to fulfill school credit or occupational licensing objectives made up a small fraction of all adult education courses.

Table 3.17

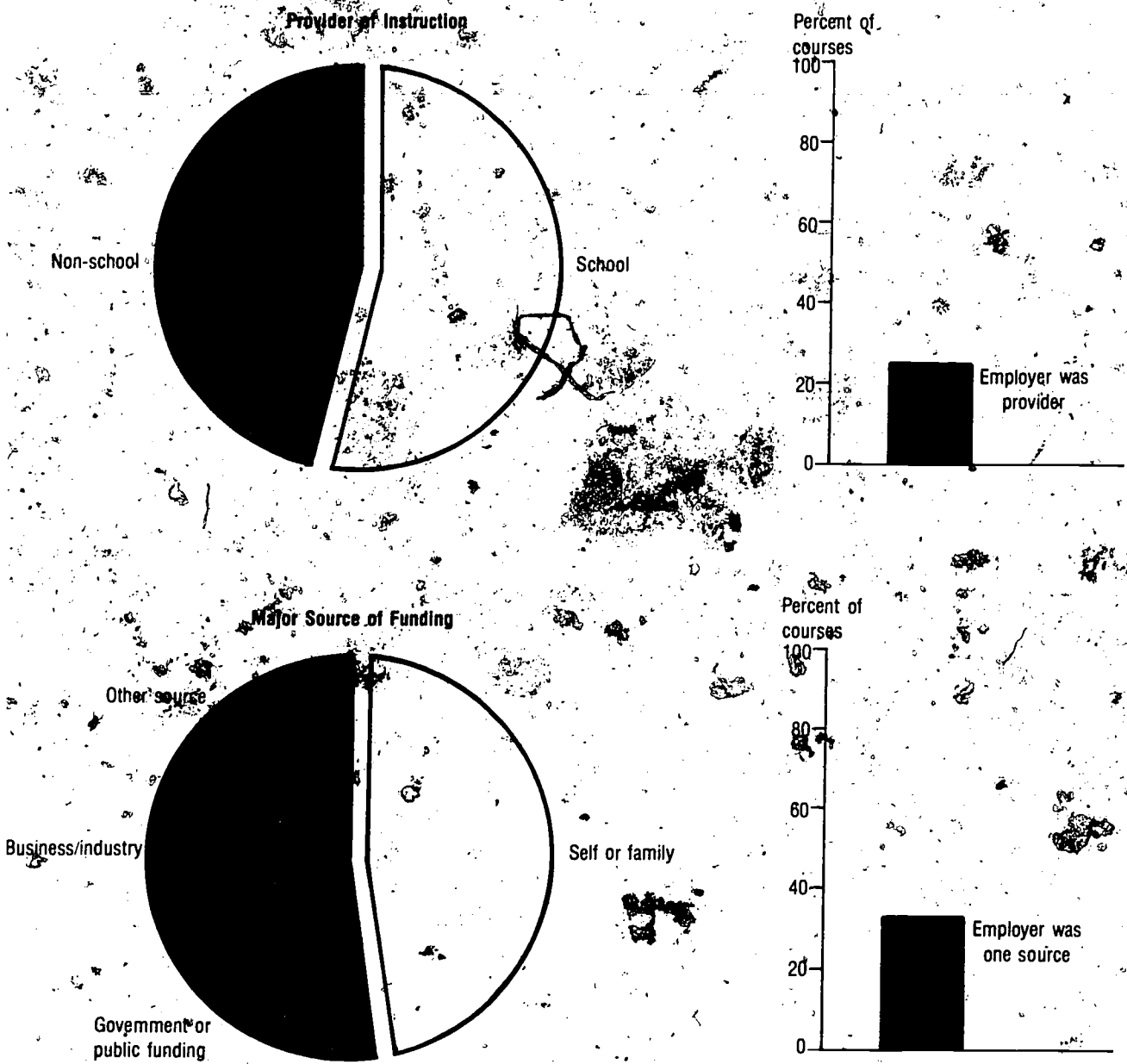
Providers of Instruction and Major Sources of Funding for Adult Education Courses¹—Year Ending May 1981

Item	Number of Courses Taken in Thousands	Percentage Distribution
Total courses taken, by provider of instruction	37,381	100.0
School	20,154	53.9
Elementary/secondary school	2,551	6.8
Vocational/trade school	3,413	9.1
2-year institution	7,030	18.8
4-year institution	7,160	19.2
Non-school	17,227	46.1
Business/industry	5,119	13.7
Labor/professional association	1,858	5.0
Government agency	2,934	7.8
Community organization	3,172	8.5
Tutor	1,637	4.4
Other	2,507	6.7
Employer was provider	9,260	24.8
Total courses taken, by source of funding	37,381	100.0
Self or family	17,760	47.5
Government or public funding	6,402	17.1
Business/industry	8,090	21.6
Other source	5,129	13.8
Employer was one source	12,259	32.9

¹ Courses and organized educational activities taken part-time at any level by persons 17 years old and over. Excluded are courses taken by full-time students leading to a high school diploma or an academic degree, or taken as part of occupational training programs of 6 months or more duration. Included, however, are any courses taken part-time by full-time students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education, 1981, 1982*.

Provider of Instruction and Major Source of Funding for Adult Education Courses



About 54 percent of courses taken by adult education participants were provided by schools. Nearly a fourth of the courses were given by the employers of participants.

Chapter 4 Teacher Preparation

Enrollment declines in elementary/secondary schools resulted in slackened demand for new teachers during the 1970's. College students responded to the poor job market for teachers by shifting out of teacher preparation and into other fields. However, the enrollment upswing projected for the mid-1980's in elementary schools may generate new demand for additional teachers. Prospects may improve for graduates entering teaching and for schools and departments that prepare teachers. In the interim, the job market remains uncertain. This chapter documents how students and teacher preparation programs adapted to the slackened demand during the 1970's and how they are responding to the uncertainties of the interim period. It presents trends and projections of the supply and demand for additional teachers and shows the losses and gains in education degrees and teacher candidates by level and specialty over time. In addition, the chapter examines the measures that teacher preparation programs have undertaken in response to change. It concludes by profiling the characteristics of new teachers, teacher graduates who did not enter teaching, and prospective education majors.

Teacher Supply and Demand for Additional Teachers

Trends in teacher supply

The enrollment declines experienced in the first half of the 1970's were not followed immediately by declines in the number of teachers employed. In the early years of enrollment declines the reduced demand for teachers was offset by measures to improve teacher-student ratios and address staffing needs in mandated special education and bilingual programs. Not until the late 1970's did severe budgetary constraints slow down further improvement in teacher-student ratios and expanded services. Consequently, declines in the number of teachers came late, decreasing from 2.49 million in 1977 to 2.46 million in 1980 (entry 4.1). By 1984, when enrollments are expected to bottom out, classroom teachers are expected to drop to 2.38 million.¹ When elementary school enrollments begin climbing again in the latter half of the 1980's, the number of classroom teachers is projected to increase again, reaching an all-time high of 2.64 million

in 1990. The growth projected at the elementary school level may mean one-fifth more elementary school classroom teachers in 1990 than in 1980. Since enrollment increases will not reach the secondary level until after 1990, the number of secondary school classroom teachers is projected to continue declining throughout the 1980's.

Demand for additional teachers

The total annual demand for additional teachers includes those needed to respond to changes in enrollment and in teacher-student ratios and to replace teachers leaving the profession (teacher turnover). The cumulative demand for additional teachers fell from 896,000 in the 5-year period 1971 to 1975 to 749,000 in the 1976-to-1980 period (entry 4.2). During the next 5-year period, as enrollment continues to decline, the demand for additional teachers is projected to continue decreasing. As a result, only 670,000 additional teachers are expected to be hired from 1981 to 1985. But in the late 1980's, as enrollments begin increasing, the demand for additional teachers is expected to rise, resulting in 983,000 teachers being hired from 1986 to 1990. This represents a projected increase from 134,000 additional teachers hired each year (from 1981 to 1985) to 197,000 additional teachers each year (in the 1986-to-1990 period). These demand projections are based on the assumptions that enrollment will rise, teacher-student ratios will improve only slightly, and that the turnover of teachers will remain constant. If these conditions are altered, the projections may also change.

Supply of additional teachers

Projecting the supply of additional teachers is less certain. The supply of additional teachers consists of new teacher graduates and a reserve pool of former teacher graduates and former teachers. The annual supply of newly qualified teacher graduates decreased from

¹The following sections on projections of classroom teachers and supply and demand are excerpted from U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91*, Volume 1, 1982, with unpublished revised projections.

314,000 in 1971 to 144,000 in 1980. As a percent of bachelor's degrees, new teacher graduates dropped from 37 percent to 17 percent over the period. The projections of new teacher graduates show an increase to 238,000 in 1990-91, representing about 26 percent of bachelor's degrees that year. This projection is based on the assumption that, as the demand for additional teachers increases and as teachers' salaries improve during the 1980's, the proportion of college students preparing to teach will also increase.

The supply of new teacher graduates constitutes only part of the total supply of additional teachers. Additional teachers might also be drawn from the reserve pool of former teacher graduates and former teachers. Although the reserve pool is estimated to number roughly 1 million, only a portion might be available to enter or go back to teaching. The National Education Association (NEA) estimates that in 1980, only about 120,000 of these former teachers sought teaching positions.

Given several unknowns, the comparison of the total demand for additional teachers and the supply of new teacher graduates is far from complete. Middle-range projections indicate that both the supply of and the demand for additional teachers in the 1986- to 1990 period is expected to average 197,000 per year. Similar conditions prevailed in the 1965 to 1969 period when teaching jobs were fairly easy to obtain and spot shortages existed. Therefore, it seems reasonable to assume that in the latter half of the 1980's, the job market may be favorable for new teacher graduates and that shortages may exist in some localities and subject areas.

Yet, various market factors may work to alter the trends projected. Although it appears unlikely that the teacher turnover rate can go much lower than the 6 percent estimated to leave the profession each year, poor economic conditions could restrict job mobility of current teachers and thus lower the turnover rate and consequently the projected demand for additional teachers. Good economic conditions, conversely, would encourage current teachers and those planning to teach to seek more profitable occupations, contributing to a higher turnover rate and a higher demand for additional teach-

ers. This situation appears to be happening already in certain fields, such as the physical sciences and mathematics, in which teachers are apparently being recruited by business and industry to work for higher pay.

Supply of Newly Qualified Teachers

Changes in education degrees awarded

Projections of the supply of newly qualified teacher graduates are based on the National Education Association's long-running survey of higher education institutions offering teacher preparation programs. Other data are available to supplement the NEA estimates. The education degree data developed from NCES's annual survey of all institutions of higher education show trends in educational specialties consistent with those reported from other sources. The degree data do not, however, provide information on recipients graduated in a major other than education and qualified to teach. Thus, new teacher graduates are undercounted, particularly at the secondary level. Yet, while the number of earned degrees conferred in education specialties only approximates the supply of new teacher graduates, it does offer useful additional detail.

Degrees in education represented 21 percent of all bachelor's degrees awarded in the early 1970's. But in the school year 1972-73 they have fallen each year, to under 12 percent in 1980-81 (entry 4.3). Declines in bachelor's degrees awarded in education were substantial among both sexes: In 1970-71, 10 percent of males and 36 percent of females graduated in education. But 10 years later, only 6 percent of males and 18 percent of females received their bachelor's degrees in education. In 1980-81, 24,000 fewer bachelor's education degrees were earned by males and 62,000 fewer were earned by females than in the peak year.

At the master's level, education degrees rose to their highest point in 1975-76 but have declined in number since then. At their high point, they represented 41 percent of all master's degrees, falling to 33 percent by 1980-81. Since education degrees represented a sizable

proportion of all master's degrees awarded, declines in education degrees produced a drop in total master's degree production in the late 1970's. Among male master's recipients, education degrees declined from 29 percent to 19 percent of the total, and among females, they fell from 57 to 47 percent over the period.

At the doctoral level, education degrees increased slightly, with some minor fluctuations, and in 1980-81 numbered 7,900 degrees, representing about one-fourth of all doctorates. This increase ran counter not only to trends in lower-level education degrees but also to decreases in other doctoral programs. The number of male recipients, although still in the majority, decreased in the latter half of the 1970's, while the number of female recipients more than doubled over the decade.

When indexed to education degrees awarded in 1971, total education degree production declined by one-fifth over the decade (entry 4.4). The decline was most severe at the bachelor's level, where degrees fell by 39 percent. Master's degrees rose rapidly until the second half of the 1970's and then declined almost as quickly as they had risen, while doctoral degrees increased slightly. These changes have meant that, whereas in the early 1970's 150 master's degrees were awarded for every 100 bachelor's degrees, by the late 1970's, 90 were conferred for every 100 bachelor's degrees. Production of doctoral degrees in relation to bachelor's degrees also rose; by 1980-81, 7 doctorates were awarded for every 100 bachelor's degrees, compared to fewer than 4 per 100 in 1971.

Despite the 39-percent reduction in bachelor's degrees in education overall, a few specialties increased their degree production between 1971 and 1981 (entry 4.5). Bachelor's degrees in special education rose by two-thirds and pre-elementary by 41 percent, reflecting the growth in these education programs in school systems during the 1970's. More than 1 in 10 bachelor's degrees awarded in education were granted in special education in 1980-81. Reductions in teacher preparation degrees were most marked in elementary, art, mathematics, business, and home economics education. General elementary education, the single largest education field, declined by 57 percent. In 1970-71, over half of all bachelor's degrees in

education were in general elementary, but by 1980-81, the proportion had been reduced to one-third.

Changes in the supply of new teacher graduates

A further source of data on the supply of new teacher graduates is NCES's Recent College Graduates Survey (RCG), administered to degree recipients in the year following graduation. Data from the RCG survey of 1976-77 and 1979-80 bachelor's degree recipients provide estimates of graduates prepared to teach, the proportions who went on to apply, and the proportions teaching the year after graduation. In 1978, approximately 171,000 bachelor's recipients from the preceding year were newly qualified to teach (entry 4.6). By 1981, this number had been reduced to 132,000. Partially offsetting this decline, however, was an increase from the earlier survey in the proportion who did apply for a teaching position: In 1978, 77 percent of the newly qualified had applied to teach; in 1981, 85 percent had applied. Of those who applied, most were teaching elementary/secondary school full-time in the year following graduation.

The proportions who applied and taught in the year following graduation differed somewhat by the field in which the graduates had trained, although small numbers in some fields preclude precise comparisons. Those trained in general elementary, special education, biological science, home economics, and reading had high application rates and generally high proportions teaching full-time in 1981. Among the newly qualified, graduates in mathematics, vocational education, business, and health were less likely to have applied to teach. Relatively low proportions of newly qualified graduates in physical education, vocational education, business, and health were teaching full-time in 1981.

Teacher Preparation Institutions Number and characteristics of institutions

The task of training teacher candidates is shared by both public and private institutions; public institutions confer most of the education degrees while private institutions offering undergraduate teaching programs are more nu-

merous. In 1980-81, public institutions were responsible for conferring three-fourths of all education degrees, awarding 78 percent of the bachelor's, 75 percent of the master's, and 71 percent of the doctor's degrees (entry 4.7). These proportions were essentially unchanged from 1972-73 at the bachelor's and master's levels, but were smaller at the doctor's level than in earlier years. Public 4-year (nonuniversity) institutions granted the largest share of bachelor's and master's education degrees and public universities the bulk of the doctor's education degrees. Public and private institutions shared the declines in bachelor's and master's degrees from 1972-73, but only private institutions showed the increase in doctor's degrees awarded in education.

Despite declines at the bachelor's and master's levels in education degrees, there was no reduction in the number of institutions granting education degrees from 1973 to 1981 (entry 4.8). In fact, the number of institutions offering education degrees actually increased slightly in the early 1970's and has remained fairly stable since the late 1970's, 227 in 1980-81. Of these schools, most were controlled by private 4-year (nonuniversity) institutions. Private institutions represented more than half of all schools that awarded education degrees, although they accounted for only 27 percent of all education degrees granted in 1980-81.

Among institutions preparing teachers, most public institutions awarded education degrees above the bachelor's level while most private institutions conferred bachelor's degrees only. There was a slight increase among both public and private institutions in the proportions that granted advanced education degrees in the 1970's (entry 4.9). In 1970-71, 80 percent of public institutions with teacher preparation programs awarded advanced education degrees; by 1980-81 this figure had increased to 86 percent. Among private institutions that granted education degrees, 34 percent awarded advanced degrees in 1970-71, compared with 39 percent a decade later.

Measures to improve teacher quality

While losing students, teacher preparation programs appeared to have taken some measures in the recent period

to maintain or improve the quality of their teacher candidates, according to a newly released Fast Response Survey of Teacher Education. The NCES survey, conducted in late 1982, asked heads of schools/departments of education for their preferences among various methods for improving candidate quality. They were also asked whether any of the methods had been implemented in the past 5 years. Among the three options presented, "making the curriculum more rigorous or challenging to students" was highly preferred by a majority of program heads (entry 4.10). "Raising criteria for entrance to the school/department of education" was almost as highly regarded; 47 percent indicated that this was a high preference. "Extending the length of the program beyond 4 years" was not as popular a measure; only 15 percent gave it a high preference, while 57 percent gave it a low preference.

Again according to the responses of department heads, these preferences were reflected in actions taken by the schools/departments of education over the past 5 years. Eighty-five percent responded that their school/department had taken steps to upgrade the curriculum and 74 percent said they had raised the entrance criteria. Only 6 percent had chosen to extend the undergraduate teacher education program beyond 4 years.

When the heads were asked to indicate the importance of various measures for improving the curriculum, no clear choice was apparent. Thirty percent saw increasing the number or quality of general studies classes as highly important, but an almost equal proportion regarded the method as of low importance. Among those indicating that this measure was of high or moderate importance, most chose communication/language skills as an area to upgrade, followed by math and then by science. While 28 percent responded that increasing the amount of required student teaching was of high importance, 40 percent indicated that it was of low importance. A smaller proportion, 14 percent, saw increasing the number of professional studies credit hours as highly important.

Answers to the question of whether schools had taken measures to improve teacher candidate quality did not vary much by the extent to which the programs had

experienced declines in graduates (entry 4.11). Regardless of the extent of the decline over the past 5 years, most programs had attempted to improve curriculum and raise entrance criteria, while only a small proportion had extended undergraduate teacher preparation beyond 4 years. It is not known whether declines in degree production contributed to decisions to upgrade programs or whether upgraded programs were associated with losses or gains in degrees.

Responses from the Fast Response Survey also proved inconclusive on the possible adverse effect that raising standards would have on the financial viability of the school/department of education. Departmental heads were asked the question, "if the school/department of education were to raise standards significantly, what, if any, adverse effect would there be on your school/department's ability to support itself financially?" While 21 percent responded that it would have a major impact, 44 percent indicated that it would have a moderately adverse effect and 32 percent answered that it would have little or no effect. Preliminary analysis suggests no clear pattern of responses by the extent to which programs lost graduates in the preceding 5-year period. Responses from programs that had experienced no declines were similar, in fact, to programs that had lost 25 to 50 percent of their graduates.

New Teachers and Prospective Teachers

Characteristics of new teachers

Reduced demand for additional teachers and a shrinking supply of graduates qualified to teach meant fewer new teachers entering the public school teaching force in the late 1970's. Beginning teachers represented about 2 percent of all elementary/secondary school teachers in 1981, down from 9 percent in 1971 (entry 4.12). When combined with teachers who had 2 to 4 years experience, they accounted for less than 14 percent of all teachers, compared with 32 percent 10 years earlier. Since new teachers represent such a small slice of the teaching force, their backgrounds and credentials cannot be generalized to all current teachers. However, a description of

beginning teachers at the start of the 1980's does suggest the types and qualifications of future teachers who will be entering teaching in the next several years.

Compared with recent bachelor's degree recipients in general, those who were newly qualified to teach and those teaching full-time in 1981 were represented by higher proportions of females (entry 4.13). Females equaled 50 percent of the 1979-80 bachelor's degree recipients but represented 72 percent of recipients newly qualified to teach and 77 percent of recipients teaching full-time in elementary/secondary schools. These percentages were somewhat higher than the 67 percent that NEA reported for female representation among all public elementary/secondary classroom teachers in 1981. These data suggest that the teaching field may be growing more female-dominated, not less so. Since the increase in demand is projected at the elementary school level where most teachers are women, it is reasonable to assume that the wave of new teachers entering in the 1980's will be composed predominantly of females.

The racial/ethnic composition of the newly qualified and new full-time teachers was little different, however, from that of bachelor's degree recipients in general. Non-Hispanic whites represented over 90 percent of all recipients, those trained to teach, and those teaching full-time in 1981. These proportions were at least as high as the white (non-Hispanic) representation reported by NEA for all public elementary/secondary classroom teachers. Minority representation of 11 percent among public school teachers and 8 percent among new full-time teachers was appreciably lower than the representation of minorities among public elementary/secondary school students. Increasing minority representation in teaching will depend on increasing the minority pool of eligible graduates. If the recent graduates are any indication, it appears that racial/ethnic minorities will continue to be underrepresented in the public school teaching force for the next several years.

Certification of new teachers

Paramount to the concern over beginning teachers are the qualifications that new entrants bring to teaching. State

agencies and boards of education, in cooperation with higher education institutions, are responsible for certifying that new teachers are qualified to teach their assignments. Certification may be based on required courses completed, competency tests, student teaching experience, or a combination of these factors, depending on the State and the field of certification. Data from the Recent College Graduates Survey indicate that most new teachers were certified or eligible for certification in some field and that three-fourths were qualified in the field to which they were currently assigned (entry 4.14). Bachelor's recipients were asked whether they had received certification to teach or were eligible for certification based on completed coursework including student teaching. Among these bachelor's recipients teaching elementary/secondary school full-time in 1981, fully 94 percent were qualified to teach some field while 78 percent were qualified to teach in the field currently assigned. By field, those teaching self-contained (generally elementary) classes were among the most likely to be certified or eligible to teach in their respective field. In some major fields, however, certification in assignment was relatively low. Less than half of new teachers in sciences and mathematics had certification or eligibility in their particular teaching fields, although most were qualified to teach in some field.

Despite the lack of certification in some fields, most new teachers considered their current jobs to be closely related to their major fields of college study. Approximately 88 percent regarded their work and college studies as closely related, and another 10 percent saw them as somewhat related, while only 2 percent considered them unrelated (entry 4.15). Even in assignments in which certification was relatively low, college study and work were viewed as closely related by most new teachers. For example, 82 percent of science and mathematics teachers saw their college study and work as closely related, although many were not certified in sciences and mathematics. Proportions regarding college and work as closely related were highest for those teaching self-contained classes.

When presented by level taught, certification in principal field was higher among new teachers at the preprimary

and elementary school levels and somewhat lower at the secondary school level and in combined elementary/secondary schools. About 80 percent of those teaching preprimary or elementary school classes were qualified to teach in their principal assignments compared with 74 percent teaching secondary school classes and 68 percent teaching in combined elementary/secondary schools (entry 4.16). New teachers in public schools were more likely than those in private schools to have credentials qualifying them to teach in their principal assignments; 82 percent in public schools were qualified, compared with 70 percent in private religiously affiliated schools and 53 percent in private nonaffiliated schools. Among new teachers in private nonaffiliated schools, 23 percent lacked State eligibility to teach any field.

New teachers who taught at the elementary school level were the most likely to regard their work as closely related to their college majors (entry 4.17). Those who taught in public schools were also the most likely to view work and college as closely related; 90 percent who taught in the public schools saw them closely related, compared with 84 percent in private religiously affiliated schools, and 73 percent in private nonaffiliated schools.

Teacher graduates who did not enter teaching

Not all recent college graduates qualified to teach go on to apply for or obtain teaching positions. As indicated previously, in 1981, of those newly qualified to teach, 15 percent did not apply and an additional 20 percent who applied did not teach in the year following graduation. The number of newly qualified who were not teaching full-time in 1981 was estimated to number some 48,400 (entry 4.18). Of this "reserve pool" of recent teacher graduates, one-third had applied to teach but had never taught. Another 28 percent had applied, taught in May 1980, but were not teaching in May of the following year. Approximately 38 percent of this reserve pool had never applied for a teaching job.

Among these newly qualified who were not teaching in May 1981; the largest proportion, 38 percent, were employed in other professional or managerial occupations.

They could also be found in smaller proportions in sales and clerical work and in blue-collar occupations. Approximately 27 percent were unemployed and 8 percent were enrolled in school.

Of the bachelor's degree recipients newly qualified to teach who did not apply, 90 percent indicated that they did not apply because they did not want to teach (entry 4.19). The remaining 10 percent answered that "they wanted to teach but teaching jobs were so hard to get that they did not bother to apply." Regardless of whether or not they wanted to teach, a majority of all those who did not apply considered the labor market for teachers unfavorable.

Prospective education majors

Some indications of the size, composition, and qualifications of the future teaching pool can be gathered from the plans of students entering college. While occupational expectations are often overestimated and field-of-study choices frequently change in college, they do suggest student interest in pursuing various careers. Since its inception in the late 1960's, the American Freshman National Norms survey annually has asked entering full-time college freshmen about their probable occupational choices. The latest data indicate that college freshmen in 1982 were less interested in pursuing teaching careers than any previous entering class (entry 4.20). In the fall of 1970, 19 percent of full-time college freshmen chose elementary/secondary teaching as their probable careers. But by the mid-1970's, less than half this proportion selected teaching, suggesting that students were well aware of market conditions. In the late 1970's, the percentage fell to around 6 percent, and in 1982 it declined even further, to under 5 percent. The decline in interest was apparent in both elementary and secondary teaching, but was most pronounced in the choice of secondary school teaching, dropping from 11 percent in 1970 to below 2 percent in 1982. Over the period, school teaching lost in popularity to the growing fields of business, engineering, and computer programming. Whereas in 1970 elementary/secondary school teaching was a leading choice, selected by one-fifth of college freshmen, in

1982 business was the most popular, chosen by one-fifth of the entering freshman class.

Asking college-bound high school seniors their intended college major also suggests a rough estimate of the popularity of teaching as a career choice. While it should be kept in mind that potential majors in education only approximate the number of future teachers, data on intended majors from the National Longitudinal Study of 1972 and the High School and Beyond Study of 1980 are revealing. Comparing intended majors of college-bound seniors in 1972 with those in 1980 indicates a substantial decline in education as a probable field of study. In 1972, 12 percent of college aspirants selected education as their intended majors, but in 1980 only 7 percent chose education (entry 4.21). Although females in both years comprised three-fourths of the potential education majors, declines were appreciable among both sexes. In 1972, 6 percent of the males and 19 percent of the females planned to major in education, but in 1980, 3 and 10 percent, respectively, intended an education major. Declines were consistent, as well, across all racial/ethnic groups. White and Hispanic females, however, continued to show a higher interest in the education field than their black counterparts.

Data from these studies reveal not only that fewer students intended to major in education, but also that on the average, they may be less academically qualified than students pursuing other fields. In 1980 college aspirants who intended to major in education scored lower on standardized vocabulary, reading, and mathematics achievement tests than other college-bound seniors. The prospective education majors also averaged lower high school grades and fewer courses in science and mathematics than students intending other majors.

Comparable testing in the earlier study suggests that the poorer performance of aspiring education majors is not a new phenomenon. Despite a drop in scores of all seniors between 1972 and 1980 on comparable vocabulary, reading, and mathematics exercises, those who intended to major in education scored below other prospective ma-

jors in both years. Indications are that the scores of females who intended to major in education experienced the sharpest decline, suggesting a widening gap in performance between females going into education and those pursuing other majors. This finding is particularly disturbing, considering that females will probably comprise most teacher graduates. Even if many teacher preparation programs raised their entrance criteria in the late 1970's, as indicated by the responses of program heads, these data show that the pool from which applicants could be drawn was smaller and of lower academic ability.

There are, however, some brighter possibilities. The increased demand for additional teachers may result in better employment prospects and higher teacher salaries. Just as students reacted to the drop in demand by moving out of teacher preparation, so too are students projected to enter teacher training as the job market improves. More students and better academically able students may be recruited into teacher preparation programs. Whether prospects for elementary/secondary education will also improve will depend on how well teacher preparation programs, school districts, and States respond to the changing demands of the 1980's.

Table 4.1

Classroom Teachers in Regular Elementary/Secondary Schools, by Control and Level of School: Fall 1970 to 1990

Fall of Year	Total			Public			Private		
	K-12	Elementary	Secondary	K-12	Elementary	Secondary	K-12	Elementary	Secondary
	(In thousands)								
1970	2,288	1,281	1,007	2,055	1,128	927	230	153	80
1971	2,293	1,263	1,030	2,063	1,111	952	230	152	78
1972	2,334	1,294	1,040	2,103	1,140	963	231	154	77
1973	2,374	1,309	1,065	2,138	1,152	986	236	157	79
1974	2,410	1,331	1,079	2,165	1,167	998	245	164	81
1975	2,451	1,352	1,099	2,196	1,180	1,016	255	172	83
1976	2,454	1,349	1,105	2,186	1,166	1,020	269	183	85
1977	2,488	1,375	1,113	2,209	1,185	1,024	278	190	89
1978	2,478	1,375	1,103	2,206	1,190	1,016	273	185	87
1979	2,456	1,374	1,082	2,181	1,188	993	275	186	89
1980	2,460	1,373	1,087	2,184	1,186	998	276	187	89
	Projected ²								
1981	2,411	1,361	1,050	2,136	1,178	958	275	183	92
1982	2,374	1,351	1,018	2,100	1,168	931	275	183	92
1983	2,377	1,359	1,018	2,100	1,175	925	277	184	93
1984	2,376	1,356	1,020	2,098	1,171	927	278	185	93
1985	2,408	1,385	1,023	2,128	1,199	929	280	186	94
1986	2,450	1,431	1,019	2,163	1,238	925	287	193	94
1987	2,495	1,485	1,010	2,201	1,285	916	294	200	94
1988	2,534	1,539	995	2,238	1,338	900	296	201	95
1989	2,580	1,596	984	2,278	1,389	889	302	207	95
1990	2,642	1,654	988	2,333	1,440	893	309	214	95

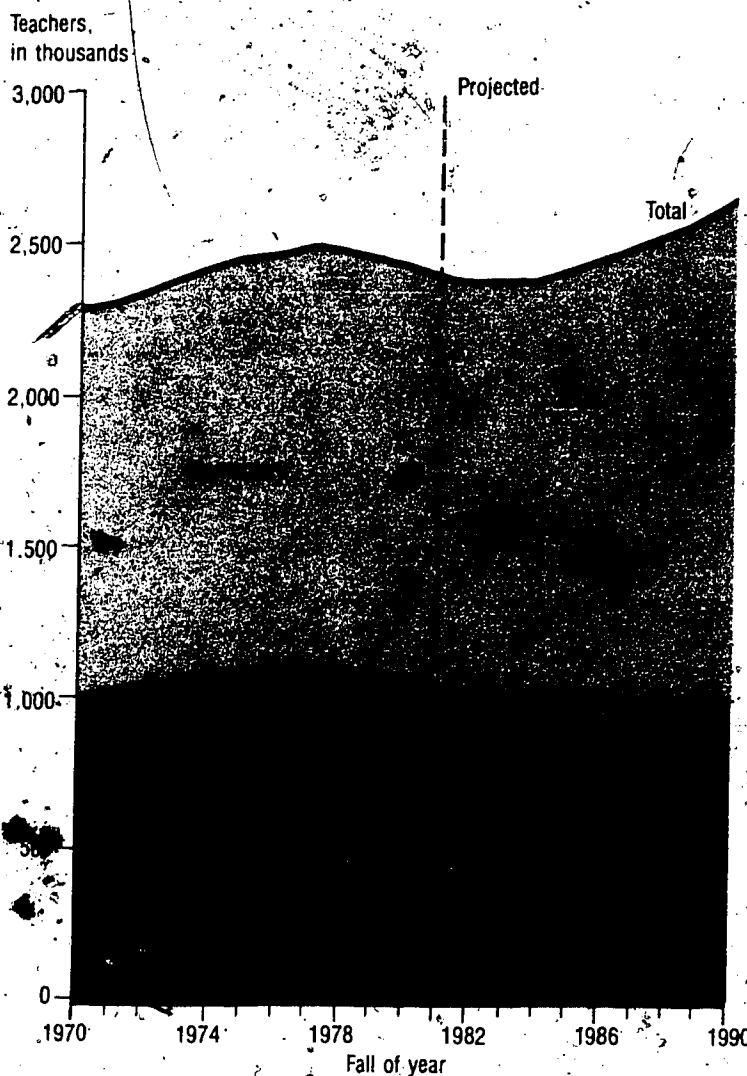
¹ Estimated.

² For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

NOTE: Details may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91, Volume I*, 1982, and unpublished tabulations (December 1982).

Elementary/Secondary Classroom Teachers, by Level



The number of elementary school teachers is expected to begin rising in 1985 and then increase annually by about 50,000 teachers. Secondary school teachers are expected to decrease annually in number throughout the 1980's.

Table 4.2

Estimated Supply of New Teacher Graduates Compared to Estimated Total Demand for Additional Teachers: Fall 1971 to 1990

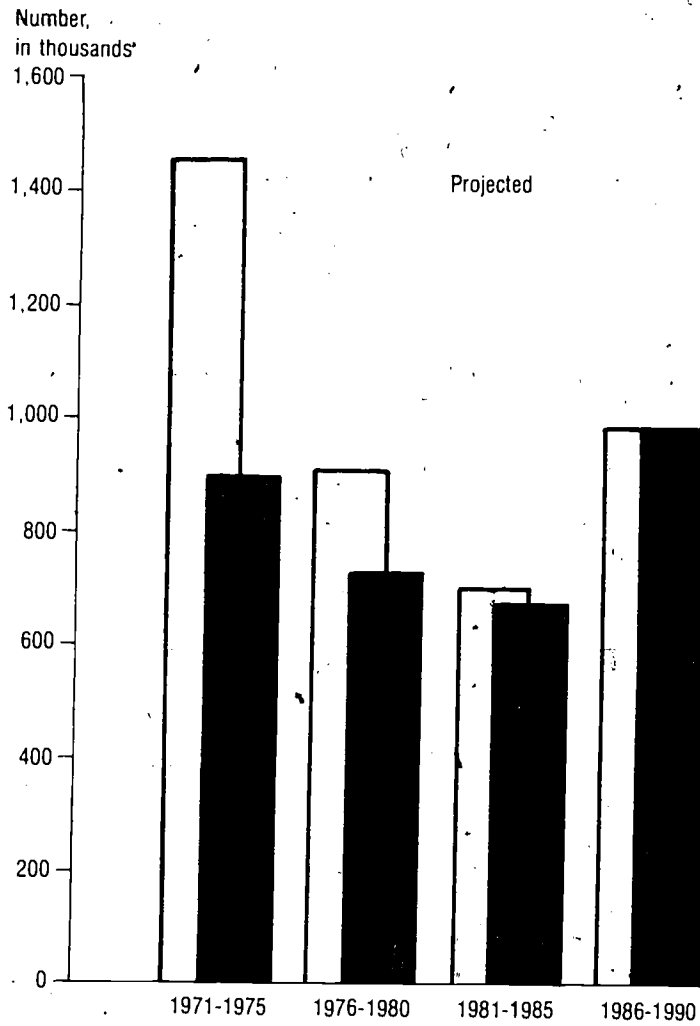
Fall of Year	Estimated Supply of New Teacher Graduates ¹ in Thousands	Estimated Demand for Additional Teachers, in Thousands	Supply as Percent of Demand
1971	314	163	192.6
1972	317	189	167.7
1973	313	180	173.9
1974	279	178	156.7
1975	238	186	128.0
1971-1975	1,461	896	163.1
1976	222	150	148.0
1977	194	181	107.2
1978	181	140	129.3
1979	163	126	129.4
1980	144	152	94.7
1976-1980	904	749	120.7
		Projected ²	
1981	141	99	142.4
1982	139	108	128.7
1983	138	146	94.5
1984	138	142	97.2
1985	135	175	77.1
1981-1985	691	670	103.1
1986	156	187	83.4
1987	177	192	92.2
1988	197	189	104.2
1989	218	198	110.1
1990	238	217	109.7
1986-1990	986	983	100.3

¹ Estimates for 1971 through 1980 are from National Education Association, *Teacher Supply and Demand in Public Schools, 1980-81*.

² For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91, Volume I, 1982*, and unpublished tabulations (December 1982).

Estimated Supply of New Teacher Graduates and Estimated Total Demand for Additional Teachers



□ Supply of new teacher graduates
 ■ Total demand for additional teachers

In the mid-1980's, the supply of new teacher graduates is expected to approximate the demand for additional teachers, given continuing declines in supply and anticipated increases in demand.

Table 4.3'

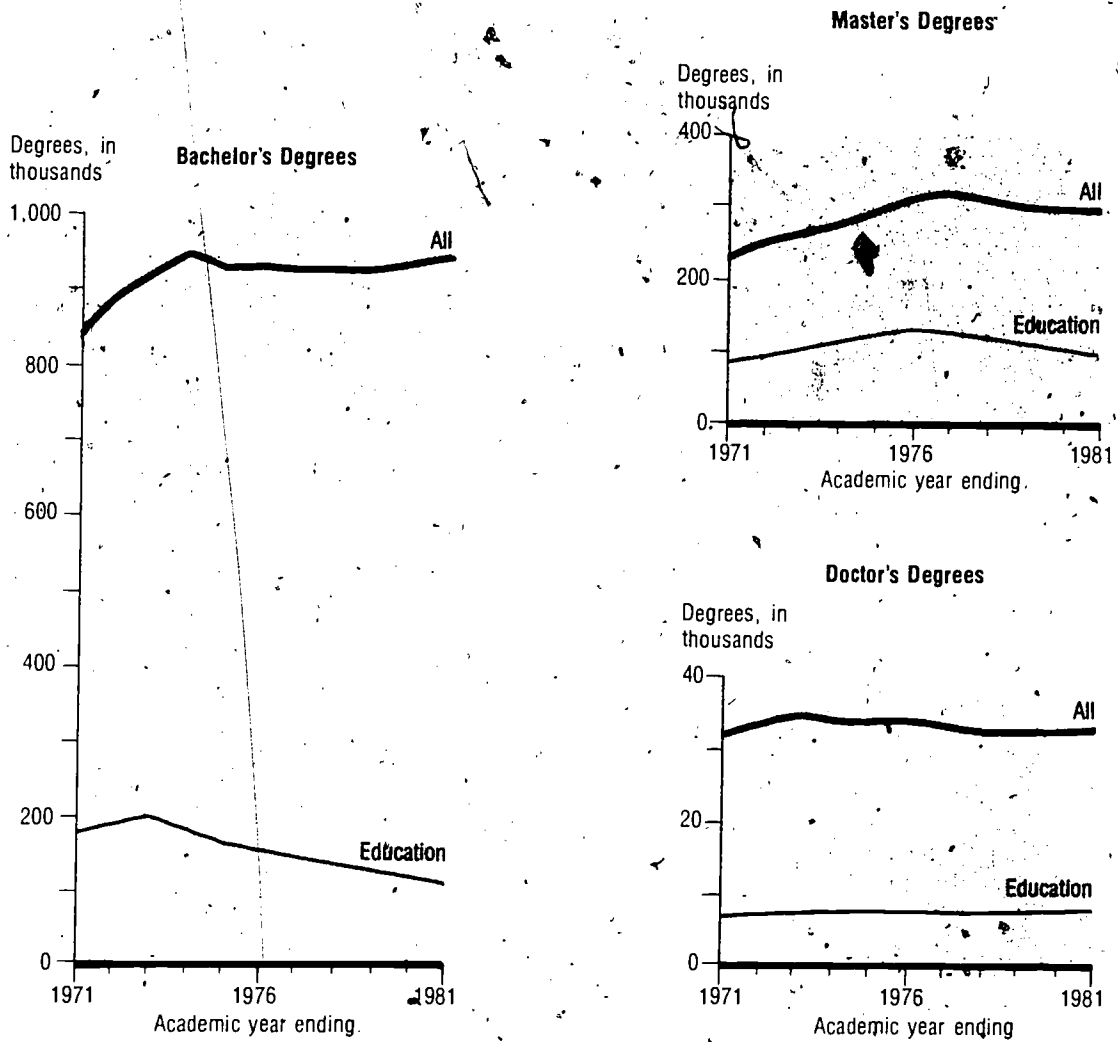
**Earned Degrees Conferred in All Discipline Divisions and in Education¹,
by Level and Sex of Recipient: Academic Year 1970-71 to 1980-81**

Academic Year Ending	Both Sexes			Male			Female		
	Education Degrees			Education Degrees			Education Degrees		
	Total	Number	Percent of Total	Total	Number	Percent of Male Total	Total	Number	Percent of Female Total
Bachelor's Degrees:									
1971	839,730	176,614	21.0	475,594	45,094	9.5	364,136	131,520	36.1
1972	887,273	191,220	21.6	500,590	49,537	9.9	386,683	141,683	36.6
1973	922,362	194,229	21.1	518,191	51,441	9.9	404,171	142,788	35.3
1974	945,776	185,225	19.6	527,313	49,160	9.3	418,463	136,065	32.5
1975	922,933	167,015	18.1	504,841	44,557	8.8	418,092	122,458	29.3
1976	925,746	154,807	16.7	504,925	42,070	8.3	420,821	112,737	26.8
1977	919,549	143,722	15.6	495,545	39,941	8.1	424,004	103,781	24.5
1978	921,204	136,141	14.8	487,347	37,484	7.7	433,857	98,657	22.7
1979	921,390	126,109	13.7	477,344	33,819	7.1	444,046	92,290	20.8
1980	929,417	118,169	12.7	473,611	30,922	6.5	455,806	87,247	19.1
1981	935,140	108,309	11.6	469,883	27,076	5.8	465,257	81,233	17.5
Master's Degrees:									
1971	230,509	88,952	38.6	138,146	38,977	28.2	92,363	49,975	54.1
1972	251,637	98,143	39.0	149,550	41,816	28.0	102,083	56,327	55.2
1973	263,371	105,565	40.1	154,468	44,128	28.6	108,903	61,437	56.4
1974	277,033	112,610	40.6	157,842	45,124	28.6	119,191	67,486	56.6
1975	292,450	120,169	41.1	161,570	45,421	28.1	130,880	74,748	57.1
1976	311,771	128,417	41.2	167,248	45,796	27.4	144,523	82,621	57.2
1977	317,164	126,825	40.0	167,783	43,288	25.8	149,381	83,537	55.9
1978	311,620	119,038	38.2	161,212	38,413	23.8	150,408	80,625	53.6
1979	301,079	111,995	37.2	153,370	35,143	22.9	147,709	76,852	52.0
1980	298,081	103,951	34.9	150,749	31,020	20.6	147,332	72,931	49.5
1981	295,739	98,938	33.3	147,043	28,256	19.2	148,696	70,682	47.5
Doctor's Degrees:									
1971	32,107	6,403	19.9	27,530	5,045	18.3	4,577	1,358	29.7
1972	33,363	7,044	21.1	28,090	5,384	19.2	5,273	1,660	31.5
1973	34,777	7,318	21.0	28,571	5,504	19.3	6,206	1,814	29.2
1974	33,816	7,293	21.6	27,365	5,316	19.4	6,451	1,977	30.7
1975	34,083	7,446	21.9	26,817	5,147	19.2	7,266	2,299	31.6
1976	34,064	7,778	22.8	26,267	5,179	19.7	7,797	2,599	33.3
1977	33,232	7,963	24.0	25,142	5,189	20.6	8,090	2,774	34.3
1978	32,131	7,595	23.6	23,658	4,634	19.6	8,473	2,961	34.9
1979	32,730	7,736	23.6	23,541	4,472	19.0	9,189	3,264	35.5
1980	32,615	7,941	24.3	22,943	4,419	19.3	9,672	3,522	36.4
1981	32,958	7,900	24.0	22,711	4,164	18.3	10,247	3,736	36.5

¹ According to new classification, includes the former code 0800 education, plus the former code 1508 teaching of English as a foreign language.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Earned Degrees Conferred*, various years, and unpublished tabulations (September 1982).

Earned Degrees Conferred in Education and in All Disciplines



Degrees awarded in education represented under 12 percent of all bachelor's degrees conferred in 1981, down from 21 percent in the early 1970's. Education degrees at the master's level rose to their highest point before 1977 and fell in absolute numbers and relative share from then on, while at the doctor's level, they increased slightly.

Table 4.4

Earned Degrees Conferred in Education¹, by Level, and Master's and Doctor's Degrees as Percent of Bachelor's Degrees: Academic Year 1970-71 to 1980-81

Academic Year Ending	Bachelor's	Master's	Master's as Percent of Bachelor's	Doctor's	Doctor's as Percent of Bachelor's	Doctor's as Percent of Master's
1971	176,614	88,952	50.4	6,403	3.6	7.2
1972	191,220	98,143	51.3	7,044	3.7	7.2
1973	194,229	105,565	54.4	7,318	3.8	6.9
1974	185,225	112,610	60.8	7,293	3.9	6.5
1975	167,015	120,169	72.0	7,446	4.5	6.2
1976	154,807	128,417	83.0	7,778	5.0	6.1
1977	143,722	126,825	88.2	7,963	5.5	6.3
1978	136,141	119,038	87.4	7,595	5.6	6.4
1979	126,109	111,995	88.8	7,736	6.1	6.9
1980	118,169	103,951	88.0	7,941	6.7	7.6
1981	108,309	98,938	91.3	7,900	7.3	8.0

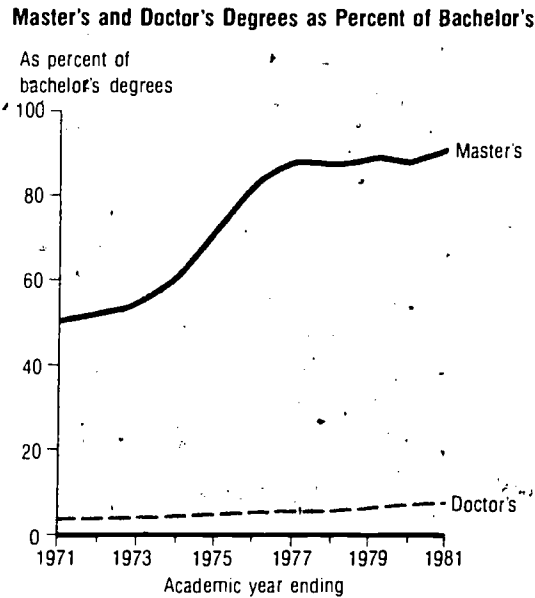
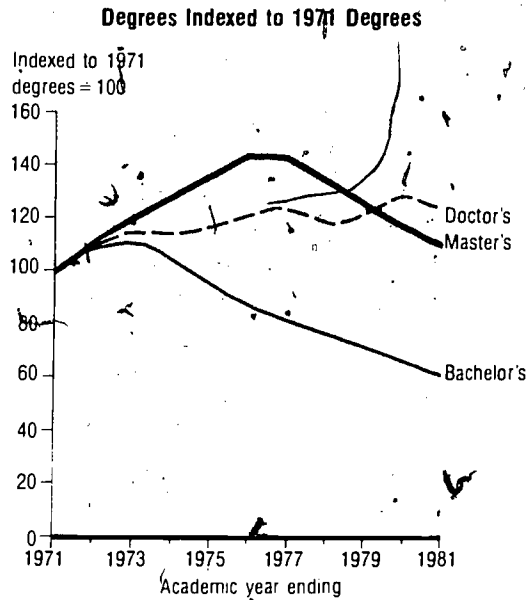
Indexed to 1971 Degrees = 100.0

1971	100.0	100.0	—	100.0	—	—
1972	108.3	110.3	—	110.0	—	—
1973	110.0	118.7	—	114.3	—	—
1974	104.9	126.6	—	113.9	—	—
1975	94.6	135.1	—	116.3	—	—
1976	87.7	144.4	—	121.5	—	—
1977	81.4	142.6	—	124.4	—	—
1978	77.1	133.8	—	118.6	—	—
1979	71.4	125.9	—	120.8	—	—
1980	66.9	116.9	—	129.5	—	—
1981	61.3	111.2	—	123.4	—	—

¹ According to new classification, includes the former code 0800 education, plus the former code .1508 teaching of English as a foreign language.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Earned Degrees Conferred*, various years, and unpublished tabulations (September 1982).

Earned Degrees Conferred in Education, by Level



When indexed to education degrees awarded in 1971, bachelor's degrees fell by over one-third, master's degrees rose rapidly until 1977 and then declined almost as quickly, and doctor's degrees increased slightly. When expressed in terms of bachelor's degree production in education, 5 master's degrees were awarded for every 10 bachelor's degrees in 1971; by 1981, 9 master's were awarded for every 10 at the bachelor's level.

Table 4.5

**Earned Degrees Conferred in Education¹, by Level and Specialty:
Academic Year 1970-71 and 1980-81**

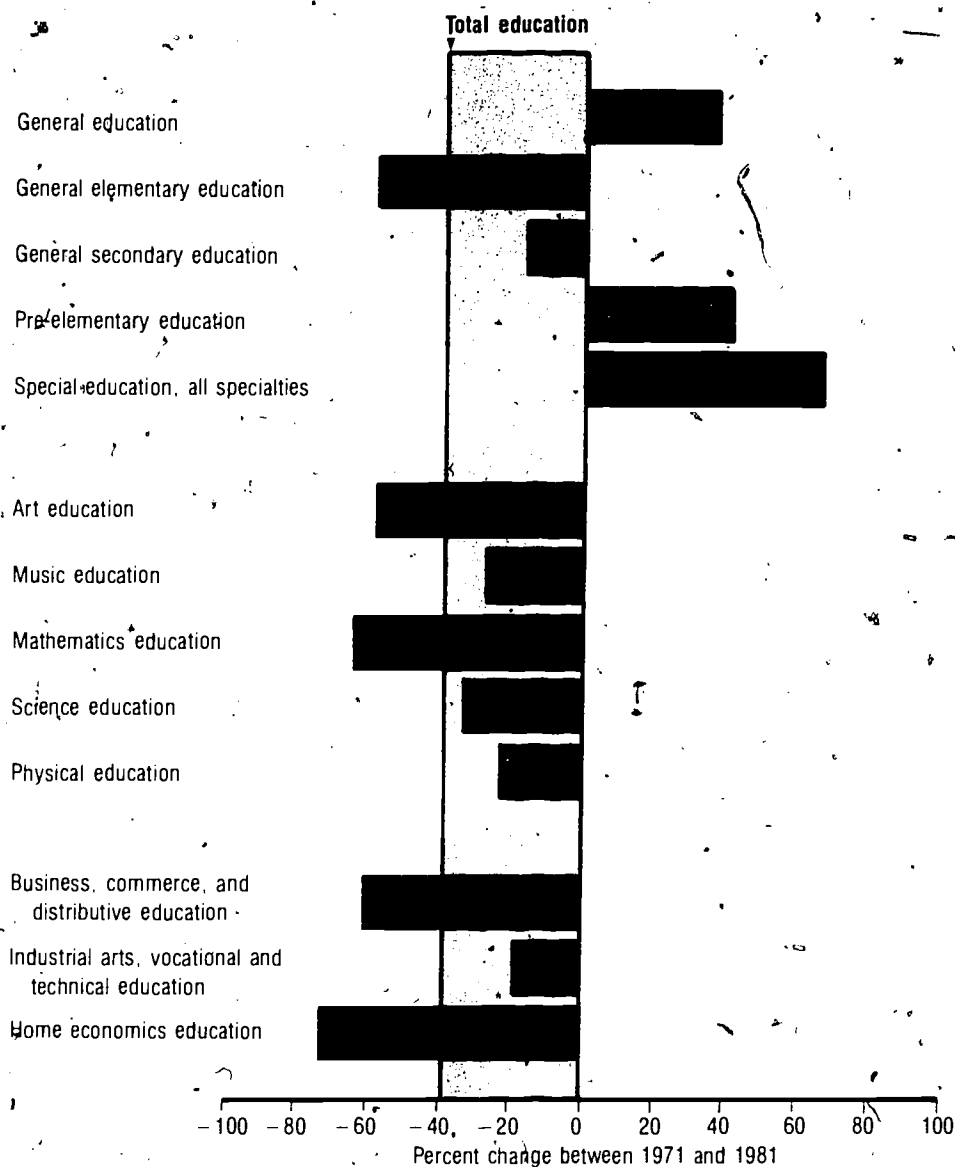
Specialty	Bachelor's			Master's			Doctor's		
	1971	1981	Percent Change	1971	1981	Percent Change	1971	1981	Percent Change
Education, total	176,614	108,309	-38.7	88,952	98,938	11.2	6,403	7,900	23.4
Education, general	2,026	2,777	37.1	12,867	13,038	1.3	1,598	1,394	-1.8
Elementary education, general	90,432	38,524	-57.4	17,070	13,833	-19.0	219	224	2.3
Secondary education, general	3,549	2,973	-16.2	5,422	5,268	-2.8	212	169	-20.3
Pre-elementary education	3,405	4,807	41.2	533	1,726	223.8	9	46	411.1
Junior high school education	721	248	-65.6	134	146	9.0	2	9	350.0
Higher education, general	6	5	-16.7	308	368	19.5	274	376	37.2
Junior and community college education	1	2	100.0	91	212	133.0	6	126	2000.0
Adult and continuing education	12	25	108.3	239	933	290.4	45	136	202.2
Special education, all specialties	8,360	13,950	66.9	6,068	13,537	123.1	207	293	41.5
Special education, general	2,320	8,843	281.2	3,051	9,482	210.8	114	207	81.6
Administration of special education	0	20	—	106	37	-65.1	9	18	100.0
Education of the mentally retarded	2,640	1,660	-37.1	935	463	-50.5	18	4	-77.8
Education of the gifted	12	28	133.3	28	99	253.6	0	1	—
Education of the deaf	239	349	46.0	208	356	71.2	4	3	-25.0
Education of the culturally disadvantaged	3	22	633.3	115	52	-54.8	0	0	—
Education of the visually handicapped	78	93	19.2	97	114	17.5	2	1	-50.0
Speech correction	2,358	1,197	-49.2	572	495	-13.5	40	5	-87.5
Education of the emotionally disturbed	347	471	35.7	378	411	8.7	14	5	-64.3
Remedial education	0	17	—	87	190	118.4	0	3	—
Special learning disabilities	125	846	576.8	179	1,507	741.9	2	27	1250.0
Education of the physically handicapped	149	137	-8.1	150	90	-40.0	0	3	—
Education of the multiple handicapped	63	104	65.1	50	128	156.0	0	3	—
Education of exceptional children, not classified above	26	163	526.9	112	113	0.9	4	11	175.0
Social foundations	180	32	-82.2	534	333	-37.6	129	173	34.1
Educational psychology	307	235	-23.5	1,286	2,225	73.0	362	621	71.5
Educational statistics and research	3	0	—	61	65	6.6	58	63	8.6
Educational testing, evaluation, and measurement	0	50	—	222	122	-45.0	30	17	-43.3
Student personnel	7	299	417.4	13,335	12,200	-8.5	556	643	15.6
Educational administration	5	27	440.0	7,702	9,298	20.7	957	1,593	66.5
Educational supervision	0	46	—	707	1,260	78.2	71	104	46.5
Curriculum and instruction	296	318	7.4	2,261	3,700	63.6	458	699	52.6
Reading education	9	370	401.1	2,789	6,096	118.6	61	151	147.5
Art education	5,661	2,392	-57.7	998	807	-19.1	53	55	3.8
Music education	7,264	5,332	-26.6	1,564	1,127	-27.9	109	68	-37.6
Mathematics education	2,217	798	-64.0	782	372	-52.4	49	30	-38.8
Science education	891	597	-33.0	883	483	-45.3	91	79	-13.2
Physical education	24,732	19,095	-22.8	4,410	4,219	-4.3	283	222	-21.6
Driver and safety education	132	109	-17.4	171	271	58.5	2	5	150.0
Health education	1,089	2,259	107.4	405	838	106.9	51	82	60.8
Business, commerce, and distributive education	8,550	3,405	-60.2	1,924	1,131	-41.2	82	41	-50.0
Industrial arts, vocational and technical education	7,071	5,772	-18.4	2,099	2,436	16.1	106	265	150.0
Agricultural education	1,398	955	-31.7	447	233	-47.9	43	22	-48.8
Home economics education	6,449	1,767	-72.6	802	412	-48.6	28	7	-75.0
Nursing education	603	171	-71.6	330	60	-81.8	28	7	-75.0
Teaching English as a foreign language	43	44	2.3	236	557	136.0	5	0	—
Other	1,195	925	-22.6	2,272	1,632	-28.2	219	180	-17.8

¹ According to new classification, includes the former code 0800 education, plus the former code 1508 teaching of English as a foreign language.

NOTE: Caution should be exercised in comparing 1971 and 1981 figures when actual number of degrees conferred in specialty is small.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Earned Degrees Conferred: 1970-71, Earned Degrees Conferred: 1980-81*, forthcoming, and unpublished tabulations (September 1982).

Percent Change in Bachelor's Degrees Conferred in Selected Education Specialties



Despite a 39-percent reduction in bachelor's degrees awarded in education, a few specialties, notably special education and pre-elementary, increased their degrees between 1971 and 1981. Reductions in teacher preparation degrees at the bachelor's level were most severe in elementary, art, mathematics, business, and home economics education.

Table 4.6

Elementary/Secondary Teaching Status of Recent Bachelor's Degree Recipients Newly Qualified to Teach, by Field of Teacher Preparation: February 1978 and May 1981

Field of Teacher Preparation	Number Newly Qualified to Teach	Did Not Apply for Teaching Job	Applied for Teaching Job				
			Total	Total Teaching	Teaching Full-Time	Teaching Part-Time	Not Teaching
Percentage Distribution of Newly Qualified to Teach							
1978:							
All fields	171,100	23	77	60	49	11	17
General elementary	46,100	13	86	71	58	13	16
Special education	23,300	14	85	72	64	9	13
Social science	12,300	25	75	55	45	10	20
Physical education	10,000	16	84	63	52	11	21
English	8,000	13	87	61	58	3	26
Music	7,200	23	77	57	38	19	20
Art	5,400	33	67	41	19	22	26
Mathematics	4,800	22	79	58	55	3	21
Vocational education	4,300	19	81	62	53	9	19
Business	3,700	52	49	39	34	4	10
Industrial arts	3,500	22	78	57	51	6	20
Other ¹	19,300	33	67	53	41	11	15
More than one field	22,200	40	60	39	30	9	20
No certification	1,000	—	100	100	40	60	—
1981:							
All fields	132,200	15	85	64	53	11	20
General elementary	36,400	11	89	71	60	11	18
Special education	16,500	12	88	75	70	4	13
Social science	7,400	17	83	63	54	9	20
Physical education	13,600	18	82	49	36	13	33
English	8,600	15	85	53	47	6	32
Music	8,200	19	81	59	50	9	21
Art	2,800	13	87	57	50	7	30
Mathematics	4,900	27	73	59	54	5	13
Vocational education	5,100	29	71	40	33	7	32
Business	3,300	24	76	38	31	7	38
Industrial arts	1,900	22	78	53	51	2	26
Biological science	2,500	11	89	83	68	15	6
Health	3,300	33	67	30	22	8	37
Home economics (nonoccupational)	2,100	10	90	64	54	10	25
Reading	1,600	6	94	65	62	3	29
Other ²	5,400	23	77	53	41	12	25
More than one field	—	—	—	—	—	—	—
No certification	8,700	—	100	100	54	46	0

—Not applicable

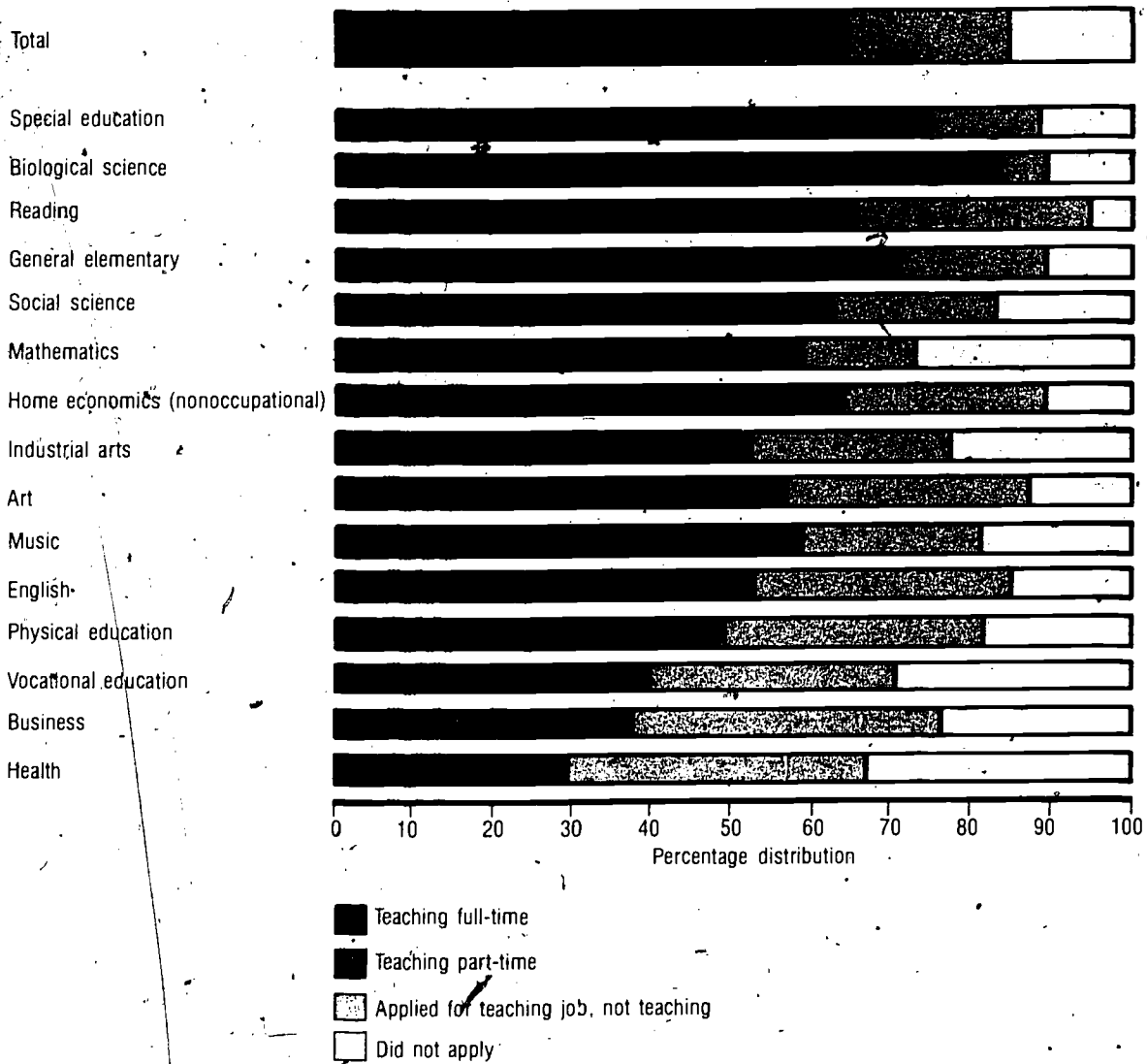
¹ Data for the following fields are included in the "other" category because their sample numbers are too small to present them individually: biological science, foreign language, health, home economics (nonoccupational), reading, physical science, bilingual education, and English as a second language.

² Data from the following fields are included in the "other" category because their sample numbers are too small to present them individually: foreign language, physical science, bilingual education, English as a second language, and gifted and talented.

NOTE: Data exclude bachelor's recipients from U.S. Service Schools. Also do not include deceased graduates and graduates living at foreign addresses at the time of the survey.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *New Teachers in the Job Market, 1981 Update*, forthcoming and unpublished tabulations (October 1982).

Elementary/Secondary Teaching Status of Recent Bachelor's Degree Recipients Newly Qualified to Teach: May 1981



Among recent bachelor's degree recipients newly qualified to teach, 53 percent were teaching elementary/secondary school full-time in May 1981. Special education and biological science graduates were the most likely of the newly qualified to be teaching full-time; vocational education, business, and health graduates were the least likely.

Table 4.7

Earned Degrees Conferred in Education¹, by Level of Degree and Control and Type of Institution of Higher Education: Academic Year 1972-73 and 1980-81

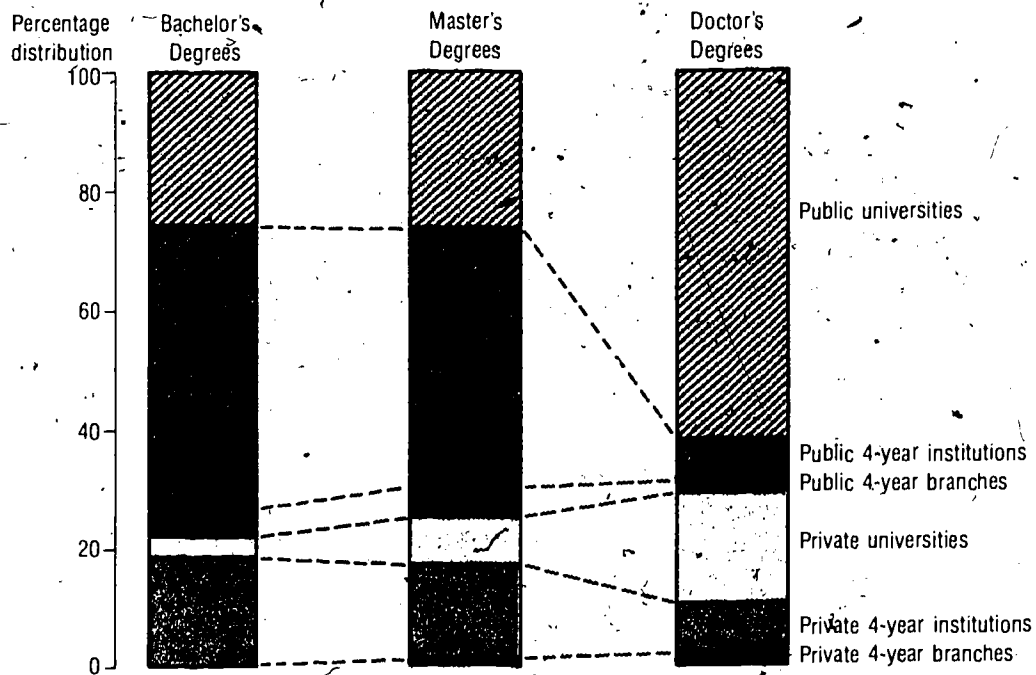
Item	Total	Bachelor's	Master's	Doctor's	Total	Bachelor's	Master's	Doctor's
1972-73:		Number			Percentage Distribution			
Total	307,112	194,229	105,565	7,318	100.0	100.0	100.0	100.0
Public	298,216	153,670	78,927	5,619	77.6	79.1	74.8	76.8
University	88,509	50,980	32,324	5,205	28.8	26.2	30.6	71.1
Other 4-year	141,679	97,211	44,076	392	46.1	50.0	41.8	5.4
4-year branch	8,028	5,479	2,527	22	2.6	2.8	2.4	.3
Private	68,896	40,559	26,638	1,699	22.4	20.9	25.2	23.2
University	21,046	7,511	12,190	1,345	6.8	3.9	11.6	18.4
Other 4-year	45,777	32,816	12,817	144	14.9	16.9	12.1	2.0
4-year branch	2,073	232	1,631	210	.7	.1	1.6	2.9
1980-81:								
Total	215,147	108,309	98,938	7,900	100.0	100.0	100.0	100.0
Public	164,202	84,420	74,191	5,591	76.3	77.9	75.0	70.8
University	59,099	27,986	26,198	4,915	27.5	25.8	25.5	62.2
Other 4-year	94,922	51,446	42,925	551	44.1	47.5	43.4	7.0
4-year branch	10,181	4,988	5,068	125	4.7	4.6	5.1	1.6
Private	50,945	23,889	24,747	2,309	23.7	22.1	25.0	29.2
University	13,672	4,110	8,054	1,508	6.4	3.8	8.1	19.1
Other 4-year	36,072	19,730	15,705	637	16.8	18.2	15.9	8.1
4-year branch	1,201	49	988	164	.6	.1	1.0	2.1
		Percent Change from 1972-73						
Total	-29.9	-44.2	-6.3	8.0				
Public	-31.1	-45.1	-6.0	-5				
University	-33.2	-45.1	-19.0	-5.6				
Other 4-year	-33.0	-47.1	-2.6	40.6				
4-year branch	26.8	-9.0	100.6	468.2				
Private	-26.1	-41.1	-7.1	35.9				
University	-35.0	-45.3	-33.9	12.1				
Other 4-year	-21.2	-39.9	22.5	342.4				
4-year branch	-42.1	-78.9	-39.4	-21.9				

¹According to new classification, includes the former code 0800 education, plus the former code 1508 teaching of English as a foreign language.

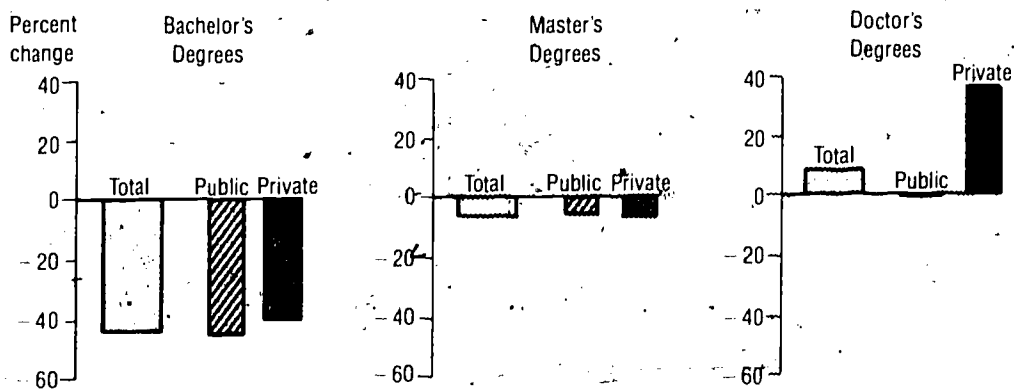
SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Earned Degrees Conferred, unpublished tabulations (December 1982).

Education Degrees Conferred by Institutions of Higher Education

Distribution of Education Degrees Conferred, by Control and Type of Institution: 1980-81



Percent Change From 1972-73 in Education Degrees Conferred, by Control of Institution



In the field of education, 78 percent of the bachelor's degrees, 75 percent of the master's degrees, and 71 percent of the doctorates were awarded by public institutions. Declines were registered between 1972-73 and 1980-81 in bachelor's and master's degrees in education by both public and private institutions, while an increase was shown in doctor's degrees awarded by private institutions.

Table 4.8

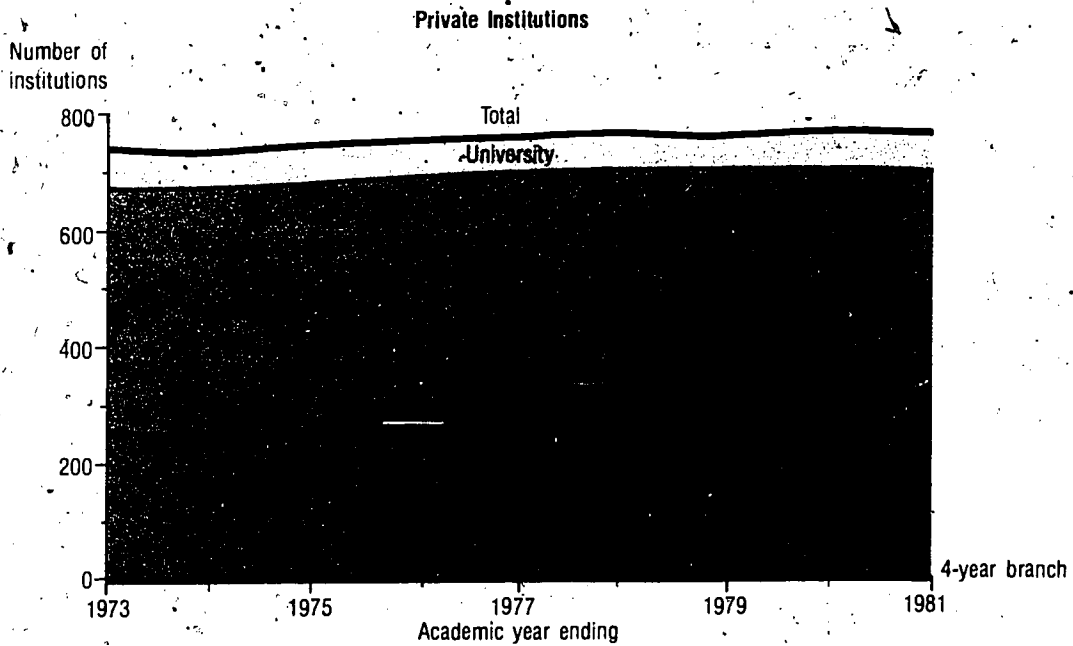
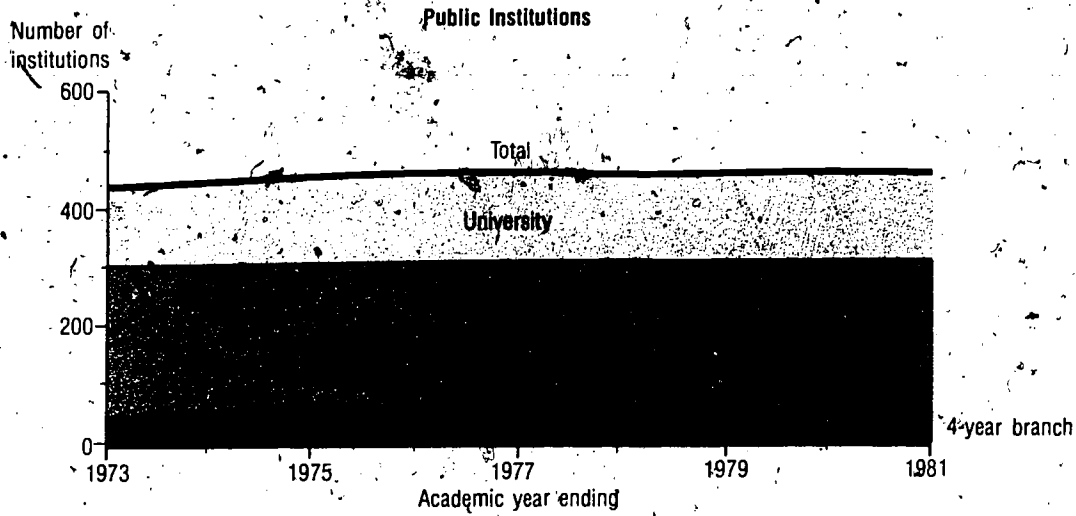
Number of Higher Education Institutions Conferring Degrees in Education, by Control, Type, and Highest Education Degree Conferred: Academic Year 1972-73 to 1980-81

Control, Type, and Highest Degree Conferred	Academic Year Ending								
	1973	1974	1975	1976	1977	1978	1979	1980	1981
	Number of Institutions								
Total	1,178	1,178	1,198	1,218	1,223	1,231	1,225	1,223	1,227
Public	438	446	455	462	466	464	465	464	465
University	96	95	95	95	95	95	95	95	95
Bachelor's	0	0	0	0	0	0	0	0	0
Master's	13	11	11	12	10	12	10	11	10
Doctor's	83	84	84	83	85	83	85	84	85
Other 4-year	302	296	304	305	309	310	311	312	312
Bachelor's	64	57	55	55	53	47	45	45	45
Master's	215	220	228	229	233	241	242	242	241
Doctor's	23	19	21	21	23	22	24	25	26
4-year branch	40	56	56	62	62	59	59	57	58
Bachelor's	18	23	23	28	27	23	22	20	21
Master's	20	27	26	27	28	29	29	29	29
Doctor's	2	5	7	7	7	7	8	8	8
Private	740	732	743	756	757	767	760	769	762
University	57	57	59	58	58	58	58	59	59
Bachelor's	1	1	2	1	1	0	0	0	0
Master's	22	22	22	23	21	24	24	23	23
Doctor's	34	34	35	34	36	34	34	36	36
Other	678	671	680	694	695	705	698	706	699
Bachelor's	490	482	481	489	486	485	476	479	469
Master's	178	178	187	192	195	203	204	203	210
Doctor's	10	11	12	13	14	17	18	24	20
4-year branch	5	4	4	4	4	4	4	4	4
Bachelor's	1	0	1	1	1	1	1	1	1
Master's	1	2	2	2	2	2	2	2	2
Doctor's	3	2	1	1	1	1	1	1	1

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Earned Degrees Conferred, unpublished tabulations (December 1982).



Higher Education Institutions Conferring Degrees in Education, by Type of Institution



There was little change in the number of institutions granting education degrees by control or level of institution from 1973 to 1981. Private 4-year (nonuniversity) institutions represented the preponderance of schools conferring education degrees.

Table 4.9

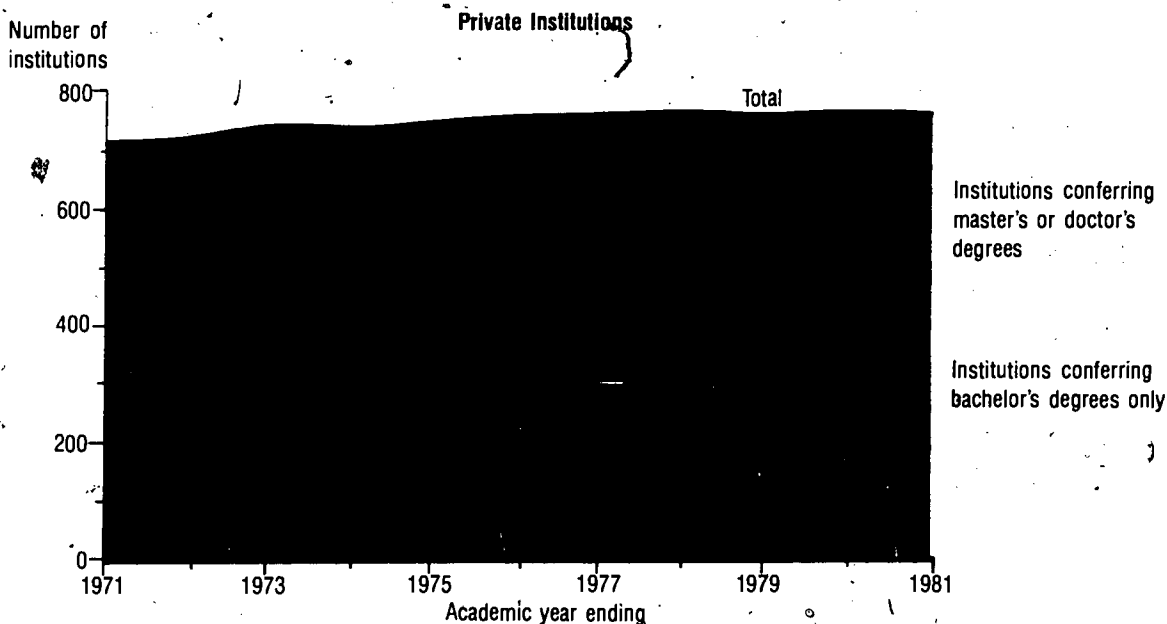
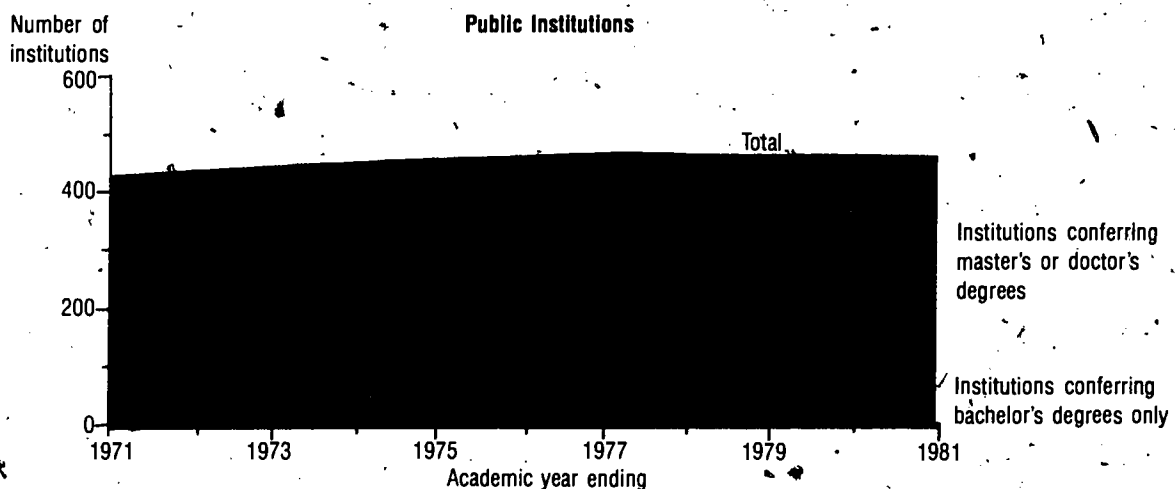
Number of Higher Education Institutions Conferring Degrees in Education, by Control and Highest Education Degree Conferred: Academic Year 1970-71 to 1980-81

Control and Highest Degree Conferred	Academic Year Ending										
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
	Number of Institutions										
Total	1,130	1,147	1,178	1,178	1,198	1,218	1,223	1,234	1,225	1,223	1,227
Bachelor's	551	562	574	563	562	574	568	555	544	545	536
Master's	436	438	449	460	476	485	489	510	511	510	515
Doctor's	143	147	155	155	160	159	166	164	170	178	176
Public	420	430	438	446	455	462	466	464	465	464	465
Bachelor's	85	82	82	80	78	83	80	70	67	65	66
Master's	240	245	248	258	265	268	271	282	281	282	280
Doctor's	95	103	108	108	112	111	115	112	117	117	119
Private	710	717	740	732	743	756	757	767	760	769	762
Bachelor's	466	480	492	483	484	491	488	486	477	480	470
Master's	196	193	201	202	211	217	218	229	230	228	235
Doctor's	48	44	47	47	48	48	51	52	53	61	57

SOURCE: U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey, Earned Degrees Conferred, unpublished tabulations (December 1982).

Chart 4.9

Higher Education Institutions Conferring Degrees in Education, by Highest Education Degree Conferred



The number of institutions conferring degrees in education remained stable throughout the 1970's. There was a slight tendency among both public and private institutions to move into awarding advanced education degrees.

Table 4.10

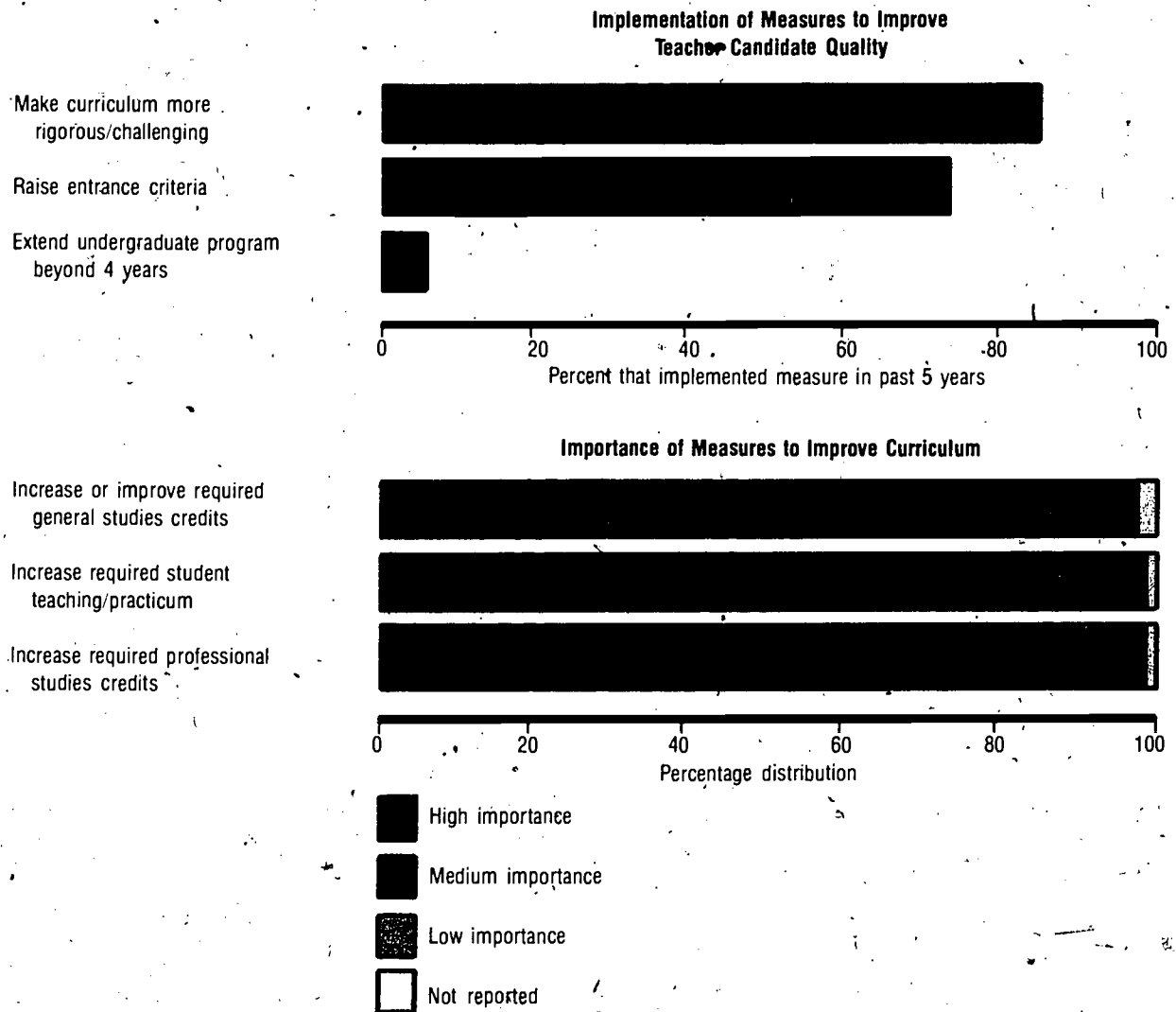
Preference for and Implementation of Measures to Improve Teacher Candidate Quality and Importance of Measures to Improve Curriculum in Schools/Departments of Education: Winter 1982

Item	Preference					Implemented in Past 5 Years				
	Total	High	Medium	Low	Not Reported	Total	Yes	No	Not Reported	
Percentage Distribution										
Measures to improve teacher quality:										
Make curriculum more rigorous/challenging ..	100	52	41	7	1	100	85	14	1	
Raise entrance criteria ..	100	47	40	12	1	100	74	26	1	
Extend undergraduate program beyond 4 years ..	100	14	28	57	1	100	6	94	1	
Importance										
Percentage Distribution										
Measures to improve curriculum:										
Increase or improve required general studies credits ..	100	30	40	28	2					
Increase required student teaching/practicum ..	100	28	32	40	1					
Increase required professional studies credits ..	100	15	43	41	1					

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey of Teacher Education, unpublished tabulations (February 1983).

203

Measures to Improve Teacher Candidate Quality and Curriculum in Schools/Departments of Education



Most schools/departments of education implemented measures to improve the quality of teacher candidates over the past 5 years, according to program heads. Eighty-five percent indicated that curriculum was made more rigorous and 74 percent said that entrance criteria were raised.

Table 4.11*

Implementation of Measures to Improve Teacher Candidate Quality and Possible Adverse Effect of Raising Standards on Schools/Departments of Education: Winter 1982.

Programs, by Percent Decline ¹	Measures Implemented in Past 5 Years		
	Make Curriculum More Rigorous/Challenging	Raise Entrance Criteria	Extend Undergraduate Program Beyond 4 Years
Total programs.....	85	74	6
No change or increased.....	77	72	8
Declined, less than 25 percent.....	87	83	10
Declined, 25 to 50 percent.....	87	77	2
Declined, over 50 percent.....	83	65	6

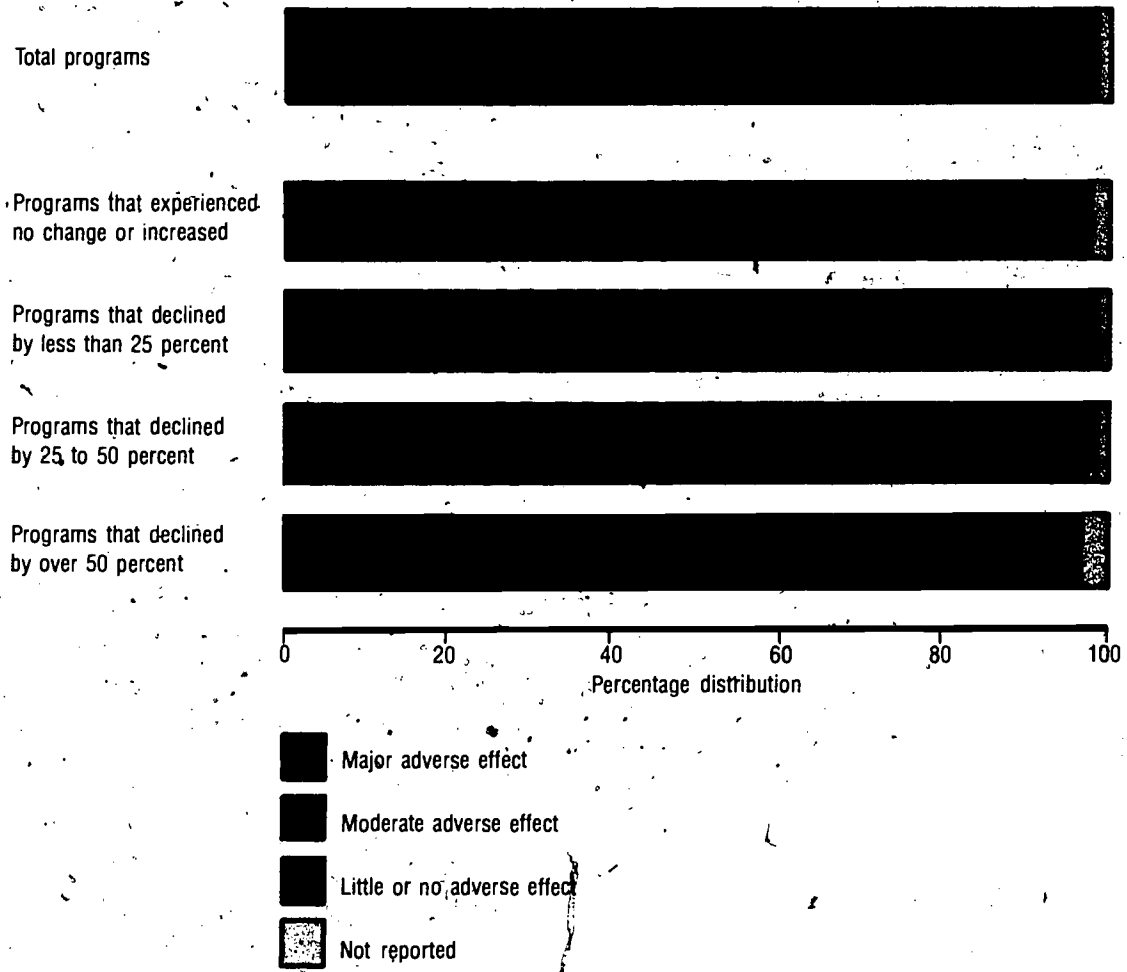
	Adverse Effect of Raising Standards Significantly				
	Total	Major	Moderate	Little or None	Not Reported
Total programs.....	100	21	44	33	1
No change or increased.....	100	15	42	41	2
Declined, less than 25 percent.....	100	29	47	22	1
Declined, 25 to 50 percent.....	100	18	44	38	1
Declined, over 50 percent.....	100	21	44	32	3

¹ Decline in bachelor's degrees in education between 1975-76 and 1980-81.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey of Teacher Education, unpublished tabulations (February 1983).

Possible Adverse Effect of Raising Standards Significantly on Schools/Departments of Education, by Past Degree Decline in Program

"If your school/department of education were to raise standards significantly for undergraduate teacher preparation, what, if any, adverse effect would there be on your school/department's ability to support itself financially?"



Raising the standards significantly in schools/departments of education would have a major adverse impact on 22 percent of programs, according to program heads. Another 32 percent, however, reported little or no effect.

Table 4.12

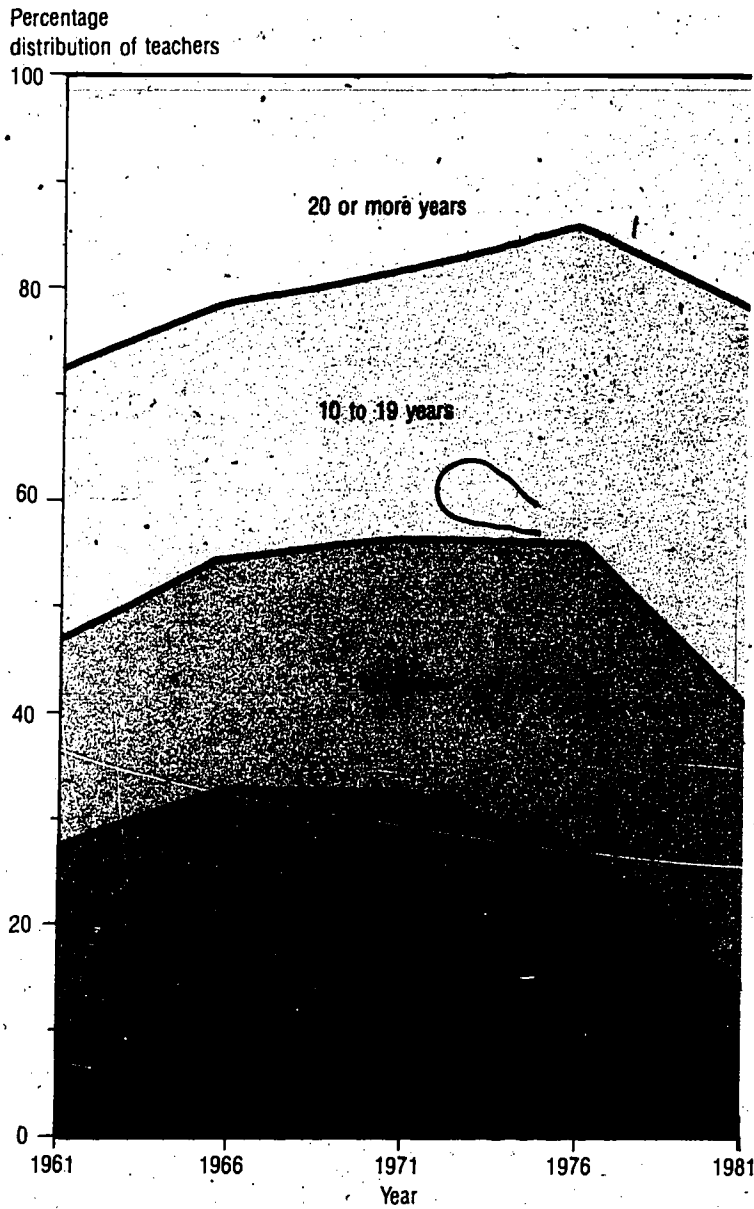
Years of Full-Time Teaching Experience Completed by Public Elementary/Secondary School Teachers: 1961 to 1981

Teaching Experience	1961	1966	1971	1976	1981
	Percentage Distribution				
Total	100.0	100.0	100.0	100.0	100.0
1 year	8.0	9.1	9.1	5.5	1.6
2 years	6.3	9.3	7.7	5.8	3.7
3 to 4 years	13.2	14.4	15.6	16.0	8.2
5 to 9 years	19.4	21.7	24.0	28.9	26.2
10 to 14 years	15.1	14.2	15.6	17.3	23.0
15 to 19 years	10.4	9.8	9.7	12.5	15.4
20 or more years	27.6	21.4	18.3	14.1	21.9
Mean	13	12	11	10	13
Median	11	8	8	8	12

NOTE: Details may not add to totals because of rounding.

SOURCE: National Education Association, *Status of the American Public School Teacher, 1980-81, 1982*, copyrighted.

Years of Full-Time Teaching Experience Completed by Public School Teachers



Beginning teachers represented a much smaller share of the teaching force in the public schools in 1981 than in earlier periods. They comprised only 2 percent in 1981, compared to 9 percent in 1971.

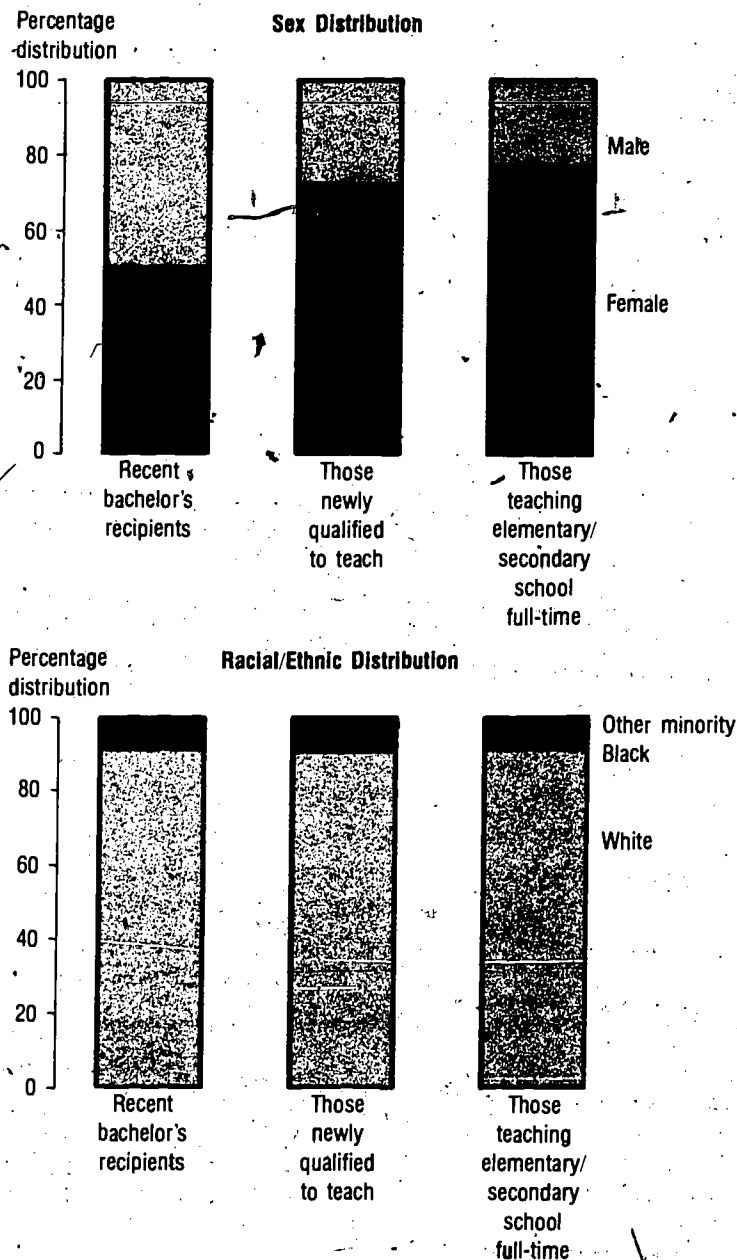
Table 4.13**Sex and Racial/Ethnic Distribution of Recent Bachelor's Degree Recipients, Those Newly Qualified to Teach, and Those Teaching Full-Time: May 1981**

Characteristic	All Recent Bachelor's Recipients		Recent Bachelor's Recipients Newly Qualified to Teach		Recent Bachelor's Recipients Teaching Full-Time	
	Number	Percentage Distribution	Number	Percentage Distribution	Number	Percentage Distribution
Total	905,700	100.0	132,200	100.0	79,800	100.0
Male	454,700	50.2	36,600	27.7	18,200	22.8
Female	451,100	49.8	95,600	72.3	61,600	77.2
Total	905,700	100.0	132,200	100.0	79,800	100.0
White, non-Hispanic	824,200	91.0	119,800	90.7	73,000	91.6
Black, non-Hispanic	47,100	5.2	8,400	6.4	4,000	5.0
Hispanic	15,400	1.7	2,300	1.7	1,900	2.4
Asian or Pacific Islander	16,300	1.8	1,300	1.0	600	.7
American Indian or Alaskan Native	2,700	.3	300	.2	200	.3
Sample size		7,576		3,207		2,048

NOTE: Data exclude bachelor's recipients from U.S. Service Schools. They also do not include deceased graduates and graduates living at foreign addresses at the time of the survey. Data only approximate the number of bachelor's recipients in 1979-80, reported elsewhere. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1981, unpublished tabulations (September 1982).

Sex and Racial/Ethnic Distribution of Recent Bachelor's Recipients, Those Newly Qualified to Teach, and Those Teaching Full-Time



While females equaled 50 percent of recent bachelor's recipients, they represented 72 percent of recipients newly qualified to teach and 77 percent of recipients teaching full-time in elementary/secondary schools. About the same percentages of each racial/ethnic group were represented among the newly qualified and those teaching, compared with recent bachelor's recipients in general.

Table 4.14

Certification in Field Currently Teaching of Newly Graduated¹ Full-Time Elementary/Secondary School Teachers, by Field Currently Teaching: May 1981

Field Currently Teaching	Number	Total	Certified or Eligible for Certification			
			In Some Field	In Field Currently Teaching	In Field Other than Currently Teaching	Not Eligible or Don't Know
Percentage Distribution						
Total	79,800	100.0	93.8	77.9	15.9	6.2
Special education teachers, all	16,700	100.0	96.1	77.3	18.8	3.9
'Self-contained class' teachers	26,400	100.0	94.8	80.0	14.8	5.2
Specialty teachers	38,900	100.0	91.4	73.7	17.7	8.6
Arts and humanities	21,100	100.0	88.2	61.9	26.3	11.8
English language arts	10,200	100.0	84.6	50.6	34.0	15.5
Foreign languages and fine arts	11,000	100.0	91.6	72.3	19.2	8.4
Sciences and mathematics	15,500	100.0	86.9	43.7	43.2	13.1
Biological and physical sciences	7,900	100.0	88.3	45.4	43.0	11.7
Mathematics	7,500	100.0	85.4	42.0	43.4	14.6
Miscellaneous specialties ²	30,700	100.0	90.4	57.2	33.2	9.6
Health and physical education	10,600	100.0	93.6	68.5	25.0	6.4
Social sciences/social studies	6,600	100.0	90.5	63.3	27.2	9.5
All other specialties ²	13,600	100.0	87.9	45.4	42.4	12.1

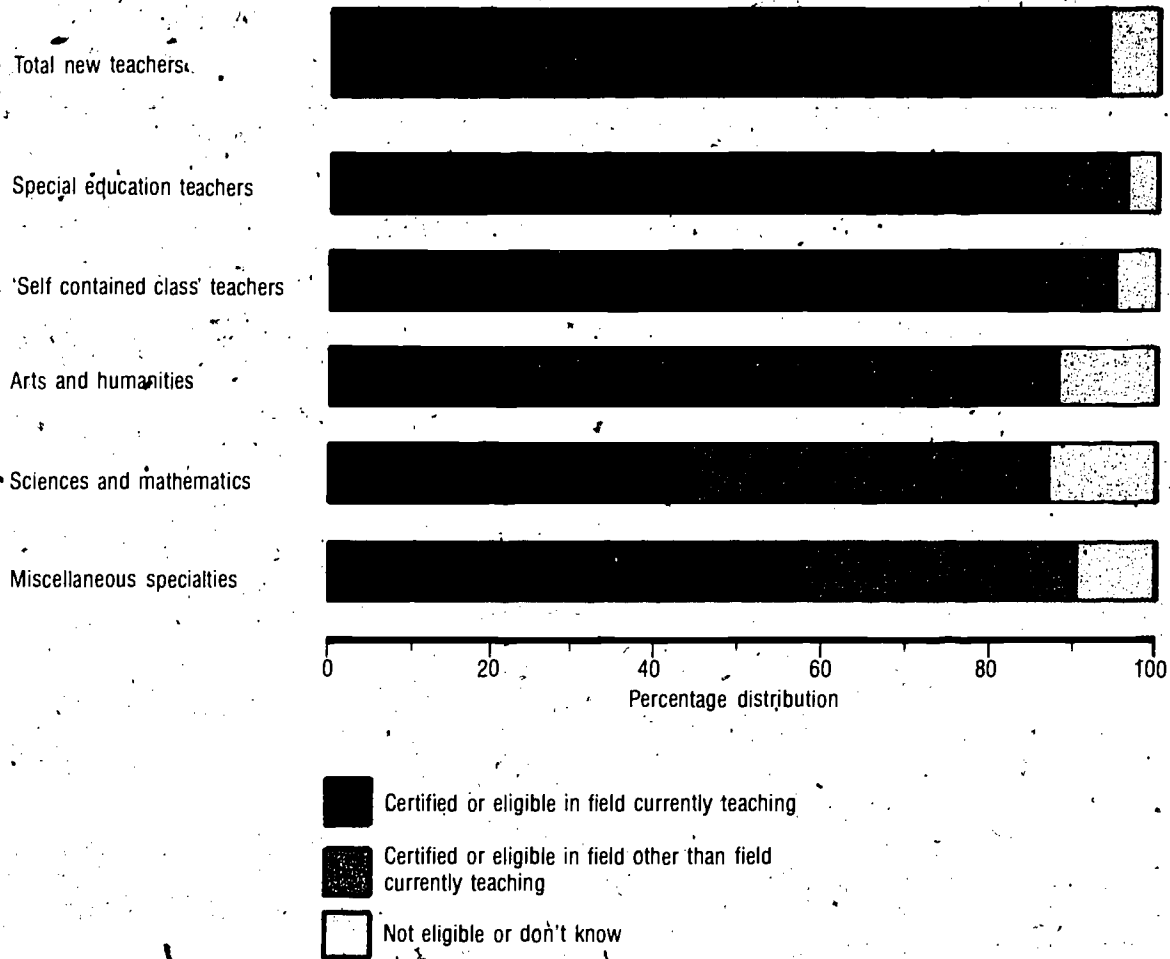
¹ 1979-80 bachelor's degree recipients teaching elementary/secondary school full-time in May 1981.

² Does not include unclassified specialties because certification in field cannot be determined.

NOTE: Categories do not add to total because of multiple responses, i.e., teachers taught more than one field. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1981, unpublished tabulations (November 1982).

Certification of New Full-Time Elementary/Secondary School Teachers, by Field Currently Teaching



Among new full-time teachers, those teaching self-contained classes were the most likely to be certified or eligible for certification in their respective fields. Those teaching mathematics and sciences were less likely than others to hold certificates in their particular teaching fields, although most were qualified to teach in some field.

Table 4.15

Extent to Which Work Related to Major Field of College Study of Newly Graduated¹ Full-Time Elementary/Secondary School Teachers, by Field Currently Teaching: May 1981

Field Currently Teaching	Number	Total	Closely Related	Somewhat Related	Not Related
Percentage Distribution					
Total	79,800	100.0	87.8	9.9	2.3
Special education teachers, all	16,700	100.0	86.2	12.5	1.3
'Self-contained' class teachers	26,400	100.0	90.8	8.1	1.2
Specialty teachers	38,900	100.0	86.8	9.9	3.6
Arts and humanities	21,100	100.0	87.1	11.8	1.2
English language arts	10,200	100.0	85.2	13.3	1.5
Foreign languages and fine arts	11,000	100.0	88.8	10.3	.8
Sciences and mathematics	15,500	100.0	81.6	14.3	4.2
Biological and physical sciences	7,900	100.0	82.3	14.2	3.4
Mathematics	7,500	100.0	80.8	14.3	4.9
Miscellaneous specialties ²	32,000	100.0	79.9	17.0	3.1
Health and physical education	10,600	100.0	86.5	12.6	.7
Social sciences/social studies	6,600	100.0	86.0	9.7	4.3
All other specialties ²	14,900*	100.0	72.4	23.4	4.2

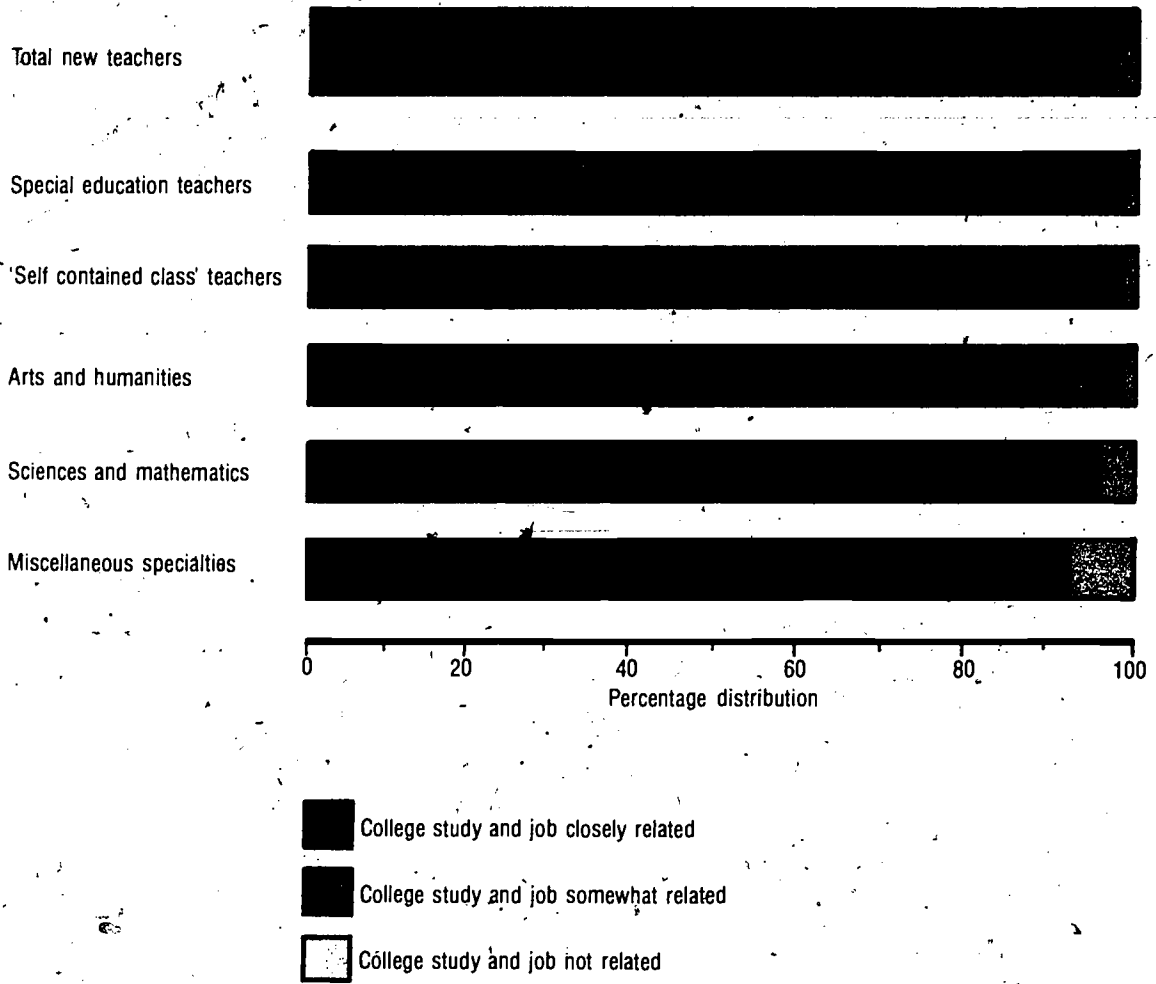
¹ 1979-80 bachelor's degree recipients teaching elementary/secondary school full-time in May 1981.

² Includes unclassified specialties.

NOTE: Categories do not add to total because of multiple responses, i.e., teachers taught more than one field. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1981, unpublished tabulations (November 1982).

Relation of College Study to Job of New Full-Time Elementary/Secondary School Teachers, by Field Currently Teaching



Over 87 percent of new full-time teachers considered their current jobs to be closely related to their college majors and another 10 percent considered them somewhat related.

Table 4.16**Certification in Principal Field Currently Teaching of Newly Graduated¹ Full-Time Elementary/Secondary School Teachers, by Level Currently Teaching and Control of School: May 1981**

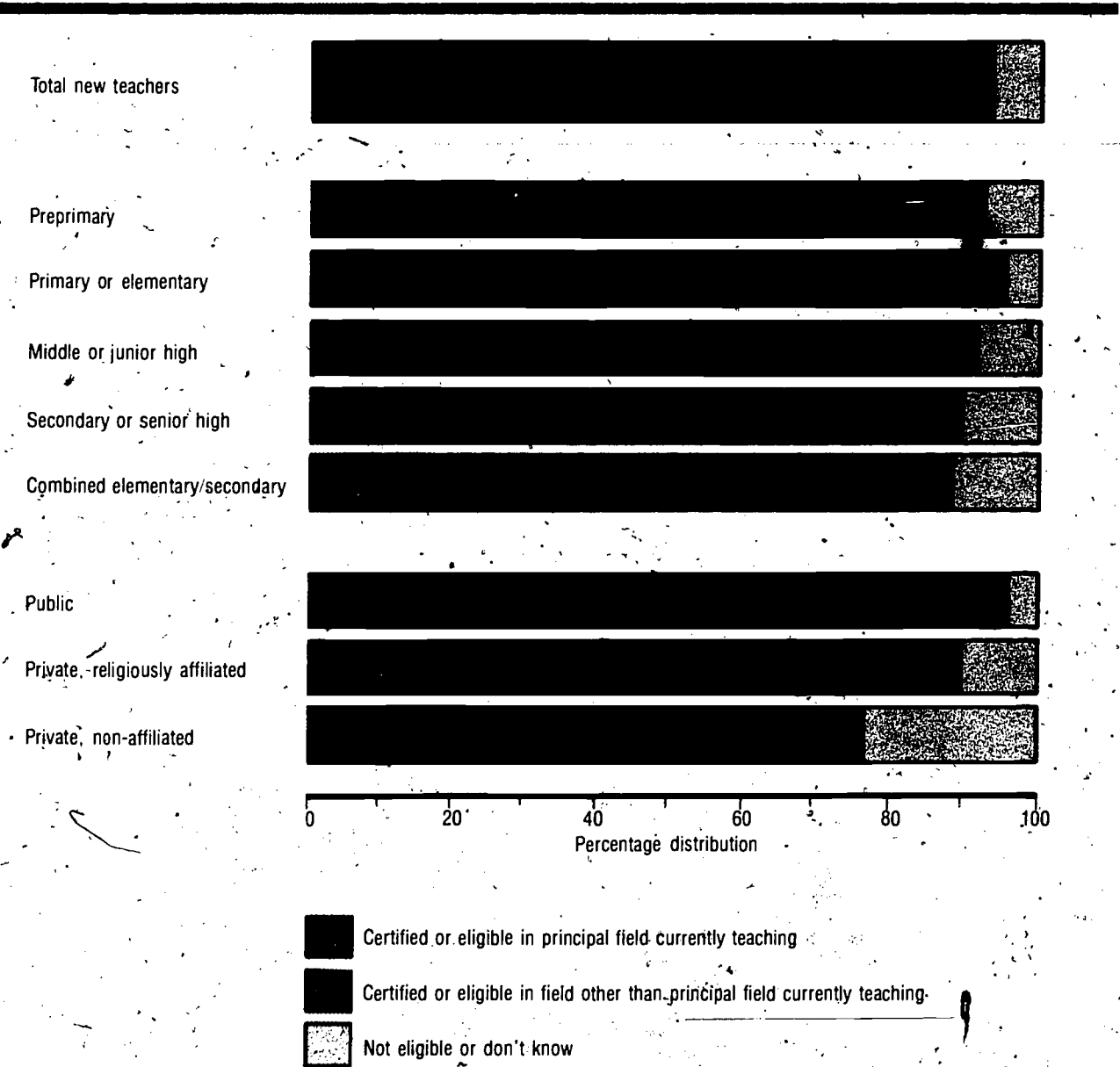
Level and Control of School Currently Teaching	Number	Total	Certified or Eligible for Certification			
			In Some Field	In Principal Field Currently Teaching	In Field Other Than Principal Field Currently Teaching	Not Eligible or Don't Know
Percentage Distribution						
Total	79,800	100.0	93.8	77.9	15.9	6.2
Preprimary	5,100	100.0	92.8	81.2	11.6	7.2
Primary or elementary	36,700	100.0	95.6	79.6	16.0	4.5
Middle or junior high	25,100	100.0	91.4	72.8	18.6	8.6
Secondary or senior high	25,600	100.0	89.8	73.7	16.1	10.2
Combined elementary/secondary	4,800	100.0	88.4	68.5	19.9	11.6
Public	61,600	100.0	96.1	81.7	14.4	3.9
Private, religiously affiliated	12,900	100.0	89.7	70.0	19.7	10.3
Private, non-affiliated	5,200	100.0	76.6	53.0	23.6	23.4

¹ 1979-80 bachelor's degree recipients teaching elementary/secondary school full-time in May 1981.

NOTE: Categories do not add to total because of multiple responses, i.e., teachers taught more than one level or in more than one school. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1981, unpublished tabulations (December 1982).

Certification in Principal Field Currently Teaching of New Full-Time Elementary/Secondary School Teachers, by Level and Control of School Currently Teaching



Most new full-time teachers were certified or eligible to teach in their principal field regardless of teaching level. Few teachers in private non-affiliated schools were less likely than others to be certified or eligible in their principal teaching field.

Table 4.17**Extent to Which Work Related to Major Field of College Study of Newly Graduated¹ Full-Time Elementary/Secondary School Teachers, by Level Currently Teaching and Control of School: May 1981**

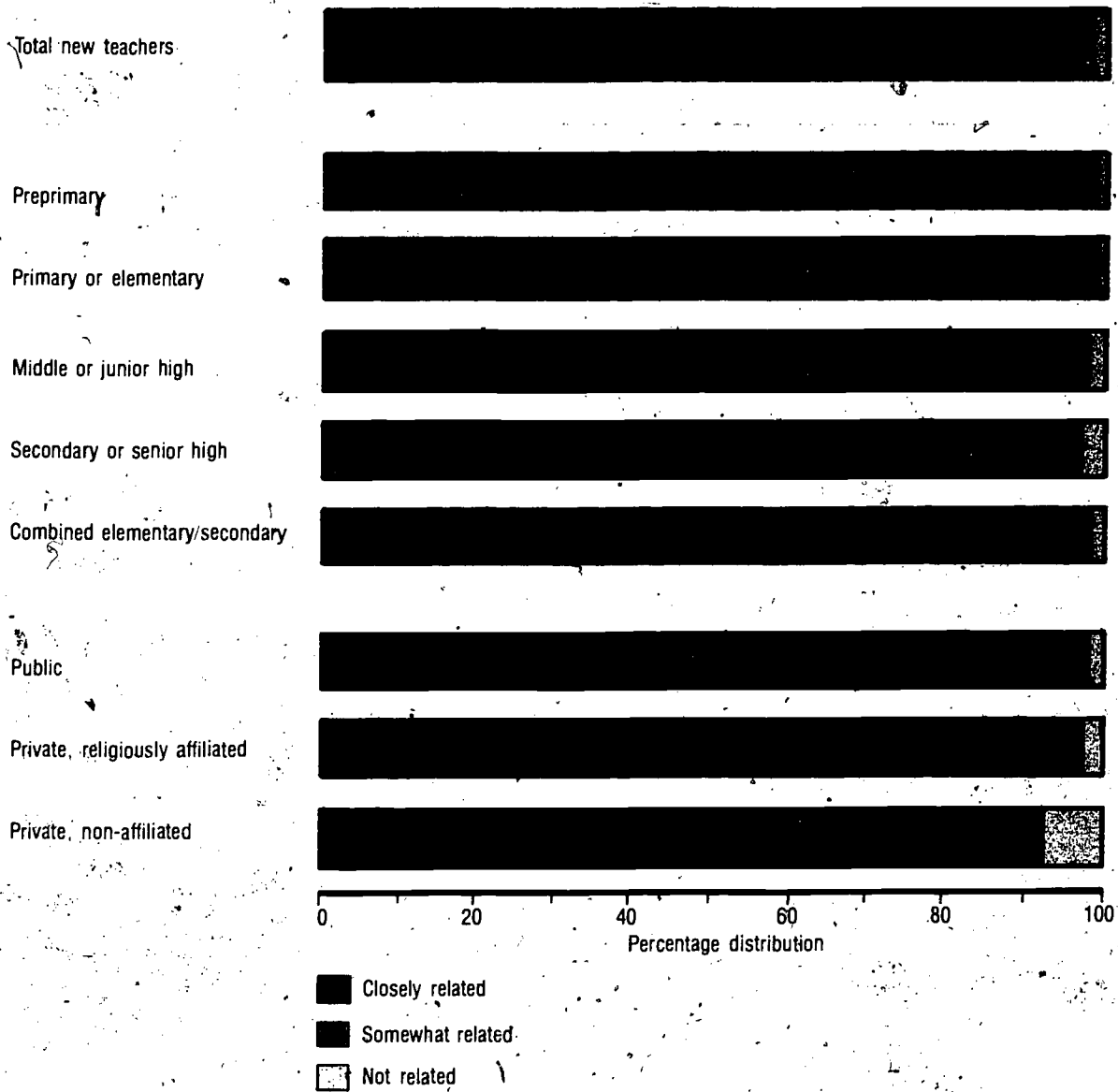
Level and Control of School Currently Teaching	Number	Total	Closely Related	Somewhat Related	Not Related
			Percentage Distribution		
Total	79,800	100.0	87.8	9.9	2.3
Preprimary	5,100	100.0	84.3	14.2	1.5
Primary or elementary	36,700	100.0	92.6	6.5	1.0
Middle or junior high	25,100	100.0	85.5	11.8	2.7
Secondary or senior high	25,600	100.0	83.7	13.2	3.1
Combined elementary/secondary	4,800	100.0	81.0	17.7	1.3
Public	61,600	100.0	89.8	8.3	1.9
Private, religiously affiliated	12,900	100.0	84.1	13.6	2.0
Private, non-affiliated	5,200	100.0	73.3	19.1	7.6

¹ 1979-80 bachelor's degree recipients teaching elementary/secondary school full-time in May 1981.

NOTE: Categories do not add to total because of multiple responses, i.e., teachers taught more than one level or in more than one school. Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1981, unpublished tabulations (November 1982).

Relation of College Study to Job of New Full-Time Elementary/Secondary School Teachers, by Level and Control of School Currently Teaching



At all teaching levels, the vast preponderance of new full-time teachers considered their current job to be closely related to their major field of college study. Only among those teaching in private non-affiliated schools did the proportion fall below 80 percent.

Table 4.18

Recent Bachelor's Recipients Newly Qualified to Teach in 1979-80 Who Were Not Teaching Full-Time in May 1981, by Whether They Applied to Teach and Current Labor Force Status: May 1981

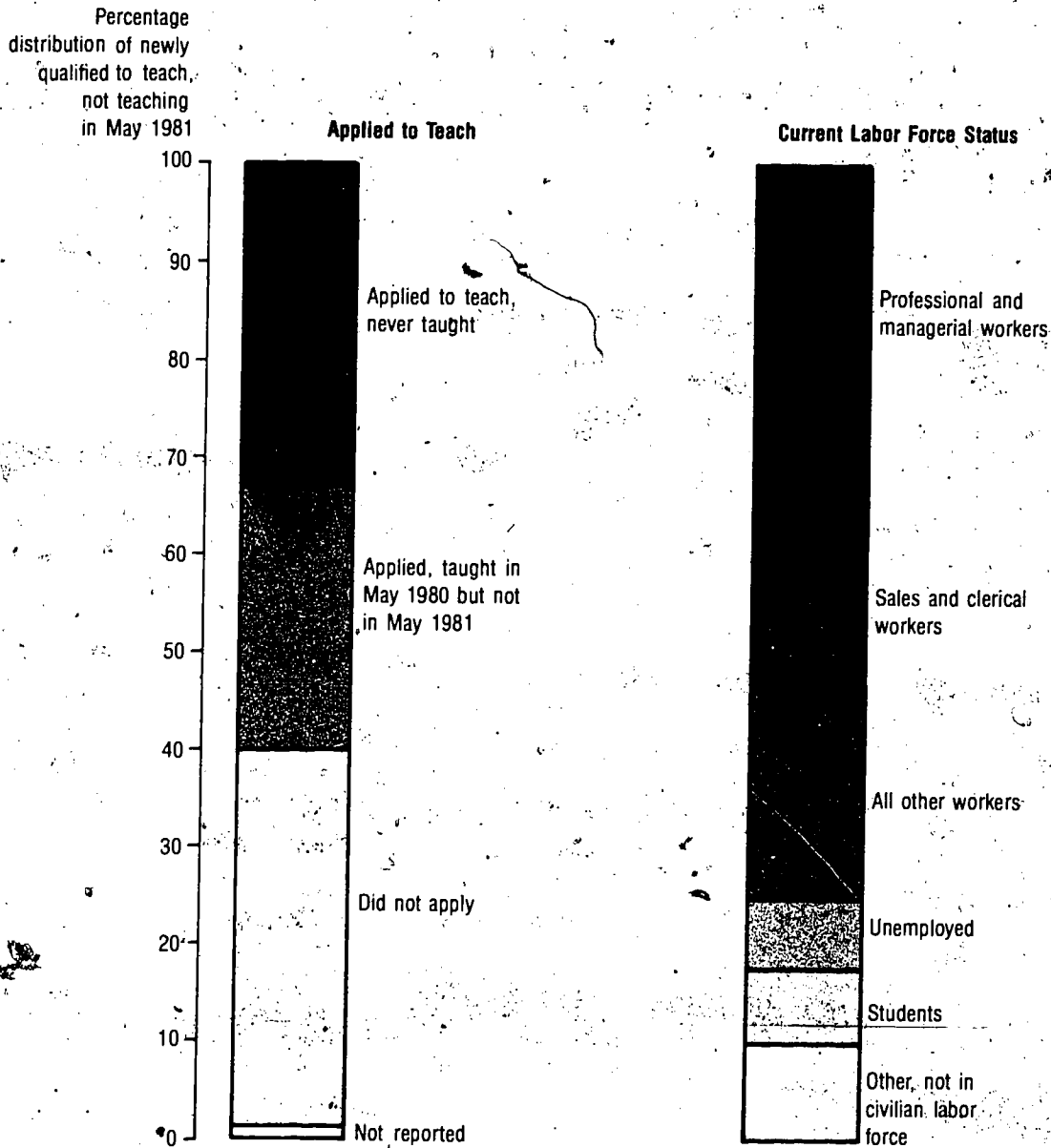
Status in May 1981	Number	Percentage Distribution by Status	Percent Who Applied to Teach	Percent Who Taught in May 1980, but Not in May 1981	Percent Who Did Not Apply	Percent Not Reported
Total	48,400	100.0	33.0	27.1	38.0	1.9
Employed:						
Professional, technical, managerial, and administrative workers <i>excluding</i> elementary/secondary teachers	18,400	38.0	32.3	20.9	44.1	2.7
Sales and clerical workers	7,300	15.1	35.6	18.4	43.6	2.4
All other workers	10,800	22.3	33.2	28.4	35.9	2.5
Unemployed	3,400	7.1	50.5	44.0	5.5	.0
In school	3,800	7.8	23.0	33.5	43.5	.0
Other, not in labor force	4,700	9.7	25.9	43.9	30.2	.0

¹ Excludes 4,000 for whom status unknown.

NOTE: Precision of the estimates may be calculated using the approximate coefficients of variation provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1981, unpublished tabulations (October 1982).

Bachelor's Recipients Newly Qualified to Teach in 1979-80 Who Were Not Teaching in May 1981, by Whether They Applied to Teach and by Current Labor Force Status



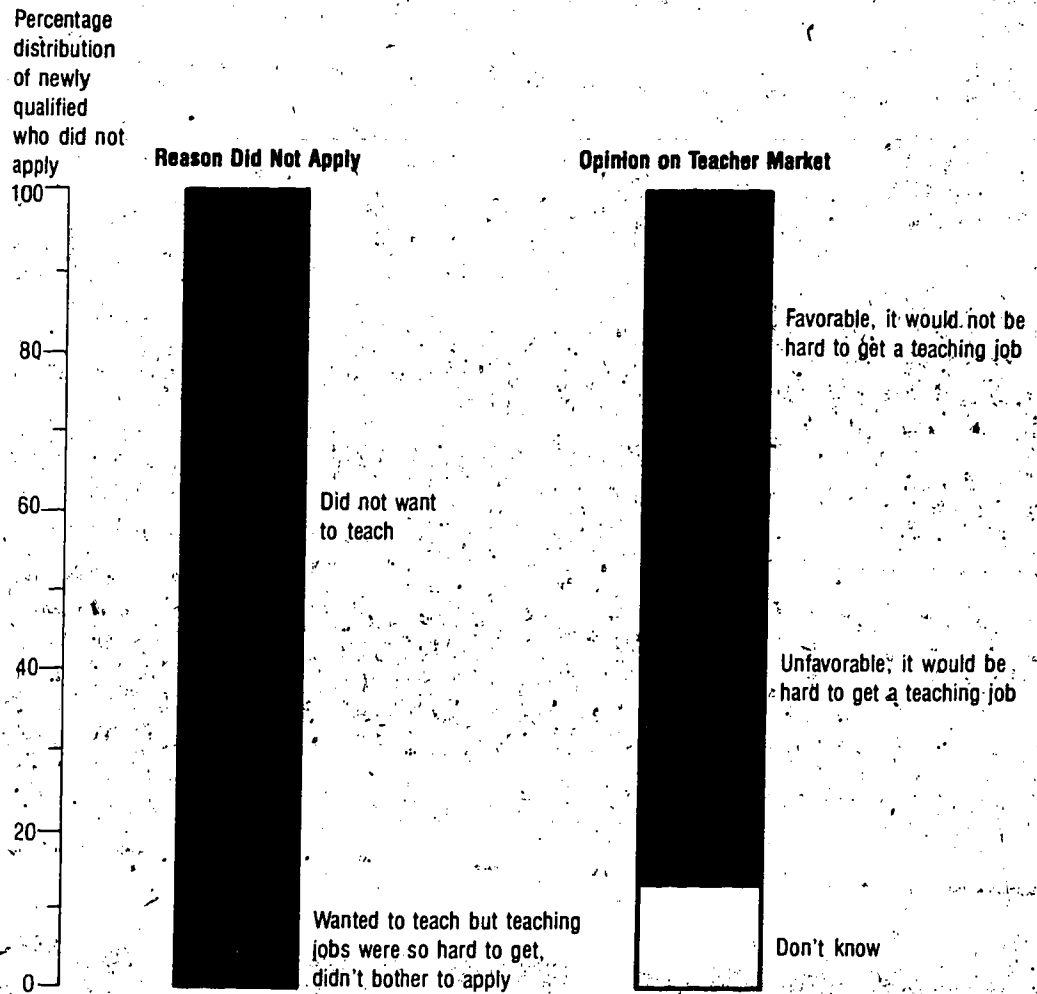
Among the 48,400 bachelor's recipients newly qualified to teach who were not teaching full-time in May 1981, 33 percent had applied to teach, another 28 percent had taught the previous year but were not teaching currently, and 38 percent had not applied. Of those qualified but not teaching, 38 percent were employed in other professional occupations and 15 percent were employed in sales and clerical occupations.

Table 4.19**Reasons for Not Applying for Elementary/Secondary Teaching Job and Opinions on Teacher Labor Market Cited by Recent Bachelor's Degree Recipients, Newly Qualified to Teach Who Did Not Apply: May 1981**

Item	Number	Percentage Distribution
Reasons did not apply:		
Total who did not apply	19,800	100
Did not want to teach	17,900	90
Wanted to teach but teaching jobs were so hard to get, didn't bother to apply	1,900	10
Opinions on labor market for school teachers:		
Total who did not apply	19,800	100
Favorable, it would not be hard to get a teaching job	6,100	30
Unfavorable, it would be hard to get a teaching job	11,200	57
Don't know	2,500	13

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduate Survey, 1981, unpublished tabulations (October 1982).

Reason for Not Applying for Teaching Job and Opinion on Teacher Market



Among the newly qualified to teach who did not apply, 90 percent said they did not want to teach and 10 percent said they wanted to teach but that teaching jobs were too difficult to get. A majority of all those who did not apply considered the labor market for teachers unfavorable.

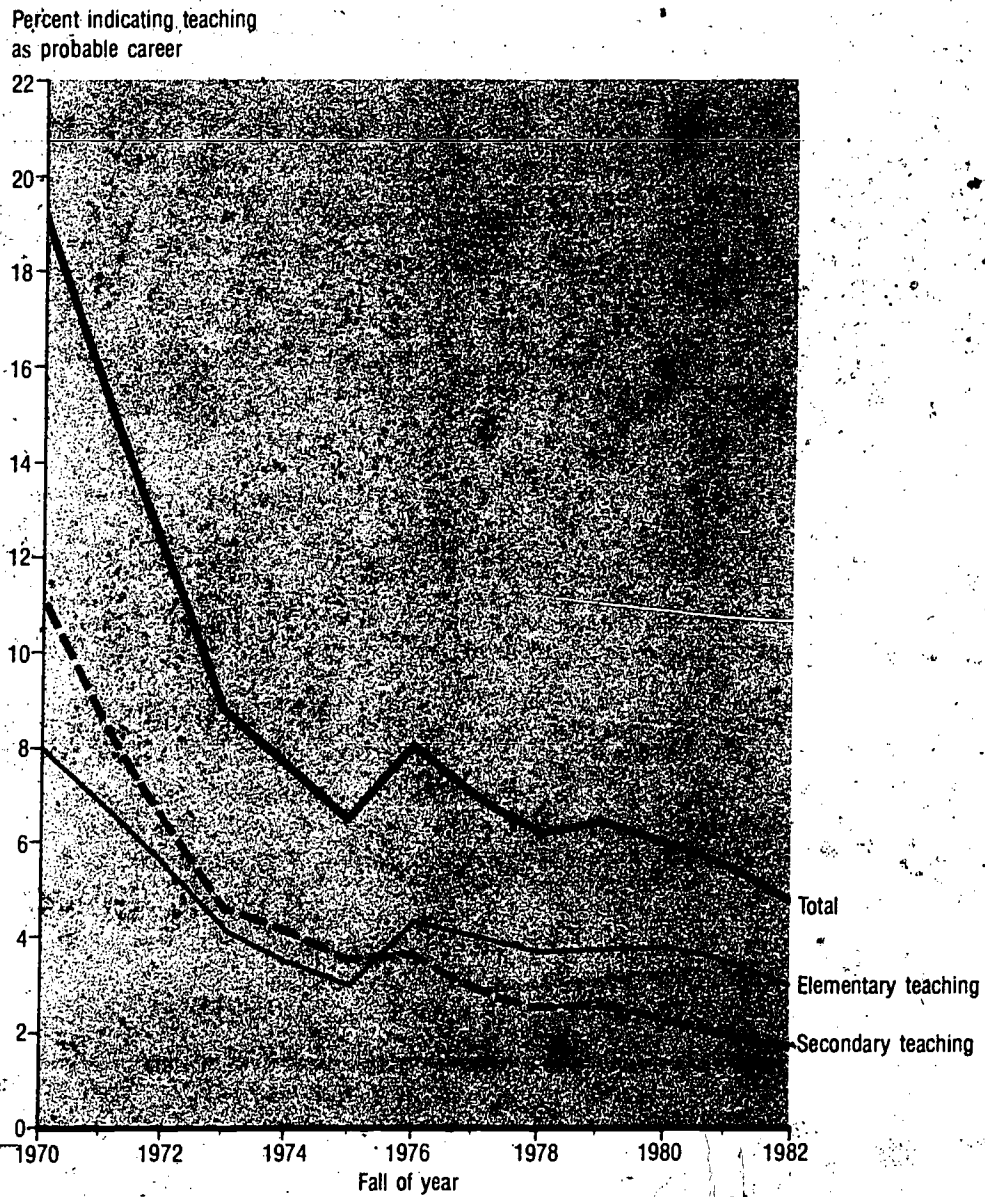
Table 4.20**Percent of First-Time Full-Time Freshmen Indicating Elementary/
Secondary Teaching as Probable Career Occupation: Fall 1970 to 1982**

Fall of Year	Total	Elementary Teaching	Secondary Teaching
		Percent	
1970	19.3	8.0	11.3
1971	15.4	6.8	8.6
1972	12.1	5.6	6.5
1973 ¹	8.8	4.2	4.6
1974	7.7	3.5	4.2
1975	6.5	3.0	3.5
1976	8.0	4.3	3.7
1977	6.9	4.0	2.9
1978	6.2	3.7	2.5
1979	6.4	3.8	2.6
1980	6.0	3.8	2.2
1981	5.5	3.5	2.0
1982	4.7	3.0	1.7

¹ Specialist teaching included as a separate option in only the 1973 survey. Inclusion of 3.9 percent responding that specialist teacher was probable career occupation would have increased total response to 12.7 percent.

SOURCE: American Council on Education, Cooperative Institutional Research Program, *The American Freshman: National Norms*, various years.

College Freshmen Indicating Teaching as Probable Career



The proportion of college freshmen indicating elementary/secondary teaching as their probable career declined throughout the 1970's, dropping to under 5 percent in 1982.

Table 4.21

College-Bound¹ Seniors who Intend to Major in Education, by Sex and Racial/Ethnic Group: Spring 1972 and 1980

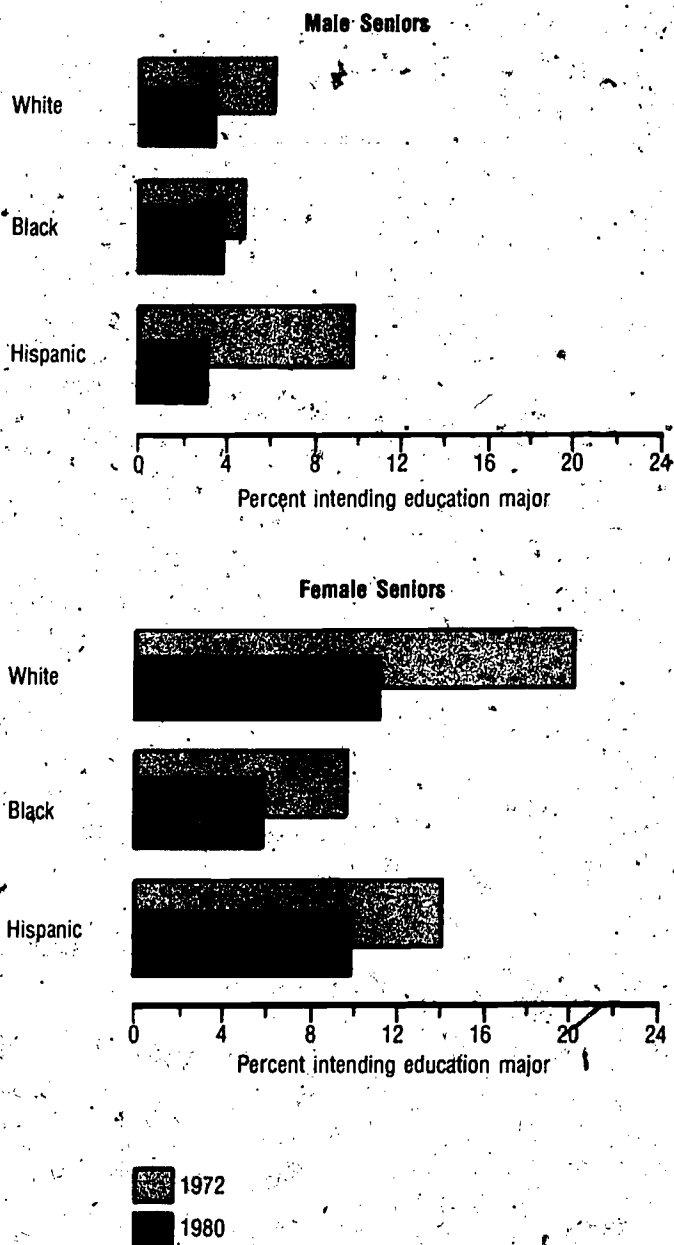
Field	Male					Female			
	Total	Total	White Non-Hispanic	Black Non-Hispanic	Hispanic	Total	White Non-Hispanic	Black Non-Hispanic	Hispanic
Percentage Distribution									
1972 seniors:									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Education	12.0	6.0	6.0	4.7	9.8	18.8	20.1	9.3	14.1
Other field	88.0	94.0	94.0	95.3	90.2	81.2	79.9	90.7	85.9
Sample size	7,969	4,021	3,718	190	113	3,948	3,542	294	112
1980 seniors:									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Education	7.0	3.4	3.4	3.9	3.0	10.3	11.0	5.6	9.9
Other field	93.0	96.6	96.6	96.1	97.0	89.7	89.0	94.4	90.1
Sample size	11,259	5,367	4,253	608	506	5,892	4,329	905	658

¹ College-bound seniors include those who indicated that they intended either to attain some college in the future or to be enrolled in college for academic or vocational training in the year following high school.

NOTE: Precision of the estimates may be calculated using the sample size and following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Education Attracts Fewer Academically High Achieving Young Women*, Bulletin, December 1982 and National Longitudinal Study of the High School Class of 1972 and High School and Beyond Study, unpublished tabulations (September 1982).

Percent of College-Bound Seniors Intending Education Majors, by Sex and Racial/Ethnic Group



Education as a probable major declined substantially across sex and racial/ethnic groups between 1972 and 1980. White and Hispanic females continued to show higher interest in the education field than their black counterparts, while females in general were more likely than males to indicate education as their intended major.

Table 4.22

Average Vocabulary, Reading, and Mathematics Test Scores of College-Bound¹ Seniors, by Sex and Intended Field of Study: Spring 1972 and 1980

Field	Male		Female	
	1972 Seniors	1980 Seniors	1972 Seniors	1980 Seniors
Vocabulary Test (15 Point Maximum)				
Education:				
Average score	6.50	6.20	8.05	6.59
Standard error	.32	.35	.18	.20
Other field:				
Average score	8.19	7.43	8.49	7.31
Standard error	.09	.07	.10	.08
Reading Test (20 Point Maximum)				
Education:				
Average score	10.59	9.69	11.88	9.99
Standard error	.35	.52	.21	.27
Other field:				
Average score	12.03	11.16	12.35	10.84
Standard error	.10	.09	.11	.09
Mathematics Test (19 Point Maximum) ²				
Education:				
Average score	12.03	10.90	11.96	10.20
Standard error	.36	.44	.22	.24
Other field:				
Average score	13.95	12.88	12.85	11.36
Standard error	.08	.08	.10	.09
Sample size:				
Education	267	172	692	595
Other field	3,754	5,195	3,256	5,297

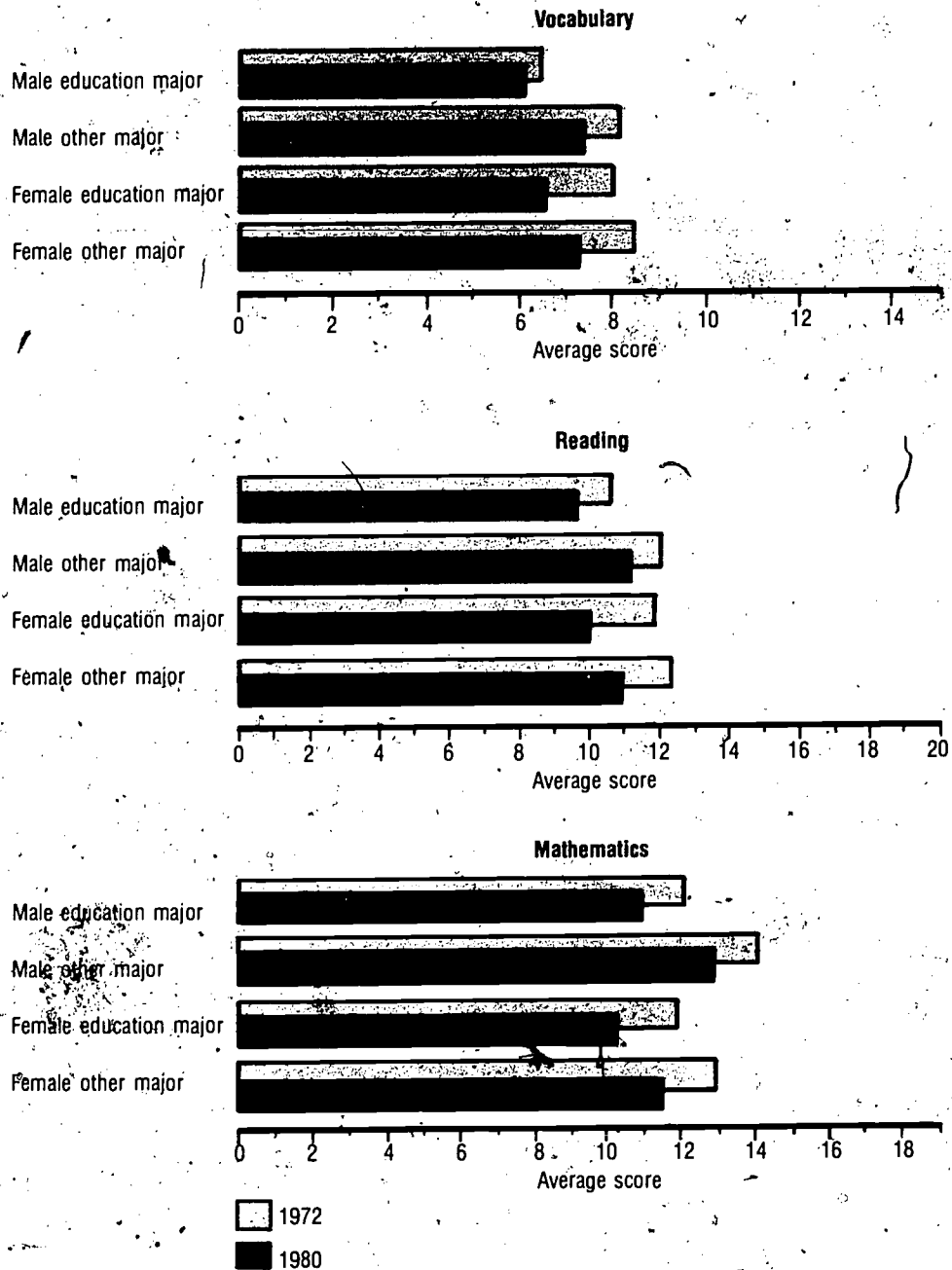
¹ College-bound seniors include those who indicated that they expected either to attain some college in the future or to be enrolled in college for academic or vocational training in the year following high school.

² Caution should be exercised in interpreting change in mathematics scores because scores were based on 19 common items out of 25 items. Differences in levels of difficulty of the other 6 items may have affected time in which to complete the 19 common items.

NOTE: Precision of the estimates may be calculated using the standard error following procedures provided in the Data Sources in the Appendix.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Education Attracts Fewer Academically High Achieving Young Women*, Bulletin, December 1982, and National Longitudinal Study of the High School Class of 1972 and High School and Beyond Study, unpublished tabulations (September 1982).

Vocabulary, Reading, and Mathematics Test Scores of Seniors Intending Education Majors Compared With Other Intended Majors



Although college-bound seniors in general scored lower on vocabulary, reading, and mathematics tests in 1980 than in 1972, those who intended to major in education scored consistently below their counterparts who planned other majors in both years.

Data Sources

Source and Reliability of Estimates

The information presented in this report was obtained from many sources, including Federal and State agencies, private research organizations, and professional associations. The data were collected using several research methods, including surveys of a universe (such as all colleges) or of a sample, compilations of administrative records, and statistical projections. A description of the information source and methods of data collection used for each data set is presented by sponsoring organization in the following subsections, preceded by a general discussion of data accuracy.

Accuracy of Data

The accuracy of any data reported is determined by the joint effects of sampling and nonsampling errors. Estimates based on a sample will differ somewhat from the figures which would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. The resulting differences are called sampling errors or sampling variability. In addition, all surveys, both universe and sample, are subject to design, reporting, and processing errors and errors due to nonresponse. To the extent possible, these nonsampling errors are kept to a minimum by methods built into the survey procedures. In general, however, the effects of nonsampling errors are less gaugeable than those produced by sampling variability.

The standard error is the primary measure of sampling variability. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 90 out of 100 that the difference would be less than 1.65 times the standard error; about 95 out of 100 that the difference would be less than 1.96 times the standard error; and about 99 out of 100 that it would be less than 2.5 times as large. Thus, knowing the standard error permits us to specify a range within which we can have a stated confidence that a given estimate would lie if a complete census, rather than a sample survey, had been conducted.

To illustrate this further, consider the table A1 of standard errors and 90 percent confidence intervals for estimates from the High School and Beyond (HSB) sample.

For an estimate of 30 percent of males participating in a program, the table shows that the standard error is 0.6 percent. This means that the chances are about 68 out of 100 that the 30 percent estimate is within 0.6 percent of the percent that could result from a complete census. Therefore, the 68 percent confidence interval is 29.4 to 30.6. In order to increase our confidence to 90 percent, we would have to use 1.65 times the standard error or 0.99 percent. Therefore the 90 percent confidence interval (rounded to tenths of a percent) would then be 29.0 to 31.0, which is the interval shown in the table.

A similar statement can be made concerning an estimated difference. The standard error of a difference between two sample estimates is approximately equal to the square root of the sum of the squared standard errors of the estimates. The standard error of a difference, $a-b$, is in fact: $\sigma_{a-b} = \sqrt{\sigma_a^2 + \sigma_b^2} - 2\sigma_{ab}$.

It should be noted that the standard errors presented in subsequent sections and in the original documents are approximations. That is, to derive estimates of standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, the standard errors presented provide a general order of magnitude rather than the exact standard error for any specific item.

The preceding discussion on sampling variability was directed toward a situation concerning one or two estimates. A more difficult situation is encountered when determining the accuracy of statistical projection. A detailed discussion will not be presented here. In general, the further away from the actual data being used for the projections, the greater the variability in the projection. That is, if annual data from 1971 to 1981 are being used to project enrollment in institutions of higher education, the further away from 1981 one gets, the more variability in the projection. One is less sure of the 1990 projection of enrollment in institutions of higher education than the 1982 projection.

Sources of Information

A large number and variety of sources were used as the basis of information for this report. Particular care should

be taken in comparing data from the different sources. Differences in procedures, timing, phrasing of questions, interviewer training, and so forth, mean that the results from the several sources are not strictly comparable. The information in this report comes from the following different sources identified by the sponsoring agency or organization. Government sources are presented first, followed by private research and professional associations. It should be noted that more extensive documentation of survey procedures does not imply more problems with the data, only that more information is available on certain surveys than on others.

National Center for Education Statistics

Common Core of Data

The Common Core of Data (CCD) program is a coordinated effort administered by the National Center for Education Statistics (NCES) to acquire and maintain statistical data on States and local public school districts. The CCD program, which began in 1954, is a universe survey of State education agencies and education agencies of the District of Columbia and outlying areas. Information is collected annually on the numbers of local public school districts, public elementary/secondary school systems, staff, students, high school graduates, estimates of revenue and nonrevenue receipts, school expenditures, and average salaries paid to classroom teachers and other professional/educational staff.

Since the CCD is a universe survey, the information presented in this report from the CCD is not subject to sampling error. However, nonsampling error may occur from two possible sources—nonreturn and misclassification. Nonreturn is minimal, with all States submitting almost all nine survey instruments each year.

With data submitted by over 90,000 schools to approximately 16,000 local districts and compiled by the 50 State education agencies, opportunity does exist, however, for misclassification. NCES attempts to minimize these errors by working closely with the Council of Chief State School Officers and its Committee of Education and Information Systems. The State Education Agencies have the task of gathering the information and performing the initial data audit. For the added burden, the States

are reimbursed by NCES. Then to the extent possible, NCES reviews each State's reports for internal consistency and for comparability with information received in previous surveys, State publications, and related NCES studies. Letters, telegrams, and telephone calls are used, when necessary, to obtain data from respondents and to resolve questions.

As in any mailed questionnaire survey, interpretation of instructions and definitions may vary among respondents. Because public elementary/secondary education is a State and local responsibility, any statistical total for the Nation as a whole reflects a composite of the different reporting practices in the States. The use of standard forms and definitions in collecting data tends to minimize these variations. Whenever State deviations from prescribed definitions and instructions are known, they are indicated in the footnotes. NCES encourages each State to obtain the data for its reports by conducting a fall survey of local school districts with adaptations of the Federal forms and accompanying instructions. Some States report from survey data collected for regular annual reports.

If questions arise concerning the Common Core of Data, they can be directed to:

A. Stafford Metz
Institutional Surveys Branch
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

Private School Survey

The NCES 1980-81 private elementary/secondary school survey was intended to assemble an inclusive listing and basic statistics of private elementary/secondary schools.

Under contract to NCES, The National Catholic Educational Association (NCEA) surveyed the Catholic schools and Evaluation Policy Research Associates surveyed the non-Catholic private schools. A list of all private schools was developed and then a survey questionnaire was mailed to every school on the list. Schools that did not respond to the first mailing were sent additional questionnaires, and in some cases phone calls were

made to obtain their responses. The list construction for the Catholic schools was relatively simple because of the existing diocesan school system network. The list was developed for the non-Catholic private schools by searching the 1978-79 NCES private school universe listing, State and local government directories of schools, private school association directories, and by contacting local and regional private school authorities.

The survey objective, though unachievable, was to obtain information from every private elementary/secondary school that had a first or higher grade and enrolled students in the 1980-81 school year. Despite the efforts devoted to searching for schools, some schools were not included or were not contacted. Other schools failed to respond to one or more items on the questionnaire. These nonresponses were handled differently.

If a school was identified as operating in the 1980-81 school year (even by the return of the questionnaire with a refusal to cooperate), the school was considered open. Any items not completed by open schools were imputed by using data from earlier surveys. In the few cases where these data were not available, the value from a similar school was used for imputation. Imputed values resulting from this imputation procedure amounted to 1 percent of the total students, 3 percent of the total teachers, and 6 percent of the total high school graduates.

The other type of nonresponse—the failure to include some open schools—was examined through the Statistical Analysis Group in Education (SAGE). SAGE conducted an intensive search in 21 sites across the country to help evaluate the undercoverage of the private school survey. It was determined from those sites that 100 percent of the Catholic schools and 75 percent of the non-Catholic schools were covered by the NCES list. Although the results of this study are not definitive because of its small size, they do indicate that the number of schools reported may be underestimated by as much as 15 percent and the total number of students, by 5 percent. The study also concludes that the undercoverage was greatest for small, non-Catholic schools and for new schools.

Questions concerning the Private School Survey can be directed to:

Joanell Porter
Institutional Surveys Branch
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

Higher Education General Information Survey

The Higher Education General Information Survey (HEGIS) is a coordinated effort administered by the National Center for Education Statistics (NCES). Its purpose is to acquire and maintain statistical data on the characteristics and operations of institutions of higher education. HEGIS, developed in 1966, is an annual universe survey of institutions listed in the latest *Education Directory, Colleges and Universities*.

The information presented in this report draws on HEGIS surveys which solicit information concerning institutional characteristics, faculty salaries, finances, enrollment, and degrees. These surveys are part of the overall HEGIS package and as such cover all institutions in the universe. The data presented, therefore, are not subject to sampling error but are subject to nonsampling error. Due to the differing information solicited by the various survey instruments, the sources of nonsampling errors differ. Each survey will therefore be discussed separately. A validation study, "HEGIS Post-Survey Validation Study", was conducted for two HEGIS surveys, enrollment and degrees, in 1979. The information presented in this appendix concerning the nonsampling error of these two surveys draws considerably on this study.

If questions exist concerning the surveys discussed and used as data sources for this report, or if other questions arise concerning HEGIS, they can be directed to:

Curtis O. Baker
University and College Surveys and
Studies Branch
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

Institutional Characteristics of Colleges and Universities

The Institutional Characteristics Survey provides the basis for the universe of institutions presented in the *Education Directory, Colleges and Universities* and used in all other HEGIS data collection activities. The universe is comprised of institutions that offer at least a 1-year program of college-level studies leading toward a degree and that meet certain accreditation criteria. In the fall, institutions included in the *Directory* the previous year receive a computer printout of their information with the request to update. Institutions not previously included that have applied for *Directory* listing are sent the questionnaire form to complete. All institutions reported are certified as eligible to be listed by the Division of Eligibility and Agency Evaluation within the Department of Education.

Opening Fall Enrollment in Institutions of Higher Education

Opening Fall Enrollment in Institutions of Higher Education has been part of the HEGIS series since its development. The enrollment survey, as with the HEGIS degree survey, does not appear to suffer significantly from problems of nonreturn.

The major sources of nonsampling error for this survey come from classification problems, availability of needed data, interpretation of definitions, the survey due date, and operational errors. Of these, the classification of students appears to be the main source of error. Institutions have problems in correctly classifying first-time freshmen, other first-time students and unclassified students for both full-time and part-time categories. ~~These problems are more evident at 2-year institutions (both private and public) and the private 4-year institutions.~~ In 1977-78, the classification problems led to an estimated overcount of 11,000 full-time students and an undercount of 19,000 part-time students. Although the percentage of error for the grand total was quite small (i.e., less than 1 percent), the percentage of errors for detailed student levels might be as high as 5 percent or even higher at certain student levels.

Degrees and Other Formal Awards Conferred

The Degrees and Other Formal Awards Conferred Survey has been part of the HEGIS series since its development. For the 1970-71 survey, however, the taxonomy was changed. The information from survey years 1970-71 through the present is directly comparable, but care must be taken if information before this date is included in any comparison. The nonreturn rate does not appear to be a significant contributor to nonsampling error for this survey. The return rate over the years has been extremely high, with the rate for years 1977-78 and 1978-79 at 100 percent. Because of the high return rate, nonsampling error caused by imputation would also be minimal.

The major sources of nonsampling error for this survey are: differences in the HEGIS program taxonomies and taxonomies used by the school; classification of double majors and double degrees; operational problems; and timing of the survey. In the validation study conducted in 1979, it was found that the sources of nonsampling error noted above contributed to an error rate of 0.3 percent overreporting for bachelor's degrees and 1.3 percent overreporting for master's degrees. The differences, however, varied greatly among fields. Over 50 percent of the fields selected for the study had no errors identified. The major categories of fields that had large differences were: business and management, education, engineering, letters, and psychology. It is also shown that differences in proportion to the published figures were less than one percent for most of the selected fields that had some errors. Exceptions to this were: master's and Ph.D. programs in labor and industrial relations (20 percent and 8 percent); bachelor's and master's programs in art education (3 percent and 4 percent); bachelor's and Ph.D. programs in business, commerce, and distributive education (5 percent and 9 percent); ~~master's and Ph.D. programs in letters (1 percent and 4 percent);~~ master's programs in philosophy (8 percent); and Ph.D. programs in psychology (11 percent).

Financial Statistics of Institutions of Higher Education

The Financial Statistics of Institutions of Higher Education Survey has been part of the HEGIS series since its

development. A number of changes were made in the financial survey instruments in 1975. While these changes were significant, only comparable information on trends is presented in this report. Other possible sources of nonsampling error in the financial statistics are nonresponse, imputation, and misclassification. The response rate has been over 90 percent for the years reported. Two general methods of imputation have been used: (1) if prior year's data were available for a nonresponding institution, these data were inflated using the Higher Education Price Index and adjusted according to changes in enrollments; or (2) if no previous year's data were available, current data were used from peer institutions selected for location (State or region), control, level, and enrollment size of institution. For the most recent year reported, the imputation method did not include the adjustment for changes in enrollments. It should be noted that the imputed current funds expenditures of the nonrespondents are less than 3 percent of the aggregate U.S. total.

To reduce reporting error, NCES uses national standards for reporting finance statistics. These standards are contained in *College and University Business Administration: Administrative Services (1974 Edition)*, published by the National Association of College and University Business Officers; *Audits of Colleges and Universities* (as amended August 31, 1974), by the American Institute of Certified Public Accountants; and *HEGIS Financial Reporting Guide (1980)*, by NCES. Wherever possible, definitions and formats in the survey form are made consistent with those in these three accounting texts.

Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education

This survey, like those for earned degrees, financial statistics, and enrollments, has been a component of HEGIS nearly every year. Like these other surveys, the faculty salaries survey is a universe survey; hence, the data are not subject to sampling error.

The response rates for this survey have been very high in recent years—exceeding 90 percent. Salaries and fringe

benefit data are not imputed for nonresponding institutions.

The salaries of full-time faculty may include some part-time faculty at a very small number of institutions. The impact of these reporting errors is estimated to lower average salaries by less than 1 percent.

The salaries presented by State are for full-time instructional faculty with 9-10 month contracts. Faculty with 11-12 month contracts comprise 14 percent of instructional faculty and their salaries have been adjusted for inclusion in the trend data.

Residence and Migration Survey

The Residence and Migration of College Students (R&M) survey for fall 1979 is one of the more difficult of the surveys in the Higher Education General Information Survey to present clearly without misrepresentation. Although each student is reported once by the responding institution, the same student is enumerated twice—once in the State of enrollment and once in the State of residence or home State.

The data collected in fall 1979 differ from those of earlier surveys in that only full- and part-time first-time students were reported by level of enrollment in fall 1979 rather than all students by sex as in prior years. For this reason, numeric trends cannot be constructed. It is anticipated that the new design for data collection that began with the fall 1979 survey will be retained. Therefore, the 1979 survey will provide the base year for a new data series.

The mailout of the 1979-80 Higher Education General Information Survey included survey report forms for 3,188 institutions in the survey universe. Of these, 3,008 institutions sent usable responses, representing a 94 percent response. State coordinators and college and university officials who had not sent in their survey report forms by the due date were contacted through followup phone calls and mailgrams before the closeout of data collection. Data were imputed for the 180 nonrespondent institutions by identifying peer institutions, and where this could not be done, by relying upon State averages or historical data from prior surveys.

The total number of students reported as first-time freshmen on the R&M survey was expected to correspond to the number reported on the 1979 Opening Fall Enrollment (OFE) survey. However, differences in due dates occurred, students enrolled in the summer of 1979 were omitted from the OFE, and the distinction between first-time freshmen and all freshmen was blurred. Therefore, the data reported by some institutions were not consistent between the two surveys.

Vocational Education Data System

The Vocational Education Data System (VEDS) is a coordinated effort administered by the National Center for Education Statistics (NCES) to acquire and maintain statistical data on programs under the jurisdiction of State Boards of Vocational Education. This includes programs in both secondary and postsecondary institutions. Secondary schools include comprehensive high schools, vocational high schools, and area vocational centers. Postsecondary institutions include 2- and 4-year institutions of higher education, noncollegiate postsecondary schools, correspondence schools, and State correctional facilities.

VEDS, first implemented in 1978-79, is a universe survey of State educational agencies and agencies in the District of Columbia and outlying areas. Information is collected annually on students, programs, program completers and leavers, staff, facilities, and expenditures.

As a universe survey, VEDS is not subject to sampling error. Nonsampling error, however, may occur from non-return, nonresponse, and misclassification. Survey non-return for the VEDS information presented in this report is minimal, with all States submitting survey forms. However, the nonresponse to certain survey items was considerable. As with other universe surveys, the amount of information being gathered dictates that the opportunity certainly exists for misclassification. The States are responsible for the accuracy of all data submitted. All data are reviewed and edited for reasonableness, and suspect responses are verified by contacting the submitter. In turn, the forms are reviewed by NCES and, if need be, returned to the States for correction. Standard data

processing procedures are then carried out to assure that the edited responses are accurately transcribed to electronic form.

If questions exist concerning the Vocational Education Data System, they can be directed to:

Robert L. Morgan
Adult and Vocational Surveys Branch
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

National Longitudinal Study of the High School Class of 1972

The National Longitudinal Study (NLS) of the High School Class of 1972 periodically queries a national sample of the 1972 high school seniors to chart their educational, vocational, and personal development. NLS was initiated in the spring of 1972 by the National Center for Education Statistics. Over 1,000 public and private schools and nearly 18,000 students participated. Four followup surveys have been conducted since the 1972 base-year survey, in fall 1973, fall 1974, fall 1976, and fall 1979.

The original sample design was a deeply stratified two-stage probability sample with schools as first-stage sampling units and students as second-stage units. The first-stage sampling frame was constructed from computerized school files maintained by the Office of Education and by the National Catholic Educational Association. The schools were then stratified according to various criteria and randomly selected within strata. Except for schools in the low income areas or with high black enrollments and schools with small enrollments, the schools were sampled with equal probability and without replacement. From each selected school, 18 students were randomly chosen to participate. The samples represent the Nation's 12th grade enrollment in 1972 in all public and private schools.

The main source of nonsampling error in a longitudinal study, i.e., a study of the same individuals over time, is usually the decrease in return rates over time. With NLS,

of the 1,200 primary sample schools, 948 participated in the base-year survey. Of the remainder, 21 had no seniors enrolled, and 231 either refused to participate or could not, because they had received the request too late in the school year. In the summer of 1973, NCES made further attempts to secure the participation of the 231 schools that had not participated in the base-year survey, and to replace the 21 schools that had no seniors.

The "resurvey" activity, initiated prior to the first followup survey, involved securing school cooperation, choosing random samples of up to 18 former 1972 seniors per school, and then securing the last known addresses of those selected. This activity was successful in 205 of the 231 primary sample schools; thus, students from 1,153 of the 1,200 primary sample schools were included in the first followup survey. Also, an additional sample of 200 school districts was contacted during the base year to identify public schools not included in the original school sampling frame. Forty-five such schools were identified, and 23 of these were randomly selected as an "augmentation" sample to compensate for base-year undercoverage. Samples of former 1972 seniors from 16 of these augmentation schools participated in the first and subsequent followup surveys.

Due to the complexities of the base-year data collection, both unequivocal base-year data availability rates and subsequent followup response rates are difficult to compute. However, using the augmented base-year sample, the return rates were quite high. Among the 16,683 individuals responding to the base-year questionnaire, the percentages also responding in the first, second, third, and fourth followup were approximately 94, 93, 89, and 83 percent, respectively. Of the 21,350 first followup questionnaire respondents, 95, 91, and 84 percent also responded to the second, third, and fourth followup, respectively. Sample retention among the 20,872 second followup respondents was 94 percent for the third followup and 87 percent for the fourth. Approximately 91 percent of the 20,092 third followup respondents also responded in the fourth followup.

Another area of possible nonsampling error in the NLS estimates is that of sample weights and nonresponse

adjustments. Since students were selected with unequal probability, simple weighted tabulations could be misleading; thus, sample weights were computed for each student. The unadjusted sample weights were calculated as the inverse of sample inclusion probabilities, which are a function of the school selection probabilities and the student selection probabilities within school. Such calculations were nontrivial due to the several *post hoc* redefinitions of the sample; however, appropriate weighting was accomplished.

To provide better estimates of the attributes of this population, it was necessary to address the problem of compensating for instrument nonresponse. This was accomplished through weight adjustments. Because of the various sample redefinitions and augmentations, several sets of adjusted weights were computed. The general procedure used was a weighting-class approach, which distributes the weights of nonrespondents to respondents who are most like them. Weighting classes were defined by several survey classification variables: race, sex, high school curriculum, high school grades, and parents' education. Differential response rates for students in different weighting classes are reflected in this adjustment.

In addition to the nonresponse adjustment, the problem of nonresponse was addressed by identifying 88 critical questions. Special effort was then made to contact participants who failed to respond to these items in their returned questionnaires.

Estimates of the sampling errors for the NLS were calculated as a joint function of the estimated percentage and the sample size for the percentage base (i.e., denominator). The actual standard error estimate, for a percentage from the complex stratified multistage NLS sample, is inflated over the standard error estimate that would have been obtained had a simple random sample of students been selected. The estimated standard errors ranged from 1.19 to 6.00 for a sample size equal to 100 and estimated percentages of 1 (or 99) to 50; and standard errors ranged from 0.08 to 0.42 for a sample size equal to 20,000 and the same estimated percentages.

Questions concerning the NLS can be directed to:

Andrew Kolstad
Longitudinal Studies Branch
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

High School and Beyond

High School and Beyond (HSB) is a national longitudinal study of 1980 high school seniors and sophomores conducted by the National Center for Education Statistics. A probability sample of 1,015 high schools was selected with a target number of 36 seniors and 36 sophomores in each of the schools. The total number of students participating in the survey is 58,728. Substitutions were made for noncooperating schools in those strata where it was possible, but not for students. Student and parent refusals and student absences resulted in an 84 percent completion rate for students. This refers to the overall return rate of the survey and not the completion rate of each item within the survey.

Several small groups in the population were sampled with probabilities higher than their occurrence in the population. This was done to allow for special study of certain types of schools or students. Students completed questionnaires and took a battery of cognitive tests. In addition, a sample of parents of sophomores and seniors (about 3,600 for each cohort) was surveyed.

The major sources of nonsampling error are in school nonresponse, student survey nonresponse, and student misinterpretation of the items. Nonresponse can come from the 9 percent school nonresponse, a 16 percent student nonresponse, and the nonresponse rates for given items. The nonresponse rates by item for those students returning a survey range from a low of 0.3 percent (questioning if the student expects to graduate) to a high of 21 percent (concerning family income). Examples of the sampling variability in the estimates from the HSB survey are given in Table A1.

The standard error (s.e.) of an individual percentage (p) can also be approximated by the formula $s.e. (p) =$

$1.6\sqrt{p(100-p)/n}$ where n is the sample size and 1.6 is a factor used to adjust for the particular sample design used in High School and Beyond. In evaluating a difference between two percentages, the standard error of the difference may be conservatively approximated by taking the square root of the sum of the squared standard errors of the two percentages. For example, the estimated percentage of seniors in the Northeast enrolled in academic programs is 51 percent while the estimate for seniors in the South was 33 percent, a difference of 18 percentage points. Using the formula and the sample sizes from the table, the standard errors of the two percentages being compared are calculated to be:

$$1.6\sqrt{(51)(49)/5,587} = 1.1$$

$$1.6\sqrt{(33)(67)/9,142} = 0.8$$

The standard error of the difference is therefore

$$\sqrt{1.1^2 + 0.8^2} = \sqrt{1.21 + 0.64} = 1.4$$

The sampling error (95 chances in 100) of the difference is approximately twice the standard error, or approximately 3 percentage points, and the 95 percent confidence interval for the difference is 18 ± 3 or 15 to 21 percentage points.

If questions arise concerning the High School and Beyond Study, they can be directed to:

Samuel Peng
Longitudinal Studies Branch
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

Recent College Graduates Survey

The Recent College Graduates sample surveys conducted in February 1978 and May 1981 are the source of the data on employment of recent bachelor's recipients and of those newly qualified to teach. Both used a two-stage sample procedure, the first stage being a stratified sample of institutions offering bachelor's and master's degrees and the second stage being a sample of graduates from the sampled institution. The institutions were strat-

ified by percent of education graduates, control, and geographic region (the 1978 survey also had a separate stratum for predominately black institutions). The institutions were selected with probabilities proportional to their measure of size, constructed using the number of graduates and the percent of education graduates.

The graduates within the sampled institutions were stratified by: level of degree; whether or not they were education graduates; and whether or not they were special or vocational education graduates. Different probabilities of selection were assigned to each stratum to obtain the desired sample size of each type of graduate. A questionnaire was mailed to each sampled graduate.

The overall response rate was 83.5 percent in 1978 and 72.3 percent in 1981. The intensive field followup of nonrespondents conducted for the 1978 survey was not duplicated in the 1981 survey because of budget and time considerations.

A ratio estimation procedure was used to inflate the sample results to the estimates for each year. The estimates differ from the Higher Education General Information Survey (HEGIS) numbers which were the basis for the ratios because foreign addresses and deceased graduates were removed and the self-reported major was used rather than the institution-reported major.

In addition, sizable numbers of graduates majoring in a field and newly qualified to teach are counted here as newly qualified to teach and counted in HEGIS as being in their major field. The 1978 survey figures are revised from estimates published in *New Teachers in the Job Market*, August 1980, to reflect the removal of graduates from institutions in outlying areas and foreign addresses and of deceased graduates.

Since the estimates are based on sample data, they would differ from figures obtained from a complete census using the same methods. Tables A2 and A3 contain generalized estimates of the coefficients of variation (CV's) for the two surveys for percent of graduates by major categories. (Note: The CV is merely the standard error of the estimate divided by the estimate.) To calculate the CV's for this report, follow these steps:

- 1) Make sure you are using the proper table for each survey (A2 for 1978, A3 for 1981);
- 2) Find the table column which comes closest to the category of graduates for which you want a CV. For example, for the estimate of 16,500 graduates newly qualified to teach in 1981 who were prepared to teach special education, use table A3 under the heading Special and Vocational Education. For the total estimate of 132,200 newly qualified to teach, use table A3 Total, since this group of graduates has representatives in each category. Using the total column will provide a conservative CV for this estimate, since graduates newly qualified to teach have only 20 percent noneducation majors;
- 3) Using the group total N from the appropriate column, calculate percentage of graduates in the subgroup (estimate/N);
- 4) Using this percent, locate the CV in the table under the closest row entry for percentage of graduates in the subgroup and the proper group heading. If the percent calculated in step 3 does not exactly match the row entry percentage, approximate what the CV should be from the next higher and next lower percents.

Confidence intervals for estimates appearing in this report can be constructed using these CV's as described in the three examples that follow.

a) Estimates of Totals—For example, the estimate of the total number of bachelor's recipients in the 1981 survey who were newly qualified to teach is 132,200, or 14.6 percent of the 905,700 bachelor's recipients. Table A3 shows that the CV for 14.6 percent for total bachelor's recipients is about 0.048. (Note that this is probably conservative, since graduates newly qualified to teach (NQT) are largely education majors.) Thus, the standard error for this estimate is 6,346 ($.048 \times 132,200 = 6,346$), and a 95-percent confidence interval is $132,200 \pm 12,692$.

b) Estimates of Proportions—As an example of estimating a confidence interval for a proportion, con-

sider the proportion of newly qualified to teach bachelor's recipients in 1981 who applied to teach (85 percent). In this case we must: 1) determine the CV for both the numerator and the denominator of the proportion and 2) apply the formula $CV(P) = \sqrt{[CV^2(X) - CV^2(Y)]}$, where $P = X/Y$. We know from the example above that the $CV(Y) = .048$, where Y is the number of newly qualified to teach. Similarly, the $CV(X) = .053$, where X is the number of NQT bachelor's recipients who applied to teach. Therefore, the $CV(P) = .022$, since the square root of $[(.053^2) - (.048^2)]$ is .022. A 95-percent confidence interval is 85 percent \pm 3.74 percent, since the standard error of the proportion is $.022 \times 85$ percent = 1.87 percent. This procedure should be applied when the numerator and the denominator of the proportion may be highly correlated but the denominator and the proportion are uncorrelated.

c) Estimates of Difference between 1978 and 1981 Survey Estimates—Since the survey estimates for the 2 years are uncorrelated, the procedure used to estimate the CV for the difference between the estimates is: 1) find the appropriate CV for the estimate for each year and 2) apply the formula $CV(D) = \sqrt{[X^2CV^2(X) + Y^2CV^2(Y)]}/D$, where $D = X - Y$. For example, the estimate of the difference in the number of graduates newly qualified to teach who applied to teach between the 1981 and 1978 surveys is 20,100 (= 132,500 - 112,400). The CV for this estimate is .41, since

$$\sqrt{(132,500)^2(.042)^2 + (112,400)^2(.053)^2} = 8,152$$

and $8,152/20,100 = .4056$ (.042 is the CV for the 132,500 graduates newly qualified to teach who applied to teach in 1978). A 95 percent confidence interval is 20,100 \pm (16,482), where the standard error of the estimate is $.41 \times 20,100 = 8,241$.

Participation in Adult Education Survey

The Participation in Adult Education Survey (PAE) was conducted for NCES by the Bureau of the Census, as a supplement to the Current Population Survey, the Bureau's monthly household survey. The data on part-time

educational activities were collected in May 1969, 1972, 1975, 1978, and 1981. Interviewers asked if anyone in the household 17 years of age or older had participated in adult education in the 12-month period prior to the survey date. A survey form was either filled out by the interviewer or left with a household proxy for participants who were not at home at the time of the interview. In 1981 the supplement form was no longer left with the proxy but completed by the interviewer.

The PAE response rate in 1981 was 94 percent. This rate must be viewed in conjunction with the 96 percent response rate on the monthly Current Population Survey. The overall response rate for the PAE survey in 1981 is then 90 percent.

Substantial changes were made in the 1975 and 1978 surveys to include participants taking part-time instruction who were also full-time students in programs leading toward a high school diploma or college degree. Also, courses taken by adults as full-time students in vocational or occupational programs of 6 months or more duration were excluded. Because of the changes in definitions from 1969 to 1981, only the most basic statistics can be presented over time.

As previously noted, a second source of variability in estimates obtained from a sample survey is in the sampling. That is, there would be no sampling variability in a complete census. Examples of the sampling variability in the estimates from the PAE survey are given in the Tables A4 and A5.

The figures shown in the tables hold for total or white population estimates only. The variability in estimates for subgroups, employment status, income, education, etc., can be estimated using the tables presented in the original source documents.

The contact person at NCES for further information concerning the PAE survey is:

Thomas Litkowski

Adult and Vocational Surveys and Studies Branch
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

Fast Response Survey System.

The Fast Response Survey System (FRSS) was established by NCES so that education data, needed within the Department of Education (ED) for planning and policy formulation, could be collected quickly and with minimum burden on respondents. FRSS provides preliminary estimates in as little as 4 months after the questionnaire has been developed. It accomplishes this by using small, preselected, general-purpose national samples, prearranged data collection procedures, and short, easily answerable questionnaires. Since the inception of the FRSS, 16 surveys have been conducted. Three recent surveys used in this report are discussed below. For further information contact:

Doug Wright
Fast Response Survey System
National Center for Education Statistics
400 Maryland Ave., S.W.
Washington, D.C. 20202

Instructional Use of Computers in Public Schools— 1981-82

The Instructional Use of Computers Survey was requested by the Office of Educational Research and Improvement (ED) to provide a better understanding of the use of computers for instructional purposes in public elementary/secondary schools.

In April 1982, questionnaires were mailed to a stratified random sample of 900 schools representing 82,000 public schools in the Nation. The response rate was 92 percent. The estimates were adjusted for nonresponse and standard errors were calculated. The estimates involving microcomputers are generally more precise than those concerning computer terminals, since there are more than 4 times as many schools with microcomputers than with terminals.

For statistics on microcomputer usage at the national level, the coefficients of variation (CV's) ranged from 9 percent for the proportion of schools indicating computer literacy as a major instructional use to 15 percent for those schools indicating compensatory and remedial uses. For the major uses of microcomputers by grade

level cited in the text, the CV's range from 11 to 17 percent. This means that for a given statistic, 9 to 17 percent of its estimated value may be attributable to sampling variation.

To derive the standard error, multiply the estimate by the coefficient of variation. The 95-percent confidence interval could then be constructed using the estimates of the statistic plus or minus twice its standard error. Thus, the standard error for the estimate of 33 percent of schools reporting computer literacy as a major instructional use would be $.09(33) = 3$ and 2 standard errors away from the estimate would be ± 6 . The confidence interval would be 33 ± 6 or 27 to 39 percent. If these sampling procedures for this survey were repeated 100 times, the confidence intervals around the estimate would include the true population value in 95 cases.

School District Survey of Academic Requirements and Achievement

The Survey of Academic Requirements and Achievement collected information on high school standards and achievement and school district efforts to improve academic achievement. It was conducted for the National Commission on Excellence in Education in preparation for its report on improving academic achievement to the Secretary of Education.

The estimates are based on a stratified systematic sample of 570 school districts representing 11,370 school districts with high schools. Questionnaires were mailed out in August 1982. The response was 93 percent and estimates have been adjusted to account for nonresponse. For national estimates, the coefficients of variation are 8 percent or less for estimated percentages of 27 percent or more and are proportionally larger for estimated percentages of less than 27 percent. For regional data, based on fewer districts, the CV's are larger: up to 20 percent for estimates of 27 percent or more.

Survey of Schools, Colleges, and Departments of Teacher Education

The Survey of Teacher Education was requested by the National Commission on Excellence in Education to pro-

vide nationally representative data on measures to improve teacher education preferred by teacher preparation programs and baseline data on current graduation requirements.

The sampling frame consisted of all institutions of higher education with a school, college, or department of education. Of the 450 institutions selected in a stratified random sample, 420 were in scope. In November 1982, the sample questionnaires were mailed, with a resulting response rate of 92 percent. The sample weights were adjusted for nonresponse, and the estimates calculated, along with their measures of precision. For national estimates, the coefficients of variation (CV's) for the percent of schools with a high preference for various measures to improve teacher candidate quality range from 6 percent for making the curriculum more rigorous (52 percent) to 10 percent for extending the undergraduate program (14 percent). The CV's for implementing these same measures range from 3 percent to 20 percent. The CV's for high preference of various measures to improve curriculum range from 8 percent to 12 percent, while those for adverse financial effect range from 8 percent to 10 percent. For further breakdowns of the national data, the CV's would be higher.

National Institute of Education

National Assessment of Educational Progress

The National Assessment of Educational Progress (NAEP) is a project funded by the National Institute of Education and carried out by the Education Commission of the States. The overall goal of the project is to determine the Nation's progress in education. To accomplish this goal, a cross-sectional study was designed and initially implemented in 1969. Each year since 1969, National Assessment has gathered information about levels of education achievement across the country. NAEP surveys the education attainments of 9-, 13-, and 17-year-olds and young adults (ages 25 to 35) in 10 learning areas. Different learning areas are assessed every year, and all areas are periodically reassessed in order to measure possible changes in education achievement.

A multi-stage probability sample is utilized by NAEP. The primary sampling units are stratified by region, and

within region by State, size of community, and for the two smaller sizes of community strata, by socioeconomic level.

Students participating in the project are administered instruments designed to assess the student attainment of specific tasks. Assessment exercises are administered either to individuals or small groups by specially trained personnel. Information from NAEP is subject to both nonsampling and sampling error. Two possible sources of nonsampling error are nonparticipation and instrumentation. Nonparticipation is held to a minimum through oversampling, although this does not assess the bias of nonparticipants. Instrumentation nonsampling error concerns whether the NAEP assessment instruments measure what is being taught and in turn what is being learned by the students.

If questions exist concerning NAEP, contact:

Wayne Martin

National Assessment of Educational Progress

Education Commission of the States

1860 Lincoln Street

Suite 700

Denver, Colorado 80295

Office for Civil Rights

Civil Rights Survey of Elementary and Secondary Schools

The Fall 1980 Civil Rights Survey of Elementary and Secondary Schools, a study contracted through DBS Corporation, was conducted to obtain data on the characteristics of students enrolled in public schools throughout the Nation. The information is required by the Office for Civil Rights (OCR) to fulfill its responsibilities under Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. The survey provides information on minority, handicapped, and limited-English-proficient enrollments, disciplinary actions, the composition of the graduating class, and participation in programs for exceptional children.

Some 5,000 school districts and 51,000 individual schools participated. School districts were not randomly

selected; rather, districts warranting continued monitoring based on the 1978 survey were chosen, as well as a random sample of remaining districts with at least 300 students.

Further information is available from:

Nancy Russell
Surveys and Data Analysis Branch
Office for Civil Rights
400 Maryland Ave., S.W.
Washington, D.C. 20202

Bureau of the Census

Quarterly Summary of State and Local Tax Revenue

State tax revenue data shown in this report are collected as part of the Quarterly Summary of State and Local Tax Revenue through mailed surveys of appropriate State offices. In some instances, data were compiled by trained representatives of the Bureau of the Census from official State records.

The concept of "taxes" is comprised of all compulsory contributions exacted by a government for public purposes, except employer and employee assessments for retirement and social insurance purposes, which are classed as insurance trust revenue. Outside the scope of this report, accordingly, are collections for the unemployment compensation "taxes" imposed by each of the State governments and the District of Columbia. Included, however, are all receipts from licenses and compulsory fees, including those which are imposed for regulatory purposes as well as those designed to provide revenue.

Tax revenue is defined to include related penalty and interest receipts, but to exclude protested amounts and refunds. The deduction from gross collections of amounts refunded is particularly significant with respect to motor fuel sales taxes ("gasoline" taxes).

Data are subject to possible inaccuracies in classification, response, and processing. Every effort is made to keep such errors to a minimum through care in examining, editing, and tabulating the data.

More detailed figures on State tax revenue, with definitions of particular types of taxes, appear in the annual reports, *State Government Tax Collections* and *State Government Finances*.

Further information is available from:

Donna Hirsch
Governments Division
Bureau of the Census
Washington, D.C. 20233

Survey of Local Government Finances

The Survey of Local Government Finances collects detailed data on the finances of local public school systems. The report form was developed jointly by NCEC and the Governments Division of the Bureau of the Census, and the Census Bureau was responsible for the data collection. The data were obtained via the cooperation of State Education Agencies (SEA's). In most cases, SEA's transmitted the data to the Census Bureau by means of computer tapes, tabulations, or report forms. In a few instances, Census Bureau staff went to the SEA to collect the data from files. States had the option of providing data for all their school districts or for a sample selected by the Census Bureau. Most opted to provide data for all their districts. Data editing was done by Census Bureau staff.

For further information, contact:

Lawrence MacDonald
Governments Division
Bureau of the Census
Washington, D.C. 20233

Gallup Poll

Annual Survey of the Public's Attitudes Toward the Public Schools

This is the 14th "Annual Survey of the Public's Attitudes Toward the Public Schools" conducted by the Gallup Poll. The survey uses a modified probability sample to produce an approximation of the noninstitutional civilian population, 18 years and older, living in the United

States. Personal, in-home interviews were conducted with 1,557 adults in all areas of the Nation and in all types of communities in May 1982. Allowance for persons not at home was made by a "times-at-home" weighting procedure rather than by "callbacks". This procedure is a standard method for reducing the sample bias that would otherwise result from underrepresentation in the sample of persons who are difficult to find at home.

The estimates obtained from the annual survey of attitudes toward public schools are subject to both sampling and nonsampling error. Nonsampling error could result from any of the general sources previously listed. In addition, nonsampling error often occurs in attitude surveys due to the specific times that the survey was taken. Attitudes can be significantly affected by events that impinge on the respondents immediately prior to the survey. Considering sampling error, Tables A6 and A7 show how much allowance should be made for the sampling error of a percentage and a difference, respectively.

If questions exist concerning the Annual Survey of the Public's Attitudes Toward the Public Schools, they can be directed to:

George Gallup
Public Opinion Surveys, Inc.
53 Bank Street
Princeton, New Jersey 08540

National Education Association

Status of the American Public School Teacher

Status of the American Public School Teacher is a survey conducted every 5 years by the National Education Association (NEA). The survey was designed by the NEA Research Division and initially administered in 1956. The intent of the survey is to solicit information covering various aspects of public school teachers' professional, family, and civic lives.

Selection of participants for the survey is accomplished using a two-stage sample design, with the first stage stratum being determined by the number of students enrolled in the districts. Selection probabilities are deter-

mined so that the resulting sample is self-weighting. In 1980-81, a sample of 1,768 was selected from the approximately 2,185,000 public school teachers and 1,326 usable replies were obtained. This yielded a response rate of 75 percent.

Possible sources of nonsampling error are nonresponses, misinterpretation, and, when comparing data over years, changes in the sampling method and instrument. Misinterpretation of the survey items should be minimal, as the sample responding is not from the general population but one knowledgeable about the area of concern. With the sampling procedure changed after 1956 and some wording of items changed over the different administrations, care is taken to present only comparable data.

Since sampling is used, sampling variability is inherent in the data. An approximation to the maximum standard error for estimating population percentages is 1.4 percent. To estimate the population percentage with 90 percent confidence, the maximum standard error of 1.4 percent is multiplied by 1.65 ($0.014 \times 1.65 = 0.023$) to produce the largest error associated with any single sample proportion (2.3 percent). For example, if a sample percentage is 60 percent, there is a 90 percent chance that the population percentage lies between 57.7 percent and 62.3 percent (60 percent \pm 2.3 percent).

If comparisons of two percentages are to be made, Table A8 gives maximum differences for significance at the 90-percent-confidence level.

If questions exist concerning the Status of the American Public School Teacher Survey, they can be directed to:

Suzanne Gardner
National Education Association
Research Division
1201 16th Street, N.W.
Washington, D.C. 20036

American Council on Education

American Freshman Survey

Sponsored by the American Council on Education (ACE), the annual survey of college freshmen is admin-

istered through the Cooperative Institutional Research Program at the University of California, Los Angeles. Since 1966 the survey has collected biographic and demographic data on career plans, educational aspirations, financial arrangements, and current attitudes of the Nation's entering freshman classes. The 1982 survey obtained usable information from 188,692 freshmen in 350 participating institutions of higher education. Of 2,747 institutions invited to participate, 508 (18 percent) chose to participate. Although forms were returned by 492 institutions (97 percent), only data from the 350 institutions whose coverage of entering students was judged representative were used. The data obtained from students were differentially weighted because of the disproportionate sampling of institutions and because not all students completed forms at each college. The major stratifying factors include racial predominance, type, control, and selectivity of institutions. The weighted data reflect the responses of first-time, full-time freshmen obtained during the initial weeks of the fall term.

A full discussion of the design and sampling procedures is provided in *The American Freshman: National Norms For Fall, 1982*, available from:

Cooperative Institutional Research Program
University of California, Los Angeles
Los Angeles, California 90024

National Center for the Study of Collective Bargaining in Higher Education and the Professions

Directory of Faculty Contracts and Bargaining Agents in Institutions of Higher Education

The Directory of Faculty Contracts and Bargaining Agents is a project of the National Center for the Study of

Collective Bargaining in Higher Education and the Professions, a clearinghouse for information on collective bargaining. The universe for institutions included in the *Directory* are all 2-year and 4-year institutions listed in NCES's *Education Directory*. The sources for information include research surveys, telephone interviews, and abstracting of all prior *Directories*.

The data refer to the total number of recognized bargaining agents and the number of collective bargaining agreements with bargaining agents in the United States according to available information. A bargaining agent is an organization such as the National Education Association, American Federation of Teachers, etc., recognized by the institution either voluntarily or through agent elections as representing the interests of faculty in collective bargaining. As long as the certificate of recognition is in effect, the institution is designated as having a bargaining agent, even if no collective bargaining has ever taken place. Multi-campus units have been counted as a single institution with a single bargaining agent unless the individual campuses have separate agreements and bargaining agents, in which case they are treated as separate institutions. If there is more than one bargaining unit and recognized bargaining agent in any particular institution, the total number of bargaining agents elected in that institution was used.

Further information can be obtained from:

Joel M. Douglas
National Center for the Study of Collective Bargaining
in Higher Education and the Professions
Baruch College
City University of New York
17 Lexington Ave., Box 322
New York, New York 10010

Table A1

Estimated Percent Participating in Selected Programs of the High School and Beyond Study

Subgroup	Estimated Percent	Standard Error of Estimated Percent	90-Percent Confidence Interval
All students	10 (or 90)	0.3	9.5-10.5 (89.5-90.5)
or whites	30 (or 70)	.4	29.3-30.7 (69.3-70.7)
	50	.5	49.2-50.8
Males or	10 (or 90)	.4	9.4-10.6 (89.4-90.6)
females	30 (or 70)	.6	29.0-31.0 (69.0-71.0)
	50	.6	49.0-50.0
Blacks	10 (or 90)	.7	8.8-11.2 (88.8-91.2)
	30 (or 70)	1.1	28.2-31.8 (68.2-71.8)
	50	1.2	48.1-51.9
Hispanics	10 (or 90)	.8	8.7-11.3 (88.7-91.3)
	30 (or 70)	1.2	28.0-32.0 (68.0-72.0)
	50	1.3	47.8-52.2

Table A2**Coefficients of Variation for Estimates of Bachelor's Recipients, From the 1978 Recent College Graduates Survey**

Percentage of Graduates in Subgroup	Special and Vocational Education N = 31,800	All Education N = 133,500	Non-education N = 764,300	Total N = 897,800
5	.229	.154	.087	.076
10	.158	.106	.060	.053
15	.125	.084	.047	.042
20	.105	.071	.040	.035
25	.091	.061	.034	.030
30	.080	.054	.030	.027
40	.064	.043	.024	.021
50	.053	.035	.020	.018
60	.043	.029	.016	.014
70	.034	.023	.013	.011
80	.026	.018	.010	.009
90	.018	.012	.007	.006
95	.012	.008	.005	.004

Table A3

**Coefficients of Variation for Estimates of Bachelor's Recipients, From the
1981 Recent College Graduates Survey**

Percentage of Graduates in Subgroup	Special and Vocational Education N = 31,900	All Education N = 117,200	Non- Education N = 788,500	Total N = 905,700
5	.190	.137	.099	.086
10	.132	.096	.068	.059
15	.106	.077	.054	.047
20	.091	.066	.046	.039
25	.080	.058	.040	.034
30	.072	.052	.035	.030
40	.060	.044	.028	.024
50	.052	.038	.023	.020
60	.045	.034	.019	.016
70	.040	.030	.016	.013
80	.036	.027	.012	.010
90	.032	.024	.009	.007
95	.030	.023	.007	.005
100	.028	.022	.005	.003

Table A4

**Estimated Number Participating, From the Participation in Adult
Education Survey**

Estimate (in Thousands)	Standard Error	90-Percent-Confidence Interval
10	4.5	2.8 to 17.2
50	10.2	33.7 to 66.3
500	30	452 to 548
50,000	253	49,595 to 50,405

Table A5

Estimated Percent Participating, From the Participation in Adult Education Survey

Estimate	Base of Percentage (in Thousands)	Standard Error	90-Percent-Confidence Interval
1 (or 99*)	50 5,000	2.4 .2	0 to 4.8 0.67 to 1.3
10 (or 90*)	50 5,000	7.1 .7	0 to 21.4 8.9 to 11.1
50	50 5,000	11.8 1.2	31.1 to 68.9 48.1 to 51.9

*The confidence interval for the larger values can be found by taking the complement of that shown, e.g., for 99 it would be 95.2 to 100.

Table A6

Recommended Allowance for Sampling Error of a Percentage in the Annual Survey of the Public's Attitudes Toward the Public Schools

Percentage	In Percentage Points (at 95 in 100 Confidence Level)						
	Sample Size						
	1,500	1,000	750	600	400	200	100
Percentages near 10	2	2	3	3	4	5	7
Percentages near 20	2	3	3	4	5	7	9
Percentages near 30	3	4	4	4	6	8	10
Percentages near 40	3	4	4	5	6	8	11
Percentages near 50	3	4	4	5	6	8	11
Percentages near 60	3	4	4	5	6	8	11
Percentages near 70	3	4	4	4	6	8	10
Percentages near 80	2	3	4	4	5	7	9
Percentages near 90	2	2	3	3	4	5	7

If comparisons are made across populations surveyed, the sampling variability shown in Table A7 should be considered.

Table A7

Recommended Allowance for Sampling Error of the Difference in the Annual Survey of the Public's Attitudes Toward the Public Schools

In Percentage Points (at 95 in 100 Confidence Level)				
Percentages Near 20 or Percentages Near 80				
Size of Sample	750	600	400	200
750	5			
600	5	6		
400	6	6	7	
200	8	8	8	10

Percentages Near 50				
Size of Sample	750	600	400	200
750	6			
600	7	7		
400	7	8	8	
200	10	10	10	12

Table A8

Maximum Differences Required for Significance (90-Percent-Confidence Level) Between Sample Subgroups of the Status of the American Public School Teacher Survey

Size of One Subgroup	Size of Other Subgroup						
	100	200	300	400	500	600	700
100	11.6	10.1	9.5	9.2	9.0	8.9	8.8
200	10.1	8.2	7.5	7.1	6.9	6.7	6.6
300	9.5	7.5	6.7	6.3	6.0	5.8	5.7
400	9.2	7.1	6.3	5.8	5.5	5.3	5.2
500	9.0	6.9	6.0	5.5	5.2	5.0	4.8
600	8.9	6.7	5.8	5.3	5.0	4.7	4.6
700	8.8	6.6	5.7	5.2	4.8	4.6	4.4

Definitions of Selected Terms

The following terms are defined as they generally apply in the text. Readers interested in more technical, detailed definitions should refer to the appropriate National Center for Education Statistics (NCES) Handbook.

Academic program: A program of studies designed primarily to prepare students for college.

Achievement test: An examination that measures the extent to which a person has acquired certain information or mastered certain skills, usually as a result of specific instruction.

Adult education: Courses and other organized educational activities taken by persons 17 years of age and over, excluding courses taken by full-time students in programs leading toward a high school diploma or an academic degree and occupational programs of 6 months or more duration. It includes all courses taken for credit by part-time students. Providers of instruction include not only public and private educational institutions, but also business and industry, governmental agencies, private community organizations, and tutors. (The definition applies specifically to data from the NCES Participation in Adult Education Survey).

Advanced/honors courses: Special accelerated courses for students who have achieved a high standard of performance in a special subject area or who had generally high scholarship.

Area vocational center: A shared-time facility that provides instruction only in vocational education to students from throughout a school system or region. Students attending an area vocational center receive the academic portion of their education program in regular secondary schools or other institutions.

Assessment area: A particular aspect of behavior or ability which is evaluated or appraised by means of a test or other measurement instrument.

Average annual percent change: As used in the State tax revenues entry, average annual percent change is calculated using the compound interest formula: $F = P(1 + i)^n$, where F = the final compound amount, P = the original principal, i = the interest rate per conversion period, and

n = the number of conversion periods. In all other entries, it is a simple average.

Bachelor's degree: A degree granted for the successful completion of a baccalaureate program of studies, usually requiring at least 4 years (or equivalent) of full-time college-level study.

Bilingual/bicultural: A special language services program (i.e., English-as-a-Second-Language or High Intensity Language Training) or any non-language class taught in a language other than English.

Central cities: The largest city with 50,000 or more inhabitants in a Standard Metropolitan Statistical Area (SMSA). A smaller city within an SMSA may also qualify if it has at least 25,000 inhabitants or has a population of one-third or more of that of the largest city and a minimum population of 25,000. An exception occurs where two cities have contiguous boundaries and constitute, for economic and social purposes, a single community of at least 50,000, the smaller of which must have a population of at least 15,000.

Civilian labor force: All persons in the labor force, who are not in the Armed Forces, whether they are classified as employed or unemployed.

Classroom teacher: A staff member assigned the professional activities of instructing students, in classroom situations, for which daily student attendance figures for the school system are kept.

Collective bargaining agent: An organization such as the National Education Association, American Federation of Teachers, etc., recognized by the institution, either voluntarily or through agent elections, as representing the interests of faculty in collective bargaining.

College: A postsecondary school which offers general or liberal arts education, usually leading to a first degree. Junior colleges and community colleges are included under this terminology.

College enrollment: Enrollment in a course that leads to a bachelor's, master's, professional, or doctorate degree, excluding vocational certification.

Competency-based certification: The general process by which the State (or agency or organization authorized by the State) provides a credential to an individual. Processes may require individuals to demonstrate a mastery of minimum essential generic and specialization competencies and other related criteria adopted by the board through a comprehensive written examination and through other procedures that may be prescribed by the board of educational examiners.

Computer-assisted instruction: Programmed instruction utilizing an electronic computer as the principal medium of instruction.

Comprehensive secondary school: A general secondary school offering programs in both vocational and general academic subjects, but in which the majority of the students are not enrolled in programs of vocational education.

Constant dollars: Dollar amounts that have been adjusted by means of price and cost indexes to eliminate inflationary factors and allow direct comparison across years.

Core current expenditures: Measure of total expenditures excluding transportation and food service costs, used in interstate comparisons.

Corporal punishment: Infliction of physical punishment to the body of a student by a school employee for disciplinary reasons.

Current dollars: Dollar amounts that have not been adjusted to compensate for inflation.

Current funds expenditures (higher education): Money spent to meet current operating costs, including salaries, wages, utilities, student services, public service, research, libraries, scholarships and fellowships, auxiliary enterprises, hospitals, and independent operations. Excludes loans, capital expenditures, and investments.

Current funds revenues: Money received during the current fiscal year from revenue which can be used to pay obligations currently due, and surpluses reappropriated for the current fiscal year.

Doctor's degree: An earned degree carrying the title of Doctor. The Doctor of Philosophy degree (Ph.D.) is the highest academic degree, and requires mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctorates are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.), musical arts (D.M.A.), business administration (D.B.A.), and engineering (D.Eng. or D.E.S.). Many doctor's degrees in both academic and professional fields require an earned master's degree as a prerequisite. First-professional degrees, such as M.D. and D.D.S., are counted separately and are not included under this heading.

Dropouts: Persons not enrolled in school and not high school graduates.

Education major: A student whose program of studies gives primary emphasis to subject matter in the area of education and who, according to his/her institutional requirements, concentrates a minimum number of courses or semester hours of college credit in the specialty of education.

Educational attainment (years of school completed): The highest grade of regular school attended and completed.

Elementary school: A school classified as elementary by State and local practice and composed of any span of grades not above grade 8. A preschool or kindergarten school is included under this heading only if it is an integral part of an elementary school or a regularly established school system.

Employed: All civilians who did any work at all as paid employees, or who worked in their own business or profession or on their own farm, or who worked 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family. The employed include as well all those who were not working but who had jobs or businesses from which they were temporarily absent, whether or not they were paid for time off by their employers, and whether or not they were seeking other jobs.

Endowment: The portion of an institution's income derived from donations.

Enrollment: The total number of entering students in a given school unit.

Expenditures: Charges incurred, whether paid or unpaid, which are presumed to benefit the current fiscal year. For elementary/secondary schools, these include all charges for current outlays for education, plus capital outlays and interest on school debt. For institutions of higher education, these include current outlays plus capital outlays. For government, these include charges net of recoveries and other correcting transaction—other than for retirement of debt, investment in securities, extension of credit, or as agency transactions. Government expenditures include only external transactions, such as the provision of perquisites or other payments in kind. Aggregates for groups of governments exclude intergovernmental transactions among the governments.

Expenditures per student: Charges incurred for a particular period of time divided by a student unit of measure, e.g., average daily attendance or average daily membership.

Expulsion: The action, taken by school authorities, compelling a student to withdraw from school for reasons such as extreme misbehavior, incorrigibility, or unsatisfactory achievement or progress in school work.

First-professional degree: A degree that signifies both (a) completion of the academic requirements for beginning practice in a given profession and (b) a level of professional skill beyond that normally required for a bachelor's degree. This degree usually is based on a program requiring at least 2 academic years of work prior to entrance and a total of at least 6 academic years of work to complete the degree program, including both prior-required college work and the professional program itself. First-professional degrees are awarded in fields such as dentistry (D.D.S. or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), podiatric medicine (D.P.M.), veterinary medicine (D.V.M.), law (J.D.), and theological professions (M.Div. or M.H.L.).

First-time college students: Students not previously enrolled in any institution of higher education.

Full-time-equivalent enrollment: Enrollment of full-time and the equivalent part-time students as reported by the institution or as computed by adding one-third of part-time to full-time enrollment.

Full-time personnel: Employees whose positions require them to be on the job on school days throughout the school year, at least the number of hours the schools are in session; or, for higher education, those members of the staff of an educational institution who are employed on a full-time basis and whose major regular assignment is instruction.

Full-time student (higher education): Students enrolled in courses with total credit equal to at least 75 percent of the normal full-time course load.

General educational development (GED) program: Academic instruction to prepare persons to take the high school equivalency examination.

General program: A program of studies designed to prepare students for the common activities of persons as citizens, family members, and workers. A general program of studies may include instruction in both academic and vocational areas.

GED recipients: Persons who have obtained certification of high school equivalency because they have met State requirements and passed an approved exam, which is intended to provide an appraisal of their achievement or performance in the broad subject matter areas usually required for high school graduation.

Geographic regions: 1) Regions used by the U.S. Department of Commerce, Bureau of Economic Analysis, and by the National Assessment of Educational Progress, as follows:

<i>Northeast</i>	<i>Southeast</i>
Connecticut	Alabama
Delaware	Arkansas
District of Columbia	Florida
Maine	Georgia
Maryland	Kentucky
Massachusetts	Louisiana

New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Central

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

Mississippi
North Carolina
South Carolina
Tennessee
Virginia
West Virginia

West

Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oklahoma
Oregon
Texas
Washington
Wyoming

South
(South Atlantic)
Delaware
Maryland
District of Columbia
Virginia
West Virginia
North Carolina
South Carolina
Georgia
Florida

(East South Central)

Kentucky
Tennessee
Alabama
Mississippi
(West South Central)
Arkansas
Louisiana
Oklahoma
Texas

West
(Mountain)
Montana
Idaho
Wyoming
Colorado
New Mexico
Arizona
Utah
Nevada

(Pacific)

Washington
Oregon
California
Alaska
Hawaii

2) Regions and divisions used by the U.S. Department of Commerce, Bureau of the Census, in Current Population Survey tabulations, as follows:

Northeast

(New England)
Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut

(Middle Atlantic)

New York
New Jersey
Pennsylvania

North Central

(East North Central)
Ohio
Indiana
Illinois
Michigan
Wisconsin

(West North Central)

Minnesota
Iowa
Missouri
North Dakota
South Dakota
Nebraska
Kansas

3) Regions used by the National Education Association, as follows:

Northeast

Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Middle

Illinois
Indiana
Iowa

Southeast

Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Virginia
West Virginia

West

Alaska
Arizona
California

Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oklahoma
Oregon
Texas
Utah
Washington
Wyoming

Gifted/talented: Students who by virtue of outstanding abilities are capable of high performance and who require differentiated educational programs and/or services beyond those normally provided by the regular school program.

Handicapped: A "handicapped" person is one who has one or more of the exceptionalities defined below, whether or not he/she requires special education.

Educable mentally retarded: A condition of mental retardation which includes students who are educable in the academic, social, and occupational areas even though moderate supervision may be necessary.

Trainable mentally retarded: A condition of mental retardation which includes students who are capable of only very limited meaningful achievement in the traditional basic academic skills but who are capable of profiting from programs of training in self-care and simple job or vocational skills.

Hard of hearing: A hearing impairment, whether permanent or fluctuating, which adversely affects a student's educational performance but which is not included under the definition of "deaf" in this section.

Deaf: A hearing impairment which is so severe that the student is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

Speech impaired: A communication disorder, such as stuttering, impaired articulation, a language impair-

ment, or a voice impairment, which adversely affects a student's educational performance.

Visually handicapped: A visual impairment which, even with correction, adversely affects a student's educational performance. The term includes both partially seeing and blind children.

Seriously emotionally disturbed: A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: an inability to learn which cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; or a tendency to develop physical symptoms or fears associated with personal or school problems. The term includes children who are schizophrenic or autistic.

Orthopedically impaired: A severe orthopedic impairment which adversely affects a student's educational performance. The term includes impairments caused by congenital anomaly, disease, and from other causes.

Other health impaired: Limited strength, vitality, or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a student's educational performance.

Specific learning disabled: A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.

Deaf-blind: Concomitant hearing and visual impairments the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf or blind students.

Multihandicapped: Concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind students. This category includes those students who are severely or profoundly mentally retarded.

High school: A secondary school offering the final years of high school work necessary for graduation, usually including grades 10, 11, 12 (in a 6-3-3 plan) or grades 9, 10, 11, and 12 (in a 6-2-4 plan).

Higher education: Study beyond the secondary school level at an institution that offers programs terminating in an associate, baccalaureate, or higher degree.

Higher education institutions (new classification):

Doctoral-granting: These institutions are characterized by a significant level and breadth of activity in and commitment to doctoral-level education as measured by the number of doctorate recipients and the diversity in doctoral-level program offerings.

Comprehensive: These institutions are characterized by diverse post-baccalaureate programs (including first-professional), but do not engage in significant doctoral-level education.

General baccalaureate: These institutions are characterized by their primary emphasis on general undergraduate, baccalaureate-level education. They are not significantly engaged in post-baccalaureate education.

Specialized: These baccalaureate or post-baccalaureate institutions are characterized by a programmatic emphasis in one area (plus closely related specialties),

such as business or engineering. The programmatic emphasis is measured by the percentage of degrees granted in the program area.

2-year: These institutions confer at least 75 percent of their degrees and awards for work below the bachelor's level.

Non-degree granting: These institutions offer undergraduate or graduate level study, but do not confer degrees or awards.

Higher education institutions (traditional classification):

4-year institutions: A higher education institution legally authorized to offer and offering at least a 4-year program of college-level studies wholly or principally creditable toward a baccalaureate degree. Within this category, a university is a postsecondary institution which typically comprises one or more colleges and one or more graduate professional schools.

2-year institutions: A higher education institution legally authorized to offer and offering at least a 2-year program of college-level studies which terminates in an associate degree or is principally creditable toward a baccalaureate degree.

Junior high school: A separately organized and administered secondary school intermediate between the elementary and senior high schools, usually including grades 7, 8, and 9 (in a 6-3-3 plan) or grades 7 and 8 (in a 6-2-4 plan).

Labor force: All persons who are either employed as civilians, unemployed, or in the Armed Forces during a specified time.

Labor force participation rate: The percent of the civilian noninstitutional population in the labor force.

Limited-English proficient (LEP): Students who have limited ability to understand, speak, or read English and who have a primary or home language other than English.

Master's degree: An earned degree carrying the title of Master. One type of Master's degree—including the

Master of Arts degree (M.A.) and the Master of Science degree (M.S.)—usually is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally-oriented program (e.g., in education (M.Ed.), in business administration (M.B.A.), in fine arts (M.F.A.), in music (M.M.), in social work (M.S.W.), in public administration (M.P.A.), and in other fields). A third type of master's degree is awarded in professional fields for study beyond the first-professional degree (e.g., the Master of Laws (LL.M.) and Master of Science in various medical specializations).

Mean test score: The score obtained by dividing the total sum of scores of all individuals in a group by the number of individuals in that group.

Metropolitan-nonmetropolitan residence: The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. Except in New England, an SMSA is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county, or counties, containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England SMSA's consist of towns and cities, rather than counties.

Migration: Movement of students into or out of State to attend college. Net migration equals the number of students who come into a State minus the number of students who leave the home State to attend college.

Minimum competency testing: Measuring the acquisition of competence or skills to or beyond a certain specified standard.

Newly qualified teacher: A person who has met the specific requirements of a State or other authorizing agency, has received certification from a State, regional,

or national accrediting body, and thus is considered eligible and qualified to instruct students.

Noncollegiate postsecondary school with occupational programs: A non-degree granting institution (or an institution offering a degree that is not recognized as a collegiate degree by the appropriate regional accrediting commission) offering instruction in vocational and technical education only, and whose educational programs are terminal in nature. Such institutions generally have no provision for the development of transfer programs to either 2-year or 4-year institutions of higher education.

Not in the labor force: Any civilian, 14 years old or over, who is not classified as employed or unemployed (i.e., seeking work), including any person engaged only in own-home housework, attending school, or unable to work because of long-term physical or mental illness; persons who are retired or too old to work; seasonal workers for whom the survey week fell in an off-season; and the voluntarily idle.

Part-time students: Students who are carrying less than a full course load, as determined by the State, local school system, or institution.

Preprimary program: A set of organized educational experiences for children attending prekindergarten and kindergarten classes including Head Start programs.

Primary school: A separately organized and administered, elementary school for students in the lower elementary grades, usually including grade 1 through grade 3 or the equivalent, and sometimes including preprimary years.

Private school: A school which is controlled by an individual or by an agency other than a State, a subdivision of a State, or the Federal government, usually which is supported primarily by other than public funds, and the operation of whose program rests with other than publicly elected or appointed officials.

Proprietary school: An educational institution that is under private control and whose profits derived from revenues are subject to taxation.

Public school: A school operated by publicly elected or appointed school officials in which the program and activities are under the control of these officials and which is supported primarily by public funds.

Racial/ethnic group: Classification indicating general racial or ethnic heritage based on self-identification as in data collected by the Bureau of the Census or on observer identification as in data collected by the Office for Civil Rights. These categories are in accordance with the Office of Management and Budget standard classification scheme presented below:

White: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Black: A person having origins in any of the black racial groups of Africa.

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

American Indian or Alaskan Native: A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

Regular day school: State-approved elementary/secondary school offering at least one grade beyond kindergarten, attended by students during a part of the day, as distinguished from a residential school. Not included in this category are residential schools for exceptional children, Federal schools for Indians, federally operated schools on Federal installations, and subcollegiate departments of institutions of higher education.

Religiously affiliated school: A private school which in most cases a parent church group exercises some control over or provides some form of subsidy to the school. Catholic schools include those affiliated with the Roman

Catholic Church, including the "private" Catholic schools operated by religious orders. Other affiliation includes schools associated with other religious denominations. An unaffiliated school is usually privately operated or under control of a board of trustees or directors.

Remedial courses: Planned diagnostic and remedial activities for individual students or groups of students, designed to correct and prevent further learning difficulties which interfere with the student's expected progress in developing skills, understandings, and appreciations in any of several required courses.

Revenues: All funds received from external sources, net of refunds, and correcting transactions. Noncash transactions such as receipt of services, commodities, or other receipts "in kind" are excluded, as are funds received from the issuance of debt, liquidation of investments, and nonroutine sale of property.

Salary: The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

School: A division of the school system consisting of students comprising one or more grade groups or other identifiable groups, organized as one unit with one or more teachers to give instruction of a defined type, and housed in a school plant of one or more buildings.

School district: An educational agency at the local level that exists primarily to operate public schools or to contract for public school services. This term is used synonymously with the terms "local basic administrative unit" and "local education agency".

Secondary school: A school comprising any span of grades beginning with the next grade following an elementary or middle school and ending with or below grade 12.

Senior high school: A secondary school offering the final years of high school work necessary for graduation and invariably preceded by a junior high school.

Source of funds: Identifies the agency, governmental or otherwise, which appropriates the money used by a local school or local educational agency.

Special education: Direct instructional activities or special learning experiences designed primarily for students identified as having exceptionalities in one or more aspects of the cognitive process and/or as being under-achievers in relation to the general level or mode of their overall abilities. Such services usually are directed at students with the following exceptionalities: (1) physically handicapped; (2) emotionally handicapped; (3) culturally different, including compensatory education; (4) mentally retarded; (5) students with learning disabilities. Programs for the mentally gifted and talented are also included in some special education programs.

Standardized test: A test composed of a systematic sampling of behavior, having data on reliability and validity, administered and scored according to specific instructions, and capable of being interpreted in terms of adequate norms.

State educational agency operations: Activities performed for the purpose of executing the responsibilities of the State educational agency, an organization established by law for the primary purpose of carrying out at least a part of the educational responsibilities of a State.

Student: An individual for whom instruction is provided in an educational program under the jurisdiction of a school, school system, or other educational institution. No distinction is made between the term "student" and "pupil"; the term "student" is used to include individuals at all instructional levels.

Student education expenditures (higher education): Expenditures for formal instruction and activities that are most closely related to instruction. Includes instruction and research that are part of regular instructional services (departmental research), extension and public service, libraries, physical plant operation and maintenance, general administration, and other sponsored activities.

Suspension: Temporary dismissal of a student from school by duly authorized school personnel in accordance with established regulations.

Teacher preparation programs: As used in this publication, departments, schools, and institutions of higher education that confer degrees in education.

Teaching candidate: A student taking a course of studies which is designed to prepare him/her for the teaching profession and which usually leads to the attainment of a teaching certificate, approved by a State, regional, or national accrediting body.

Tuition and fees: A payment or charge for instruction, or compensation for services, privileges, or for the use of equipment, books, or other goods.

Unclassified students (higher education): Students not candidates for a degree or other formal award, although taking courses for credit in regular classes with other students.

Undergraduate students (higher education): Students registered at an institution of higher education who have not completed requirements for a bachelor's degree.

Unemployed: Civilians who, during a survey period, had no employment but were available for work and (1) had engaged in any specific jobseeking activity, within the past 4 weeks, or (2) were waiting to be called back to a job from which they had been laid off, or (3) were waiting to report to a new wage or salary job within 30 days.

Unemployment rate: The number of unemployed persons seeking employment as a percent of the civilian labor force.

VEA programs: Programs receiving Federal assistance administered by the States under the provisions of the Vocational Education Act, as amended.

Vocational program: A program of studies designed to prepare students for employment in one or more semi-skilled, skilled, or technical occupations.

Vocational programs classification: Vocational education programs are usually categorized into one of the following areas:

Agriculture: Instruction designed to improve competencies in agricultural occupations. Included is the study of agricultural production, supplies, mechanization and products, ornamental horticulture, forestry, and the services related thereto.

Distribution: Learning experiences related to the flow of goods and services from the producer to the consumer or user. These activities include selling and such supporting functions as buying, transporting, storing, promoting, financing, marketing research, and management.

Health: Related courses organized to prepare students for assisting qualified personnel in providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to people, including understanding and skills essential to provide care and health services to patients.

Consumer and homemaking: Study concerned with the economic welfare of the consumer and consumer groups in everyday life, e.g., competency in managing money, purchasing and using goods and services, banking, investments, credit, and the role of the consumer in the economy.

Occupational home economics: Courses of instruction emphasizing the acquisition of competencies needed for getting and holding a job and/or preparing for

advancement in an occupational area using home economics knowledge and skills.

Industrial arts: Related courses organized for the development of understanding about the technical, consumer, occupational, recreational, organizational, managerial, social, historical, and cultural aspects of industry and technology.

Office occupations: Program of instruction organized to provide opportunities for students to prepare for and achieve career objectives in selected office occupations.

Technical: Program of instruction that normally includes the study of underlying sciences and supporting mathematics inherent in a technology, as well as methods, skills, and materials commonly used and services performed in the technology. Technical education prepares for the occupational area between the skilled craftsman and the professional person such as the physician, the engineer, and the scientist.

Trade and Industrial: Vocational education concerned with preparing persons for initial employment, or for upgrading or retraining workers in a wide range of trade and industrial occupations. Such occupations are skilled or semiskilled and are concerned with designing, producing, testing, maintaining, or repairing any product or commodity.

Cumulative Index

	Page in Edition			
	1983	1982	1981	1980
A				
Achievement tests (see also: specific subject area and National Assessment of Educational Progress):				
college entrance exams		111, 113	135, 137	133
in consumer knowledge				89
in mathematics:				
high school students		195-197	111	
9-, 13-, 17-year-olds		187, 189		85, 87
students in grades 1 to 6		175, 177, 181		
in music		191		
in reading:				
high school students		193	111	
9-, 13-, 17-year-olds	53-57	183, 185		
students in grades 1 to 6		175-179		
in science			111	
in vocabulary		193, 199	111	
in writing			109, 111	
of college-bound seniors	223			
of first-graders and relationship to preprimary education		173		
Administrative unit (see: School districts)				
Adult education:				
courses:				
by completion status				259
by source of payment	171			257
by subject area	167			255
by type of provider	171			
participants:				
as percent of adult population	157-165	35		239
by age	157, 159			239, 241
by course of study				255
by credit objectives	169			249
by educational attainment	161		37	243
by family income	163			245
by instructional method				253
by racial/ethnic group	159, 161			241
by reasons for participation	169			251
by sex	159, 161			241
career plans				251

	Page in Edition			
	1983	1982	1981	1980
in vocational programs			193	
number	157-165			239
Aid, financial, institutions of higher education (see: Financial aid)				
Attitudes (see also: Opinions)				
of students toward school subjects		201,203		
of students toward life goals		205		
Average daily attendance		63		83
B				
Bachelor's degrees:				
by control of institution		141		
by field of study			159	131
by racial/ethnic group			155	
by sex	117		155	129
in education	185-189,193	97		
number	117,121	141	155,159	129
Basic administrative units (see: School districts)				
Bilingual programs (see: Federal education programs)				
Blacks (see specific subject area, by racial/ethnic group)				
Busing for racial balance (see: Integration)				
C				
Career development	145,147		127	19,23,249,251
Civil court cases involving students		67		
Classroom teachers, public elementary/secondary schools (see: Teachers)				
College enrollment (see: Enrollment, higher education)				
College entrance exams		111,113	135,137	133
College faculty (see: Faculty, higher education)				
Commercial schools		137,143		267,269,271
Competency testing:				
of students	65	75	89	93,95
of teachers	67	115	77	

265

Page in Edition

	1983	1982	1981	1980
Computer-assisted instruction (see also: Teaching methods)	41			
Consumer Price Index, related to education expenditures	45,113		173	125
Cost of education (see: Tuition/fees, Expenditures)				
Curriculum: (see also: Special programs)				
elementary schools			91,93	25,91
secondary schools	35-39, 143,145	69,79	97	27,91
D				
Day care centers:				
child/staff ratios				215
class size				217
enrollment				201,213
expenditures				225
legal status				203
number				201
sponsorship				203
staff				219,221
Degrees earned:				
by control of institution	121	141		
by level:				
associate	123			31
bachelor's:				
by control of institution	121	141		
by field of study			159	125,131
by racial/ethnic group			155	
by sex	117		155	129
by State	121			
in education	185-189,193	97		
number	117,121	141	155,157	33,129
doctorate:				
by control of institution		141		
by field of study			159	33
by racial/ethnic group			157	
by sex	117		157	129
in education	185-189,193	97		
number	117	141	157,159	33,129

Page in Edition

	1983	1982	1981	1980
first-professional:				
by field of study	119		161	
by racial/ethnic group			157	
by sex	119		157	129
number	119	141	157,161	129
master's:				
by control of institution		141		
by field of study			159	33
by racial/ethnic group			155	
by sex	117		155	129
in education	185-189,193	97		
number	117	141	155,159	33
by State	121			
major field of study			157,159,161	
projections				129,131
Discipline:				
actions taken	63		117	
civil cases involving students		67		
problems reported by school administrators		71		
Districts, school (see: School districts)				
Doctorate degrees:				
by control of institution		141		
by field of study			159	33
by racial/ethnic group			157	
by sex	117		157	129
in education	185-189,193	97		
number	117	141	157,159	129
Dropouts:				
by age			31,55	
by language background			31	
by metropolitan status			35	
by nativity			31	
by racial/ethnic group			31,35	
by sex			235	
employment status			235	
income				139
Drug/dope problem (see: Opinions)				

	Page in Edition			
	1983	1982	1981	1980
E				
Earnings (see: Income, Salaries)				
Educational attainment:				
and employment		215,217	217,231-235, 245	
by ability			131	
by age group		21,23	37	243
by aspiration		209		
by high school curriculum			213	
by racial/ethnic group		23,209	33,129	
by region			33	
by sex		209		
by socioeconomic status		209	131	
of adult education participants	161		37	243
of family head			29,151	
Educational plans:				
of adult education participants				249
of college freshmen				20
of high school students	89,147,221	33	127,209	19
of occupational education students	147	207-213		23
Elementary and Secondary Education Act (see: Federal education programs)				
Elementary/secondary schools (see: Public schools and Private schools)				
Employment (see also: Unemployment)				
by educational attainment		215,217	217,231-235, 245	135,137
by major occupational groups		215	215,233	137
of recent college graduates	125-129			
use of vocational training	145		211,217	265
Endowments, market value		151		
English courses		79,193		
Enrollment:				
adult education	157-165	35		239,245
and labor force status		27		
by age			27	239
by level		11	11,59	17,57,59
by school size			15	
day care center				201

	Page in Edition			
	1983	1982	1981	1980
elementary/secondary school:				
by age			27	
by control of school	17,19	45,53,55	11,63	57
by grade span	15	45		
by metropolitan status		55	63	
by racial/ethnic group	23		65,67,115	
by region		53,55	63,115	
by State	15-19	49	59	59
handicapped	25,33		269,273,275, 279,283	79
in large cities				89
limited-English proficient	25			
number	15,17	9,45-49,53,55	11,59,63 65,115	57,59
Head Start				205
higher education:				
by age		25,129	27	105,239
by attendance status	81,85	129	143	107
by control of institution	81,85	139	11,17,165	103,111,113
by level	81,85	135		
by marital status		29		
by parental education			151	
by parental income			153	
by racial/ethnic group	87	133,135	149-153	111,113
by sex	81	9,129,131	147	105
by size of institution			17	
by State	83-87		145	
type of institution	81,85	139	17,143, 165	103
first-time	91	31,131	147	
foreign students		135		109
noncredit registrations				247
number	81,85	11,25,129, 131,135	143	103,111, 113
percent of high school graduates		133		
projections		11,129		
in Federal programs	141,151,155	145,147		63,65,67
noncollegiate postsecondary schools (see: Vocational/technical education)				



Page in Edition

	1983	1982	1981	1980
postsecondary		31,129,135, 139,143,145		
preprimary:				
by age		13-17	27	197,207
by control of school				211
by education of adult household member		178		211,223
by family income				207
by labor force status of mother		17		211,223
by level				
by metropolitan residence		15		
by racial/ethnic group				209
by State	21			199
number		11-13	197,199	51
projections:				
elementary/secondary		11,45		17,57
higher education	81	11,129	143	17,103
vocational/technical education:				
by ability level				265
by control of institution	141	143		
by program	151	143-147	193	261
by racial/ethnic group	155	147	207	263
by sex		147	207	
by type of institution	141	143,145	193	261
in Federal programs	141,151,155	145,147	195	
Ethnic groups (see specific area, by racial/ethnic group)				
Expenditures:				
all elementary/secondary schools				37
all levels of education				37
by financial character of school districts		47		285
by source of funds		153	171	
by State, per student	47,49		101,103	287
change in governmental expenditures		153		41
institutions of higher education	109,113,115	153,155	171,173	41,149
percent of Gross National Product				39
per student, elementary/secondary	47,49	63	169,171	287
per student, higher education		153,155	173	155
postsecondary vocational education				

	Page in Edition			
	1983	1982	1981	1980
projections				37
public elementary/secondary schools	47,49	61,63	101,103	37
research and development				35
salaries of classroom teachers				77
social welfare				41
utilities				153
F				
Faculty, higher education:				
by academic rank				121
by sex				123
by type of institution				123
collective bargaining agreements and agents	105,107			
estimated demand	99			
number	99			121,123
salaries	101,103		175,177	125
tenured				123
Federal education programs:				
bilingual services:				
funding				
students		69	79	227
expenditures for				61
of low income areas (i.e., Title I)		59		
percent participating	144,155		79,87,141	61,63, 65,67
special education			141,259,261, 279,281	
student financial aid		165	141	181,183, 185
vocational education	139,141,151,155	147,157	195	
Federal sources, receipts from:				
all levels of education			13	41
higher education	109	149	13	157
public elementary/secondary schools	43	57	13,99	283
Fees, higher education students (see: Tuition/fees)				
Finance (see: Expenditures, Income, Salaries)				

Page in Edition

	1983	1982	1981	1980
Financial aid, higher education:				
action taken by parents		163		
by family income			141	181
by type of aid			141	187
from Federal Government		165	141	183,185
First-professional degrees	119	141	159	129
First-time college students:				
degree aspirations	219			21
migration	91			
need for remedial work				
number		131	147	
time elapsed since graduation		11		
Funds, Federal, for education (see: Expenditures, Federal sources, Federal programs)				
G				
GED certificate recipients	61			
Grades		77		
Graduates:				
college:				
labor force participation	125-129	215,217	233,235	
number	117-123			129
salary	129	219-223		139
high school:				
by age				
by control of school	59	19		
by racial/ethnic group		133	13	
by region			13	
by sex	59	19	113	81
by State	59,61			
interest in postsecondary education			127	19
labor force participation		215,217	233,235	
number	59	19,133		81
salary		219,221		139
organized occupational programs				259,277
Gross National Product, relation to expenditures for education				
				39

	Page in Edition			
	1983	1982	1981	1980
H				
Handicapped population:				
accommodations for			285	
alternative placements			287	
by State	25,33		269	
by type of disability			271-277	79
enrolled	25,33		271-277,	79
			281,283	
Federal programs for		69	279,281	79
personnel serving			291	
services provided			289	
Hispanic origin (see specific subject area, by racial/ethnic group)				
Home study				253
Hospital, paramedical schools				261,271
I				
Income (see also: Salaries):				
as percent of average student charges		159		
by educational attainment	149	219-223		139
by racial/ethnic group			153	
by sex	149	219-221		139
related to education expenditures			139	291
Individualized instruction (see: Teaching methods)				
Institutions of higher education:				
by control	93,95	137	17,163	115
by size			17	
by State	93		163	
by summer and evening sessions offered			167,169	
by type	93,95	137	17	115
closings	97			117
conferring degrees in education	195,197			
credentials required for admission			133,135	
endowment		151	171	175,177
enrollment (see: Enrollment, higher education)				

	Page in Edition			
	1983	1982	1981	1980
expenditures	113,115	153,155	171,173	37,149, 151,179
libraries				127
noncredit activities				247
number	93,95	137	163	115
price indexes			173	153
revenues	109,111	149	171	157,163, 165,167
special programs				175
tuition/fees		149,159	139	159,161
Instructional radio			19	
Instructional staff, elementary/secondary schools: (see: Teachers)				
Instructional staff, higher education (see: Faculty, higher education)				
Instructional television			19	
Integration:				
busing for racial balance		73		
in public schools			61	
J				
Job satisfaction:				
of public school teachers		105		
of young adults			217	
K				
Kindergarten, enrollment (see: Enrollment, preprimary)				
L				
Labor force:				
and school enrollment status		27		
by sex			231,235	
educational attainment of			231-235	
participation of high school students			235,237	
participation of recent college graduates	125-129		235,241,243	135
participation of young adults		207	235	
Labor unions, as providers of adult education	171			251

	Page in Edition			
	1983	1982	1981	1980
Language usage, by racial/ethnic origin			79	
Libraries, public			23	
Litigation (see: Civil court cases)				
Local government expenditures				41
Local sources, receipts from:				
higher education	109	149	13,171	157
public elementary/secondary schools	43	57	13	283
Low income areas, Federal services to (see: Federal education programs)				
M				
Master's degrees:				
by control of institution		141		
by field of study			159	33
by racial/ethnic group			155	
by sex	117		155	129
in education	185-189,193	97		
number	117	141	155,159	129
Mathematics:				
achievement:				
by age group		187,189		85,87
by educational attainment		199		
by homework assigned				85
by parental education		177		
by racial/ethnic group		175,187, 193-199		
by sex		195,199		
by socioeconomic status		195		87
of first-graders		173		
of grade school students		175,177,181		
of high school students		195,197		
attitudes of grade school students		201		
offerings and enrollment	35,39	207	91,93	27
required courses				91
time spent in instruction, in elementary schools		177,181		25
Minimum competency testing (see: Competency testing)				
Minorities (see subject headings)				
Museums			21	

	Page in Edition			
	1983	1982	1981	1980
N.				
National Assessment of Educational Progress:				
consumer knowledge				89
mathematics		187,189		85,87
music		191		
reading	53-57	183,185,203		
writing			109	
Noncollegiate postsecondary education (see: Vocational/technical education)				
Nonpublic schools (see: Private schools)				
O				
Occupational groups		215	233	135,137
Occupational programs (see also: Vocational education)				
by type of program	151	145,147		261,273, 275
completion rate				277
enrollment size	141,151			269
number of schools offering	139	137		267,273
outcomes				277
participation in:				
by educational attainment				265
by racial/ethnic group	155			263
by type of program	151	145,147		261
students' career plans				23
tuition/fees				275
Opinions:				
of parents toward financial responsibility for child's education		161		
of parents toward public schools	71	109		39
of teacher graduates on labor market	217			
of young adults toward high schools			251,253	
on competency testing				95
on confidence in people running institutions				43
on cost-cutting measures in public schools	51			
on financial support of public schools		65		
on importance of education			245,247	



Page in Edition

	1983	1982	1981	1980
on leaders in American institutions				43
on major educational problems				41
on outside influences on children's education				251
on priorities for U.S. Department of Education				47
on private schools		81		
on public expenditures		65,81		45
on public schools, school personnel, and parents		109		
on quality of public education				39
P				
Parents:				
action taken to pay for child's post- secondary education		163		
expectations for child		163		
Per-pupil expenditures (see: Expenditures, per student)				
Populations:				
age distribution		9,127		11
in poverty				11
participation in education (see: Enroll- ment)				
projections		9,127		13
racial/ethnic composition				11
school-age:				
by age group		9		11
by racial/ethnic group		133		11
by region				13
handicapped				79
Postsecondary education (see: Adult education, Institutions of higher education, Vocational/technical education)				
Preprimary education:				
enrollment:				
by age		13,17		197,207
by control of school				211
by education of adult household member		173		

Page in Edition

	1983	1982	1981	1980
by family income				211,223
by labor force status of mother		17		207
by level				214,223
by metropolitan residence		15		
by racial/ethnic group				209
by State	21			199
number				197,199
outcomes		173		229
Price indexes, higher education			173	
Private schools:				
elementary/secondary schools:				
enrollment	17,19	45,53,55	63,65,71	57
number			67	
participation in Federal programs			87,259	
school size			261	
tuition and fees			67	
institutions of higher education:			105,107	
endowments, market value		51		
enrollment	81,85	139	191	203
expenditures	113,115	153,155	171	149,151
number	93,95	137	17	115
revenues	109,111	149	13,171	157
tuition/fees		149,159		161
noncollegiate postsecondary schools:				
completion rate				259
enrollment	141	143		261
number	139	137	191	267
tuition/fees				257
Professional degrees (see: First-professional degrees)				
Projections (see specific subject areas)				
Public opinion (see: Opinions)				
Public schools:				
elementary/secondary schools:				
enrollment:				
by expenditure	47			285
by level	15	45	11	57
by metropolitan status		55	63	
by region		53,55	63	

	Page in Edition			
	1983	1982	1981	1980
by size			15	
by State	15-17	49	59	59
expenditures	47,49	61,63	101,103	287,291, 293,299
Federal program participants			259,261	63
instructional staff	181	45,47,93,95		71,73
number	27	47,51	69,191	
organization			69	
revenue receipts	43	57,59	13,99	283
student-teacher ratio	31	47	71,73	71,289
with complete	41			295,297
institutions of higher education:				
enrollment	81,85	139	11,165	103
expenditures	113,115	153,155	171,173	149,151
number	93,95	137	17,163	115
revenues	109,111	149	171	157
tuition/fees		149,159	139	159,161
noncollegiate postsecondary schools:				
completion rate				259
enrollment	141	143		
number	139	137	191	267
tuition/fees				257
Public school systems (see: School districts)				

R

Reading (see also: Achievement test,

National Assessment of Educational Progress):

activities of 9-, 13-, 17-year-olds		203		
attitudes toward		201,203		
performance:				
by achievement groups				
by age group	53-57	183,185		
by Hispanic background	55			
by race and region	53,57			
of first-graders		173		
of high school students		193		
of students in grades 1 to 6		175-179		
with lowest and highest reading	57			
time spent in instruction, in elementary schools		177		

Page in Edition

	1983	1982	1981	1980
Regular day schools (see: Private schools, Public schools)				
Remedial courses (see: Special programs or specific subject area)				
Research and development expenditures				35,131
Revenue receipts:				
and personal income				291
by State	43	59	99	157,283
from Federal sources	43,109,111	57,59,149	13,99,171	157,283
from State and local sources	43,109,111	57,149	13,99,171	157,283
of institutions of higher education	109,111	149	13,171	157
of public elementary/secondary schools	43	57,59	13,99	283
S				
Salaries:				
by field of degree		223		
by sex	149	219		139
by socioeconomic status		209		
elementary/secondary education		103		77,139
higher education	101,103		175,177	139
of bachelor's recipients	129	223		139
of doctoral recipients		223		
of full-time workers	129			139
projections		103		
Scholarships (see: Financial aid, Higher education)				
School districts:				
by enrollment size	29			
expenditures	47		101	285
improvement	69			
School finance (see: Finance)				
Schools, number of:				
elementary/secondary	27	47-51	15	
higher education	93,95		17,133,163	115
noncollegiate postsecondary	139		191	
Science:				
offerings and enrollment	35		91,93	119

	Page in Edition			
	1983	1982	1981	1980
required courses				91
Social studies:				
offerings and enrollment				27
required courses				91
Special-education (see also: Handicapped population)	25,33	69	141,259, 261,279, 281	
Special programs	25,33,39	69,79		
Staff (see: Faculty, Teachers)				
State government expenditures	153			41
State sources, receipts from:				
elementary/secondary schools	43	57	13,99	283
higher education	109,111	149	13	151,163, 165
Student fees (see: Tuition/fees, Fees)				
enrollment				
higher education (see: aid, higher education)				
T				
Teachers:				
elementary/secondary school:				
by age group		91		
by assignment		101		25
by experience	203			
by racial/ethnic group		93,95		
by State		93,95		
competency-based certification	67	115	77	
contracts				79
layoffs and shortages		101		
measures to improve candidate quality	199,201			
newly graduated candidates	191,207-213			
number	181	47,101,103	73,75	71
opinions about teaching		105,107		
reasons for not applying to teach	217			
recent bachelor's recipients, by sex and racial/ethnic group	205			

	Page in Edition			
	1983	1982	1981	1980

recent bachelor's recipients not teaching	215			
relation of work to major field of college study	209,213			
salaries				77
student-teacher ratio	31	47	71,73	71,289, 295,297
supply-demand	183		75	
tenure				75
unionization				79
higher education (see: Faculty)				
Teaching machines (see: Teaching methods)				
Teaching methods		83		
Technical education, vocational (see: Vocational/technical education)				
Television (see: Instructional television)				
Title I (see: Federal education programs)				
Tuition/fees:				
institutions of higher education		149,159		
private elementary/secondary schools				105,107
private preprimary schools				223
revenue source	109	149		157,161
undergraduate		159	139	159

U				
Unemployment rate:				
by sex		217	235,255,257	
by educational attainment		217	235,255, 257-263	
recent college graduates	125			

V				
Vocabulary (see also: Achievement tests):				
performance of high school students		193,199		111
Vocational/technical education:				
enrollment:				
by ability				265
by age				239
by control	141	143	193	261,271



	Page in Edition			
	1983	1982	1981	1980
by program	145,151	145,147	193,195,207	263,265
by racial/ethnic group	155	147	207	263
by sex	143,145	147	207	
by type of institution	141	143,145		
federally aided programs	141,151,155	147	195	
number	141,151,155	143,147	193	
completions				
conditions of facilities			201	
expenditures for instruction		157		
instructional staff			203,205	
number of schools	139	137	191,197,199	267,271
tuition/fees				
Voluntary support, higher education				169,171, 173

Wages (see: Income, Salaries)				
Work, education and	125-129	215,217	231-263	135,139
Writing achievement			109	

Years of school completed (see: Educational attainment)