
NATIONAL CENTER FOR EDUCATION STATISTICS

THE **CONDITION**
OF **EDUCATION**
1994

U.S. Department of Education
Office of Educational Research and Improvement

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The National Center for Education Statistics (NCES) gathers and publishes information on the status and progress of education in the United States. The federal authorization for these activities (with antecedents to 1867) states that the Center shall "collect, collate, and from time to time, report full and complete statistics on the condition of education in the United States." The Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988 (Public Law 100-297) mandate an annual statistical report on the subject from the Commissioner of Education Statistics. This 1994 edition of *The Condition of Education* responds to the requirements of law.

The report includes 60 indicators on the condition of education. There is much good news among these indicators along with some bad news. However, for some issues that are of public concern there are no data that can give a reliable national picture of developments in those areas.

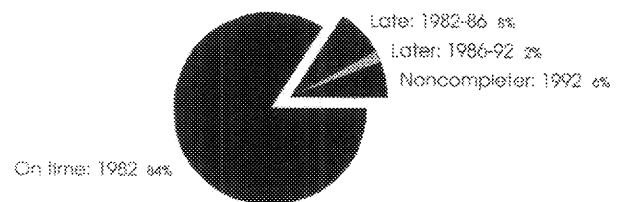
First, the good news:

Overall high school dropout rates have gradually decreased. The differences between dropout rates for blacks and whites have also narrowed (*Indicators 5 and 6*). This is encouraging because schools provide young people with the opportunity to explore their interests and develop their talents. It is also encouraging because staying in school is an important indication that a young person is learning to be a productive member of U.S. society and is less likely to suffer from poverty and unemployment (*Indicators 32 through 36*).

Reflecting greater student persistence in high school, completion rates have gradually risen and for some groups are near or over the 90 percent National Education Goal in the Goals 2000: Educate America Act. (*Indicators 6 and 21*). These completion rates are not only a result of persistence to completion, but also of young people dropping out and later returning to education to earn a GED diploma or an alternative certificate. On the one hand, it is a positive sign that these dropouts return to the education system to complete their education. On the other hand, evidence¹ suggests that these

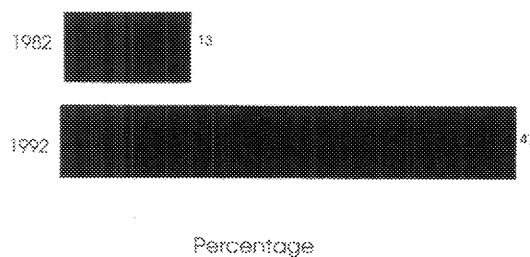
GED recipients will not enjoy the economic benefits that appear to be associated with on-time or regular diploma completion. Although GED graduates demonstrate that their achievement in many subjects is similar to that of regular high school graduates, they may not have acquired other skills such as how to work in a team or complete projects on time. Also, they may not have developed an ability to cope with institutions, rules, and authority in high schools that are similar to other institutions young people will have to face in the future.

Time of high school completion for 1980 tenth graders:



We also find good news when we look at transcripts of high school graduates. In the ten years since *A Nation At Risk* advocated tougher course requirements for high school graduation, states and students have responded dramatically. Many more students are completing the recommended core courses in English, math, science, and social studies (*Indicator 24*) and many more students are taking Advanced Placement courses.

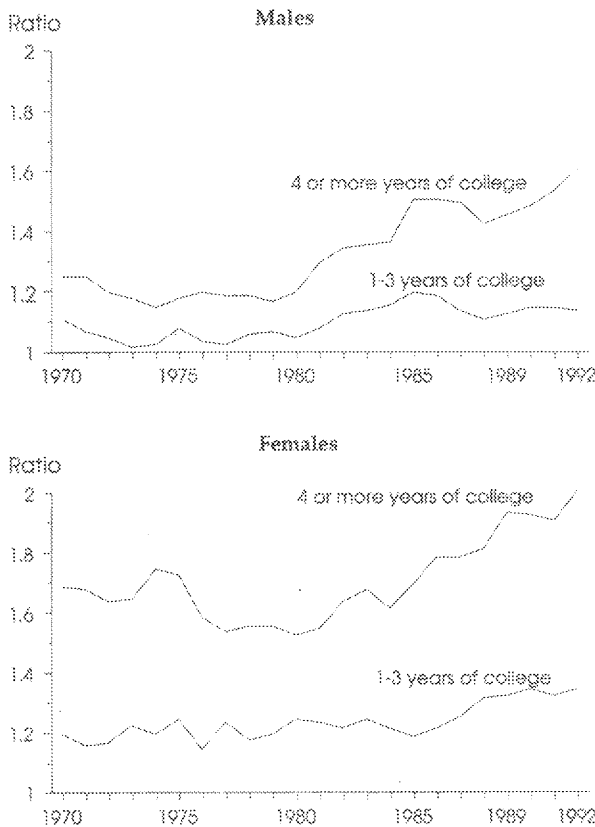
High school graduates earning the recommended credits in *A Nation At Risk*:



Of course, we hope the content of these courses is at least as rigorous as it was when the Commission on Excellence in Education made their recommendations. There is some evidence that it is, but we have no national data on the content of courses.²

Despite the fact that college graduates have faced a difficult labor market for the past few years, their job opportunities and earnings are much better than those of high school graduates. The earnings advantage, in particular, has grown stronger throughout the 1980s (*Indicator 34*).

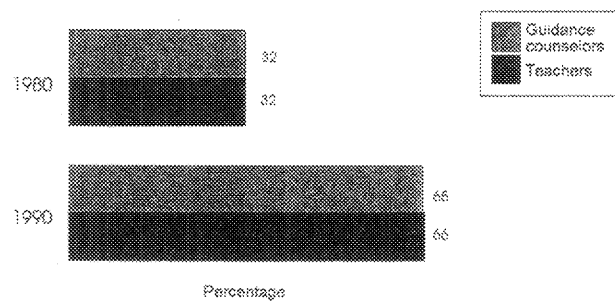
The ratio of median earnings of wage and salary workers with a college education to those with a high school education:



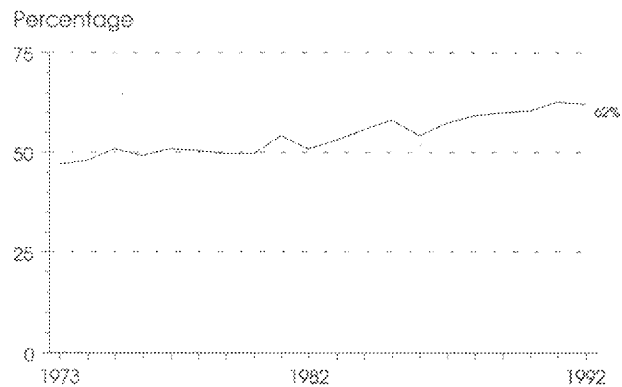
It is not surprising to learn that guidance counselors and teachers are more frequently advising high school students to attend college (*Indicator 7*). It is important for the education system to be responsive to labor market demands and these patterns are an indication that it is.

It is also not surprising that more high school graduates are choosing to go on to college (*Indicator 9*). Nevertheless, this increase in college-going rates is remarkable when one considers that it continued despite a rapid rise in tuition levels (*Indicator 8*). In fact, in 1992, participation and attainment in higher education for U.S. men and women was among the highest in the world (*Indicator 22*).⁵

Tenth-graders receiving advice to attend college from guidance counselors and teachers:



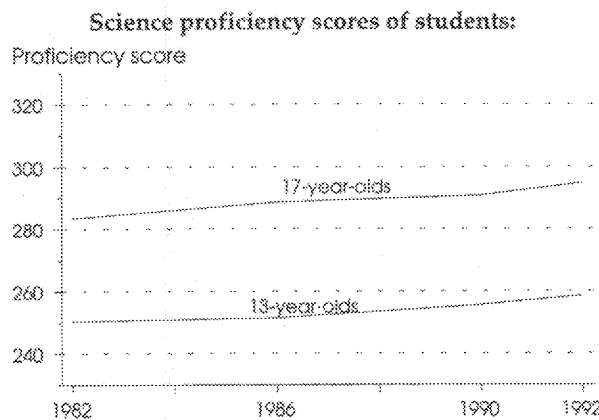
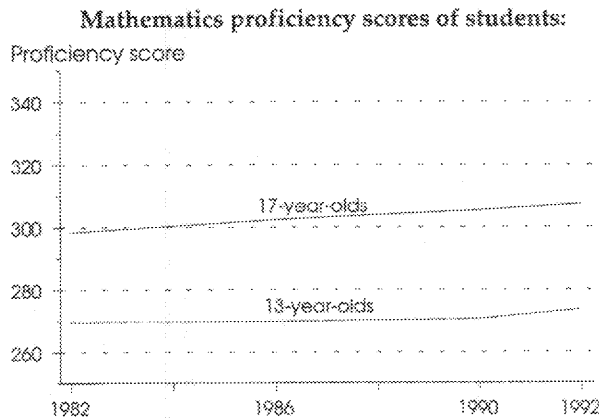
High school graduates enrolling in college the October following graduation:



Clearly, the great expansion of participation in higher education that is underway will have profound effects on this system. For example, colleges are providing a great deal of remedial instruction to students who arrive with weak academic skills.⁶ This may indicate that more students who once would not have thought of continuing into higher education are now enrolling although they must take remedial courses. In many cases, these courses do not provide credit toward graduation.

Improvements in high school course-taking were cited above. It is encouraging to see a reflection of these improvements in the math and science proficiency scores of 17-year-olds participating in the National Assessment of Education Progress. One way to get a sense of how much improvement there has been in the math and science proficiencies of 17-year-olds over time is to compare these improvements to differences in proficiencies between high school students of different ages. Using this comparison, we find the improvement for 17-year-olds from 1982 to 1992 was equal to an additional year or two of

learning in high school (*Indicators 14 and 15*). If this additional learning is substantial, 17-year-olds in 1992 have made substantial progress relative to 17-year-olds in 1982.



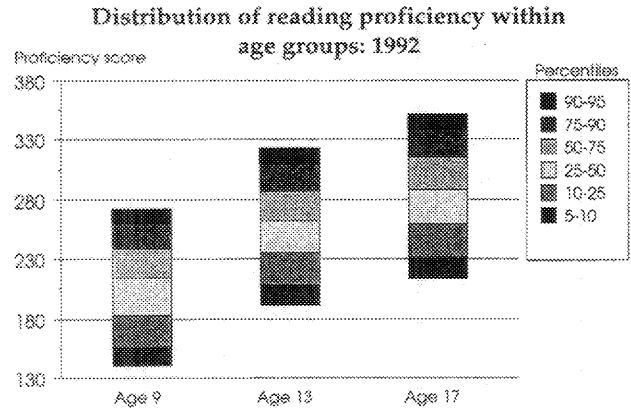
Although the proficiency scores in reading and writing have not shown similar increases (*Indicators 12 and 13*), U.S. students compared favorably in an international assessment of basic reading literacy (*Indicator 16*).

A notable feature of NAEP scores is the wide variability in performance among students of the same age or in the same grade (Table 12-3).

This reminds us that hidden in the averages is a huge amount of individual variation. Schools must cope with this variation while trying to help each student learn as much as possible.

Now for some of the bad news:

As a nation, we put great value on mathematics and science. Recently, this is evident in goal 5 of

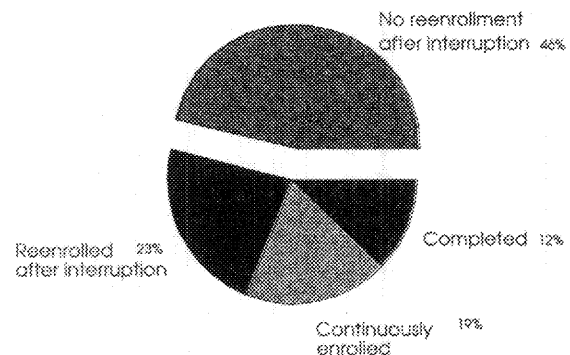


the National Education Goals: "U.S. students will be first in the world in science and mathematics achievement." Nearly forty years ago, it was evident in our response to Sputnik.

Unfortunately, in international comparisons of mathematics and science proficiency of 9- and 13-year-olds, U.S. students have not done well (*Indicators 17 and 18*). However, there is considerable variation across states. Students in some states perform as well as the best performing nations in the international comparison of mathematics achievement.⁵

I noted above the fact that more students are going on to college after high school. The data show, however, that it is very common for college students to enroll, leave, possibly return, and not finish within the expected period of time (*Indicator 10*).

Persistence of beginning students enrolled in an associate's degree program in 1989-90: Spring 1992



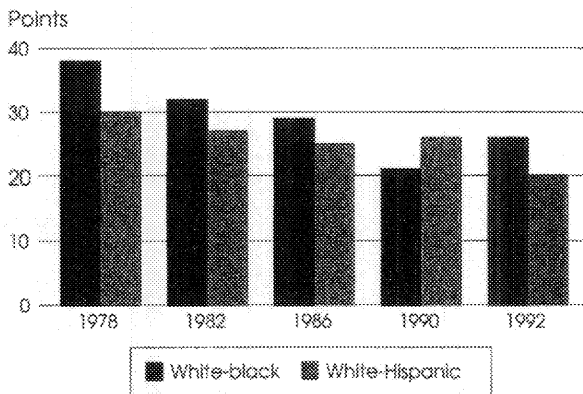
Non-completion is not necessarily an indication of failure or a waste of resources because often students, particularly in the 2-year sector, enter and withdraw from college in response to economic opportunities, or they may have begun

a program with limited objectives that they achieved. Also, many students attend part-time which can extend the time it takes them to complete. Nevertheless, the high rates of non-completion and interrupted attendance may indicate that students do not have as much information as they need about skills in demand in the labor market. Moreover, they may have unrealistic views as to the commitment of time, effort, and money needed to complete postsecondary education programs to acquire these skills.

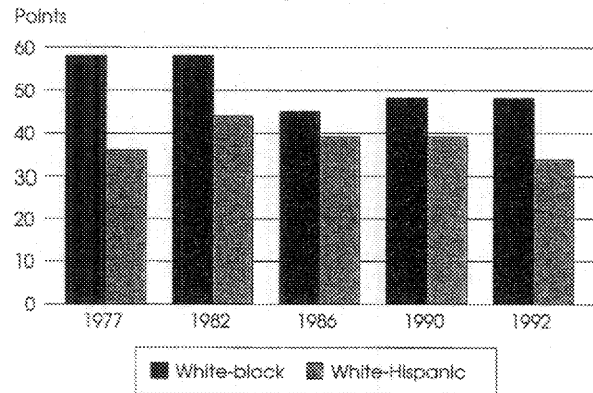
One area of continuing bad news but with a glimmer of hope is the academic achievement of minority students in elementary and secondary school. The bad news is that the gap in achievement between whites on the one hand and blacks and Hispanics on the other is very large. The glimmer of hope is that the gap narrowed during the 1980s, particularly in mathematics and science. The 1992 data, however, raise a possibility that the gap may no longer be narrowing. In reading, the most recent (1992) NAEP results indicate a loss of some of the earlier gains minority groups made relative to whites (*Indicator 12*).

The disadvantages of low academic achievement are difficult to overcome. Low achievement leads to reduced opportunities for further study and poor jobs. Low achievement probably spoils the enjoyment of school and the motivation to learn.

White-minority difference in math achievement of 17-year-olds:

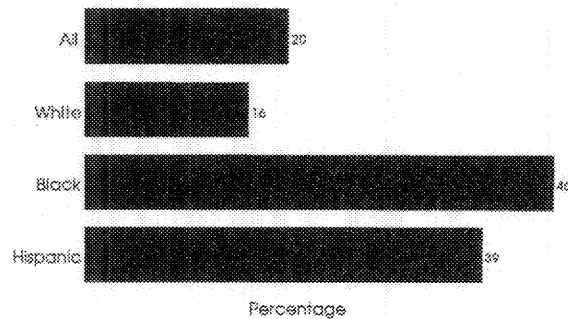


White-minority difference in science achievement of 17-year-olds:



Social scientists attribute much of the minority/white differences in achievement to the higher incidence of poverty in the families of minority children and the lower average educational levels of their parents. It is difficult for schools to compensate for such disadvantages. However, there is evidence that excellent schools and teachers make a difference.

Children living in poverty in 1992:

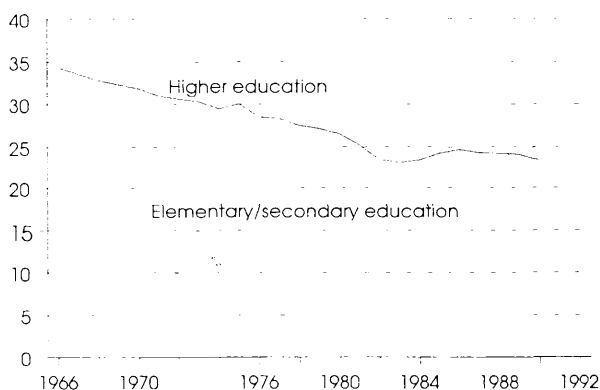


The importance of family for the achievement of students also has limited our ability to produce useful measures of the quality of schooling available to children in different locations or from different backgrounds. There are several reasons for this. First, research has not been very successful in distinguishing the effects of better educational opportunities in school from the effects of qualities such as effort or motivation the student brings to school. Second, research consistently finds that significant differences among students in achievement are associated with differences in family background; associations between student achievement and measured characteristics of their schools are more difficult to identify. Much work remains to be done to produce reliable statistical measures of school quality.

The information we have provided so far is about students and what they are or are not achieving. The quality of schools is indicated indirectly by the achievements of their students. So what can be said directly about the quality of schools? Are schools providing a safe and supportive environment so that student energies can be devoted to learning? Are schools attracting people with energy, creativity, and commitment to teaching and supporting them with competitive salaries and sustained professional development? These are important aspects of quality also.⁶

Expenditures per student are often used as a proxy measure of the quality of education. This can only be considered a crude measure, because the results of hundreds of studies of the relationship between spending and outcomes such as achievement test scores, dropout rates, and so forth are mixed.⁷ Neither a strong nor consistent relationship is found. However, no one can deny the importance of money to build schools, hire teachers, buy textbooks, and otherwise acquire the resources needed to create a safe and supportive learning environment. Among these resources are the intangible qualities of dedicated teachers, principals, and parents who create the learning environment. The incentives, both costs and rewards, that bring people with the "right" qualities to teaching are tied up in many features of our nation's law, government, economy, and society, including the local and public control of schools and the education and salaries of teachers and principals.

Revenues per student from public sources
as a percentage of income per capita:



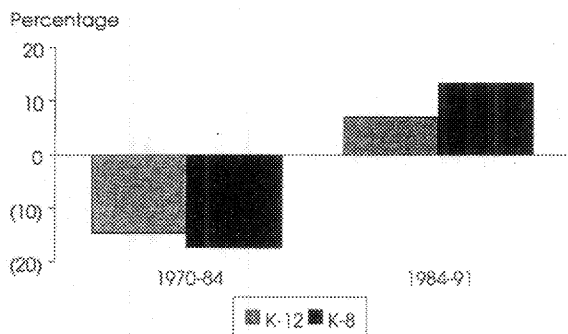
At the elementary and secondary levels, revenues per student have increased substantially over the last decade, a sign that even with the strains of slower economic growth, we as a nation are willing to continue supporting the schools (*Indicator 53*).

Still revenues per student vary widely across states: state governments, not the federal government, have responsibility for funding education and they vary in their capacity and willingness to do so. In addition, there is considerable variation within states (the data are not in this volume) because states delegate authority for operating and funding schools to local school districts.

The advantage of state and local control (funding) of schools is that parents and citizens have a greater voice in deciding how much education is provided to their children and with what emphasis. The disadvantage is that wealth varies across school districts so there will be inequality in the availability of resources for schools even when citizens are equally willing to fund the schools. This has resulted in complicated state formulas for the funding of schools and many challenges to state education financing systems in the courts. The supreme courts of several states have declared the state's education financing system unconstitutional, and more than half the states have cases pending. Kentucky has completely overhauled its educational system from teacher certification requirements to governance structures as a result of a court challenge to its funding system. Michigan recently has decided to stop using the property tax and instead to use a combination of income and sales taxes to finance its schools.

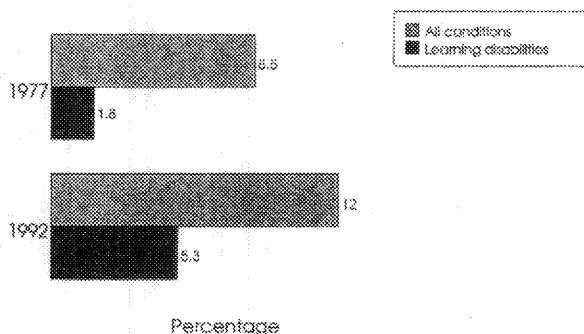
Increasing revenues per student should not be interpreted as a sign that schools are flush with resources. Changes in conditions faced by schools are putting additional strains on them. First, schools are facing a period of rising enrollments after a long period of decline (*Indicator 38*).

Changes in public school enrollment:



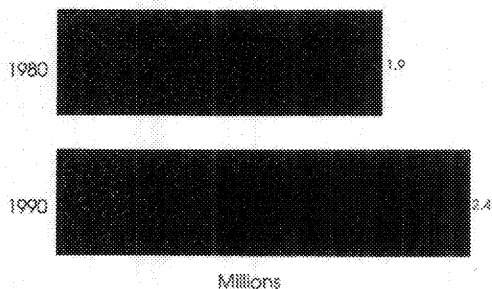
Second, many more disabled students, particularly those with learning disabilities, are receiving special services (*Indicator 45*).

Children served in federally supported programs for students with disabilities:



Third, many more students are from homes where English is not spoken and have difficulty speaking English (*Indicator 46*), a likely indication that even more read only a little and write not at all in English.

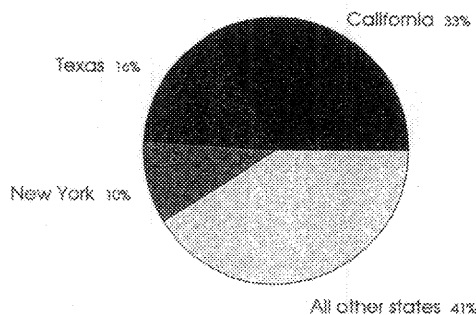
Children who have difficulty speaking English:



These students are disproportionately concentrated in a few states (California, New

York, and Texas) so the education systems in these states are under particular strain to respond to the needs these children bring with them to school.

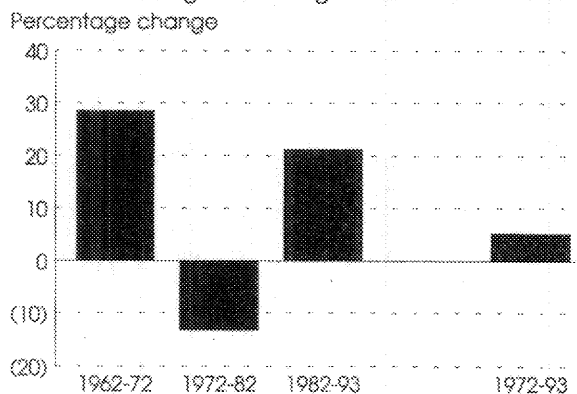
Distribution across states of children with difficulty speaking English:



Fourth, many children live in poverty (21.9% or 14.6 million) and these children typically live in neighborhoods and attend school together. The schools in these neighborhoods are also facing heavy demands.

Over the past decade, much of the increase in expenditures per student went to increase the salaries of teachers and to increase the number of teachers (*Indicator 56*).

Changes in average salaries of teachers:

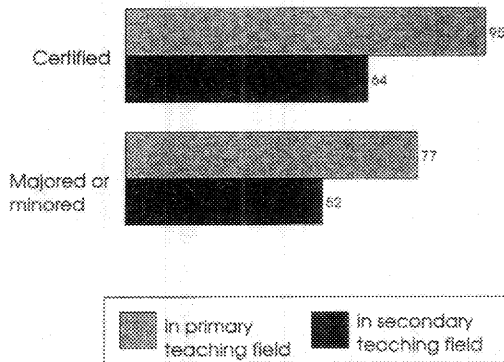


Most elementary and secondary teachers are women and the labor market opportunities of women have improved over the last two decades, so it is likely that much of the increase in salaries has been necessary to keep teachers in teaching and to induce college students to choose teaching as a career.

Teachers have high educational attainment. Almost all are certified to teach in their primary assignment field, and the large majority have

majored or minored in this field. In fact, most teachers have a graduate degree. About a quarter of teachers have a secondary assignment field and fewer teachers are certified or have majored or minored in this field (*Indicator 59*). However, these may be poor measures of subject matter and instructional competence.

Certification and educational background of teachers in 1990-91:



The high level of education and associated professional commitment among teachers is good for students and the education system. However, we must recognize that it comes at a cost, because teachers must be paid enough to justify the investment they made in their education.

It is clear that adequate financial resources are necessary for the task of providing widely-available high-quality educational programs. However, education policy-makers must deal with the more difficult issue of how to make best use of these resources. There are many tradeoffs they must consider including, but not limited to, salary levels for teachers, the number of teachers, the number of paraprofessionals, administrative activities, extended leave time to teachers for professional development, use of technology, and the level of specialized services.

There is not one answer to the complex question of whether the condition of education is improving. Some conditions are improving and some are not. In a number of areas research has not been able to disentangle the influences of several factors, so we cannot be certain whether conditions are improving or worsening. However, this volume can help all those

interested in education policy pose more sophisticated questions. By posing and answering better questions, we can make progress toward understanding what produces high quality educational institutions, an educated citizenry, and a skilled workforce.

Emerson J. Elliott
Commissioner of
Education Statistics

NOTES:

¹ Cameron, Stephen V. and James J. Heckman, "The Non-equivalence of High School Equivalents," *Journal of Labor Economics*, Volume 11, Number 1, Part 1, January 1993.

² Porter, Andrew C., Michael W. Kirst, Eric J. Osthoff, John L. Smithson, and Steven A. Schneider. *Reform Up Close: An Analysis of High School Mathematics and Science Classrooms*. Final Report to the National Science Foundation on grant #SPA-8953-446 to the Consortium for Policy Research in Education. October, 1993.

³ Organization for Economic Cooperation and Development, Center for Educational Research and Innovation. *Education at a Glance: OECD Indicators*, 1993.

⁴ U.S. Department of Education, National Center for Education Statistics. *College-Level Remedial Education in the Fall of 1989*, (NCES 91-191), May 1991.

⁵ U.S. Department of Education, National Center for Education Statistics. *Education in States and Nations: Indicators Comparing U.S. States With the OECD Countries in 1988*, October 1993, *Indicator 16*.

⁶ Special Study Panel on Education Indicators, *Education Counts*, 1992.

⁷ Hanushek, Eric. "The Economics of School: Production and Efficiency in Public Schools," *Journal of Economic Literature*, March 1986. Hedges, Larry V., Richard D. Laine, and Rob Greenwald. "Does Money Matter? A Meta-Analysis of Studies of the Effects of Differential School Inputs on Student Outcomes (An Exchange: Part I)," *Educational Researcher*, April 1994.



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Several of the indicators in this report were prepared by a team consisting of governmental and non-governmental members. By soliciting both the substantive and data expertise of people outside of the Indicators and Reports Branch, we were able to greatly improve the coverage and quality of this report. Mary Frase, Mary Rollefson, Edith McArthur, Sharon Bobbitt, and Andrew Kolstad from NCES; Tim Madigan from the Census Bureau; and Alex McCormick from MPR Associates together authored seven of the indicators in this report. In addition, Thomas D. Snyder provided considerable assistance in data acquisition and use.

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Overview

"Why do we seek to know the condition of education? In the answer to this question will be found the reasons for the elaborate statistical record which forms a feature of all official school reports. We take an account of education so that we may know whether it is sufficient in amount and good in quality."

Henry Barnard
First Commissioner of Education

Introduction

During the 1980s, the country became increasingly aware of a range of critical national issues facing education. These issues included concerns that not all children have an equal opportunity to receive a high quality education, general low academic performance, drug use and violence in the schools, unacceptably high dropout rates, the high cost of a college education, and the skills of workers lagging behind technological changes in the workplace. These concerns continue to have serious implications, not only for schools and colleges, but for the future of individual citizens, U.S. economic competitiveness, and ultimately the structure and cohesiveness of American society and culture.

The Condition of Education provides a means to report where progress is being made in education and where it is not, to draw attention to emerging issues, and to inform the ongoing policy debate.

The Structure of *The Condition of Education*

A quick tour of the volume may help the reader make the best use of it. The core of the volume consists of 60 indicators. Each indicator is presented on two pages, with findings summarized in textual, tabular, and graphical formats. Also included in the back of the volume are supplemental tables providing additional details, and sometimes an explanatory note on a technical or data-related issue.

The 60 indicators are organized into six sections:

- Access, Participation, and Progress;
- Achievement, Attainment, and Curriculum;
- Economic and Other Outcomes of Education;
- Size, Growth, and Output of Educational Institutions;
- Climate, Classrooms, and Diversity in Educational Institutions; and
- Human and Financial Resources of Educational Institutions.

Instead of separating elementary and secondary education from postsecondary education indicators, the volume integrates issues ranging from early childhood education to postsecondary education into each of the six sections.

One can find information on an issue either by using the table of contents, which lists the 60 indicators, or by using the index, which references not only the indicators but also the supplemental tables. When an updated indicator is not available in this volume, the index references the indicator number and edition of *The Condition of Education* that last published an indicator on that topic.

Each of the six sections of indicators is introduced with a 2 page review that interprets and summarizes some of the results that are found in the indicators in that section as they relate to an important issue. In addition, the overview pulls together results from throughout the volume as they relate to particular issues that cut across the sections of the report.

At the bottom of each of the two indicator pages is the source of the data for the indicator. A description of the sources is provided starting on page 380. Sometimes more knowledge about the type of survey used to calculate the indicator can give the reader insights into interpreting the data presented. Some of the terms used in this report may not be familiar to all readers. Thus, a glossary is provided starting on page 414.

In the remainder of the overview, we pull together evidence from both the 60 indicators and from other sources on selected issues:

states have raised course requirements for high school graduation since the publication of *A Nation at Risk*, and 47 states have mandated student testing standards.²

Has the increase in participation in academic courses "watered down" the curriculum or affected the achievement of advanced students?

One measure of the quality of advanced students is the percentage receiving college level credit for their high school coursework. Since 1984, the number of students taking Advanced Placement (AP) examinations has more than doubled. Fifty-seven Advanced Placement examinations per 1000 11th- and 12th-graders were taken in 1992 compared to 24 per 1000 in 1984. Generally, about two-thirds of all 11th and 12th grade AP examinees received a score of 3 or higher, a score which usually qualifies for college credit (*Indicator 27, Condition 1993*).

Another way to assess the impact of increased participation in academic courses on the achievement of advanced students is to look at how the NAEP scores of the highest performing 17-year-olds have changed since the early 1980s. The science proficiency of the highest performing 17-year-old students increased between 1982 and 1992 (table 15-3). Specifically, the 90th percentile score in science (the score that 90 percent of students score below and 10 percent of students score above) increased by 8 points for 17-year-olds. The reading and mathematics proficiency of the highest performing 17-year-old students has remained relatively stable since the early 1980s (tables 12-3 and 14-3).

Furthermore, even though the number of Scholastic Aptitude Test (SAT) examinees as a percentage of high school graduates has increased since the publication of *A Nation at Risk* (41 percent in 1993 compared to 33 percent in 1983), the percentage of students with scores above 600 on the subsections did not decline. A higher percentage of students are scoring at 600 or above on the mathematics section (an increase from 16 to 19 percent) and the percentage scoring above 600 on the verbal has remained stable (7 percent) (table 19-1).

Have students with lower abilities suffered because of

the reforms instituted since the publication of A Nation at Risk?

For the most part, students with lower abilities have shown no ill effects as a result of the reforms, either with respect to achievement or dropping out. In fact, fewer high school graduates are taking remedial mathematics courses: 17 percent compared to 33 percent (*Indicator 25*) and the mathematics and science proficiencies of the lowest performing students (as measured by NAEP) have increased (tables 14-3 and 15-3). For example, between 1982 and 1992, the 10th percentile score (the score that 10 percent of students score below) increased for 9-, 13-, and 17-year-olds in mathematics (12, 8, and 11 points respectively). The reading and writing proficiency of the lowest performing students remained relatively stable between 1984 and 1992 (tables 12-3 and 13-3).

Furthermore, fewer students are dropping out of high school between 10th and 12th grade today than a decade ago. Eleven percent of the sophomores in 1980 left school without completing high school or its equivalent by the spring of 1982, while the comparable rate for the sophomore cohort of 1990 was 6 percent, a 5 percentage point decline in the dropout rate over the decade.³

The dropout news is not so encouraging for younger students, however. Although all states mandate compulsory schooling through the age of 16, a sizeable number of students drop out of school before completing the 10th grade.⁴ Of the members of the 8th-grade class of 1988, nearly 7 percent had dropped out of school by the spring of their sophomore year. Over half of the students left because they "did not like school," while about 40 percent left because they were failing school. Almost one-third of females who dropped out between 8th and 10th grade reported that they left school because they were pregnant.⁵

If students are taking more academic and advanced courses in preparation for college, are they learning more?

Mathematics proficiency scores on the National Assessment for Educational Progress (NAEP) increased between 1982 and 1992 for 9-, 13-, and

17-year-olds (11, 4, and 9 points respectively) (*Indicator 14*). To get an idea of the magnitude of these increases, we can look at the difference in proficiency scores across ages in 1992. A 9 point gain in NAEP on the mathematics assessment corresponds to about one-quarter of the difference between the average scores of 13- and 17-year-olds in 1992. In other words, the increase in the mathematics proficiency of 17-year-olds between 1982 and 1992 appears to be roughly equivalent to about one year of schooling.

Science scores also increased for all three age groups between 1982 and 1992—10, 8, and 9 points respectively (*Indicator 15*). Reading scores, however, are essentially unchanged since 1984 (*Indicator 12*), though in 1991, U.S. 14-year-olds did compare relatively well with their international peers in reading literacy (*Indicator 16*).

What is motivating students to take more advanced courses?

In addition to increases in graduation requirements, one possible factor is the increasing educational aspirations of high school students. The percentage of high school sophomores aspiring to no more than a high school diploma fell from 27 percent in 1980 to 10 percent in 1990.⁶ Along with students' own heightened aspirations, more parents, guidance counselors, and teachers are advising students to attend college. The percentage of sophomores reporting that their mothers recommended that they attend college rose from 65 percent in 1980 to 83 percent in 1990. The percentage of sophomores receiving advice to attend college from teachers more than doubled over the decade, from 32 percent in 1980 to 65 percent in 1990. Even low-achieving students are being advised to go to college. In 1990, 57 percent of sophomores scoring in the lowest test quartile on an achievement test of reading, vocabulary, and mathematics had received advice to attend college from a teacher (*Indicator 7*).

Are students acting on these aspirations?

The percentage of students making the immediate transition from high school to college continues to rise. Since most college students

enroll immediately after high school, the percentage of high school graduates enrolled in college in the October following graduation is a leading indicator of the proportion of graduates who will eventually enroll. The percentage of graduates making the immediate transition to college has risen 11 percentage points since 1982, to 62 percent in 1992, with 39 percent going on to 4-year and 23 percent going to 2-year institutions (*Indicator 9*).

Dramatic cost increases did not deter students from attending college in the decade between 1982 and 1992. At public institutions, tuition, room, and board increased from 11 percent of median family income in 1982 to 14 percent in 1992. For those at the 25th percentile of family income, public college costs increased from 20 percent of their income in 1982 to 25 percent in 1992; at the 75th percentile, the figures were 8 and 9 percent in 1982 and 1992, respectively (table 8-1).

What do the parallel increases in the academic proficiency of 17-year-olds and the percentage of high school graduates going to college imply about changes in the learned abilities of college freshman?

The picture is mixed. Mathematics scores on the SAT increased by 10 points between 1983 and 1993, while verbal scores decreased by 1 point (*Indicator 19*). So even though more high school graduates are taking the SAT, the learned ability of the average test-taker has generally not fallen over the decade. American College Testing Program (ACT) scores between 1983 and 1992 show a similar pattern.⁷

On the other hand, the percentage of colleges offering remedial instruction or tutoring grew during the 1980s, from 79 percent of 4-year colleges in 1980 to 89 percent in 1992, and from 84 percent of 2-year colleges in 1981 to 91 percent in 1992.⁸ Furthermore, many postsecondary institutions do not have competitive admissions. For example, in 1990, a quarter of the students enrolled in public community colleges were enrolled in institutions that did not require a high school diploma or GED for admission.⁹

What is the incentive for students to attend college?

- A review of the educational status of high school students 10 years after the publication of *A Nation at Risk*;
- A discussion of teachers as an educational resource;
- Progress in the achievement and attainment of black students relative to whites; and
- A description of the sub-baccalaureate sector of postsecondary education.

These issues were selected, first because of their importance to current policy discussions, and second because a substantial amount of new information on these issues has been included in this volume and other recent NCES publications. References to indicators and tables are given in parentheses. The tables referred to are the supplemental tables starting on page 166. Occasionally, indicators in a previous edition of *The Condition of Education* are also referred to and can be recognized by the year added to the reference. References to sources other than *The Condition of Education* are footnoted.

What is the educational status of high school students 10 years after the publication of *A Nation at Risk*?

On August 26, 1981 Secretary of Education T. H. Bell created the National Commission on Excellence in Education, directing it to examine and report on the quality of education in the United States. The commission responded in 1983 with a report declaring:

Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. . . . We report to the American people that while we take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people (*A Nation at Risk* p. 5).

The Commission developed a series of

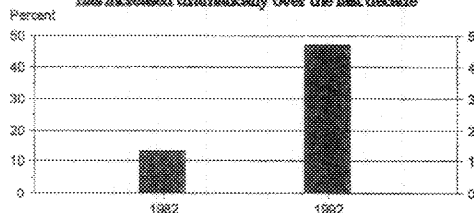
recommendations designed to improve the quantity and quality of education, including improvements to the curricular content and to the use of instructional time. The goal of these recommendations was to raise the standards and expectations of the Nation's educational system, to improve the preparation of teachers, and to raise the level of reward and respect for the teaching profession.

In describing the condition of education in this volume, it seems appropriate that we apply newly available data to assess how the quantity and quality of education in American high schools has changed over the decade since the publication of *A Nation at Risk*. Below, the educational advances of American high school students are highlighted, along with a discussion of changes in their aspirations for and continuation in further education.

What have been the curricular changes since the publication of *A Nation at Risk*?

High school graduates are taking more courses overall, particularly academic courses (*Indicator 23*). The percentage of graduates taking the core curriculum recommended by the National Commission on Excellence in Education (4 units of English, 3 units of science, 3 units of social studies, and 3 units of mathematics) increased more than 30 percentage points over the decade, from 13 percent in 1982 to 47 percent in 1992 (*Indicator 24*).¹

The percentage of high school graduates taking the core curriculum recommended in *A Nation at Risk* has increased dramatically over the last decade



SOURCE: Indicator 24

More students are taking algebra, geometry, trigonometry, and calculus; and more are taking advanced science courses, including chemistry and physics (*Indicator 25*). Both university-bound students and those who aspired to less than a 4-year college degree as high school sophomores are taking more foreign language courses than their counterparts did a decade before (*Indicator 26*). Furthermore, 42 of the 50

Jobs in manufacturing declined in the 1980s, although there was growth in comparatively lower paying service jobs. The market for unskilled and semi-skilled workers shrunk during the 1980s and American workers with limited skills were increasingly in competition with low wage workers in poorer countries.¹⁰ Furthermore, the 1980s were characterized by a growing gap in earnings between those with high school diplomas and those with college degrees. For example, between 1982 and 1992, the earnings advantage of having a bachelor's degree over a high school diploma increased from 30 percent to 55 percent for white males 25 to 34 years old. The earnings advantage of completing college increased even more for white females, black females, and black males (*Indicator 34*).

In summary, since the publication of *A Nation at Risk*, more high school students are taking core courses and are more frequently taking high-level courses in those subjects. More high school students are taking advanced placement examinations and fewer are dropping out between 10th and 12th grade. Mathematics and science achievement has increased since the early 1980s and more students are both aspiring to and attending college after they graduate.

Teachers as an Educational Resource

Most of what we consider formal childhood education takes place in classrooms through interactions among teachers and students. Teachers are one conduit through which education and societal values are passed. Because good teachers are central to education and teacher salaries are a major portion of the elementary and secondary education budget, the state of the teaching profession is of continuous concern to policymakers and education administrators.

The National Commission on Excellence in Education found that not enough "academically able" students were being attracted to teaching as a career option; that teacher preparation focused on courses in educational methods at the expense of courses in the subjects to be taught; and that teacher salaries were low and

teachers had little influence in decision making. Because of the critical importance of having qualified teachers in the education process, we will examine the current state of the teaching profession and how certain aspects of it have changed since the publication of *A Nation at Risk*.

Have the demographic characteristics of teachers changed?

Demographic characteristics of teachers have changed substantially in the last few years. A greater proportion of teachers were female in 1991 than in 1981 (72 percent compared to 67 percent). The teaching force became considerably older, with a median age of 42 in 1991, up from 37 in 1981. It has also become more ethnically diverse, with more Hispanics, Asians, and Native Americans making up the teaching pool.¹¹

Has the size of the teaching force changed?

Growth in the teacher workforce since 1981 has outpaced increases in elementary and secondary student enrollments. Between 1981 and 1991, the number of teachers per 100 students increased from 5.3 to 5.8 (*Indicator 57, Condition 1993*). The number of principals, assistant principals, and school district administrators per 100 students remained stable over the decade.

This increase in the ratio of teachers per 100 students corresponded to a slight drop in average class size for public elementary teachers between 1981 and 1991. However, the average class size for public secondary school teachers increased from 23 to 26 students over the same time period.¹² This apparent contradiction may correspond to growth in the number of special education, compensatory education, and bilingual education teachers in the workforce who often work with smaller classes or as resource teachers. In 1991, 5 percent of secondary school teachers reported that they spent the largest fraction of their time teaching special education students, a 3 percentage point increase from 1981.

Where are newly hired teachers coming from?

When hiring a new teacher, principals weigh the

relative cost of an applicant's starting salary versus the amount of prior teaching experience that person can bring to the job. Former teachers returning to teaching offer more teaching experience but at higher salaries than first-time teachers. First-time teachers, on the other hand, have high rates of attrition from the profession. The mix of first-time and reentering teachers has implications for school budgets, teacher recruitment, and teacher retention.

In 1991, 42 percent of newly hired teachers in public school districts held regular teaching positions for the first time, while about a third were transfers from other districts and about a quarter were reentrants. Between 1988 and 1991, there was a shift in sources of supply of newly hired teachers as both public and private schools hired more first-time teachers and fewer reentrants. A substantial number of new hires in both sectors worked as substitute teachers in the previous year (*Indicator 58*).

Have teacher salaries changed since the publication of A Nation at Risk?

Between 1980 and 1993, average overall public school teacher salaries adjusted for inflation increased by 21 percent, from \$29,319 to \$35,334. The salaries of teachers in some regions of the country increased more than those in other regions. Percentage increases in teacher salaries between 1981 and 1993 ranged from a high of 54 percent in New England to a low of 10 percent in the Rocky Mountain states. Between 1980 and 1993, average beginning teacher salaries increased 17 percent, from \$20,504 to \$23,969 (*Indicator 56*).

Part of this rise in salaries is due to increases in both the education and experience levels in the teacher workforce. Between 1981 and 1991, the median number of years of teaching experience among public school teachers increased from 12 to 15 years.¹³

Although teacher salaries are based on a 9- or 10-month contract, the annual salaries of some white collar professionals are more than 20 to 25 percent higher than the salaries of teachers. For example, in 1992 lawyers earned nearly double the average teacher salary and chemists and engineers 50 to 60 percent more. Auditors and

accountants, however, earned only about 10 to 20 percent more than teachers.¹⁴

Are teachers better educated than they were a decade ago?

A higher percentage of today's teachers have advanced degrees. The percentage of teachers with a master's degree or higher rose from 49 to 53 percent between 1981 and 1991.¹⁵

The minimum requirements to become a teacher are strikingly similar across countries. Overall, teachers in the United States, Canada, Japan, Australia, and the United Kingdom receive similar amounts of basic teacher training as measured by minimal years of schooling—4 years of college or teacher training programs in universities.¹⁶

How do the college course-taking patterns of new teachers compare to those of other college graduates?

Generally, the course-taking patterns for new teachers graduating in 1985–86 were not markedly different from those of all bachelor's degree recipients that year. A smaller percentage of new teachers took calculus and economics and a larger percentage took geography and history than did graduates as a whole (*Indicators 28 and 60, Condition 1993*).

How well are teachers trained in the subjects that they teach?

A Nation at Risk suggested that half of the newly employed mathematics, science, and English teachers were not qualified to teach these subjects and that fewer than one-third of U.S. high schools offered physics taught by qualified teachers. Although *qualified* is a subjective term, several measures exist to determine how well-matched teachers are to their main and additional teaching assignment fields.

In 1990–91, only 5 percent of full-time public secondary school teachers were not certified to teach in their main assignment field, that is, the field in which they taught the most classes. However, 36 percent of teachers with an additional assignment field were not certified to teach in that field. While 83 percent of teachers with a main assignment in English or

humanities had college majors matching that assignment field, only 75 percent of mathematics and 62 percent of science teachers had an appropriate match (*Indicator 59*). Only 35 percent of teachers who taught mathematics as an additional field, in addition to courses in their main assignment field, had majored or minored in mathematics or mathematics education (table 59-1).

Are current teachers updating their skills?

About 15 percent of public and private school teachers in school year 1991–92 reported pursuing a new degree or completing a degree program within the last year.

Besides working on a formal degree, teachers can attend school or district-sponsored workshops to further develop their skills. Sixty-one percent of public school teachers and 49 percent of private school teachers reported participating in teacher workshops or in-service training requiring 30 or more hours of class attendance at some time in their careers; over 85 percent of these teachers said that the training was relevant to their main assignment field (*Indicator 60*).

Are teachers influencing the decision-making processes in schools?

One aspect bearing on the climate and responsiveness of a school is the extent to which teachers participate in making decisions concerning important school policies and issues. *A Nation at Risk* found that "individual teachers had little influence in such critical professional decisions as, for example, textbook selection."

Relatively few secondary teachers in 1991 reported that faculty in their schools had a great deal of influence over school policies, including: determining discipline policy (10 percent), determining content of faculty training programs (12 percent), grouping students by ability (8 percent), and establishing curriculum (14 percent) (*Indicator 47, Condition 1993*).

A third of secondary school teachers indicated they had considerable influence over decisions for their classroom about selecting textbooks, selecting course content and topics, and

disciplining students. They were far more likely to indicate they had considerable influence over decisions concerning instructional procedures within their classroom, such as selecting teaching techniques (62 percent), grading students (62 percent), and determining the amount of homework (68 percent).

How much of a problem is teacher attrition?

There has been considerable policy discussion regarding the ability of schools to attract and keep qualified teachers, both in general and in specific subject areas such as mathematics and science. In general, teacher attrition in public elementary and secondary schools is low. Only 5 percent of full-time public school teachers left the teaching profession between 1987–88 and 1988–89. Keeping mathematics and science teachers is not as big a problem as was once suggested. The percentage of teachers in public secondary schools in 1987–88 who left the teaching profession in the next year was no higher in mathematics and science than in other teaching fields (table 58-1, *Condition 1992*).

How do school districts respond to shortages in particular teaching fields?

Fifteen percent of all schools reported having teaching vacancies in 1990–91 that could not be filled with a teacher qualified in the course or grade level to be taught. More than one method of covering an unfilled vacancy may be used by a school district. For example, almost half of school district administrators reported that they used substitute teachers to cover vacancies; 26 percent hired less qualified teachers; 23 percent assigned other teachers; 11 percent increased class sizes; 10 percent increased teaching loads of other teachers; 10 percent used part-time or itinerant teachers; and 7 percent canceled classes.¹⁷

When there were teacher shortages in particular subject areas, 10 percent of public school districts and 16 percent of private schools provided free retraining to prepare staff to teach in these subjects. In the case of any one specific field, relatively few public school districts provided free retraining (2 to 5 percent, depending on the field). However, more districts provided free retraining for special education than for any

other field except mathematics.¹⁸

Pay incentives, however, are not generally used to recruit or retrain teachers in fields of shortage. In 1987–88, 3 percent of public school districts offered increases in the salary schedule to recruit or retain teachers where a shortage existed; and fewer offered cash bonuses or other pay incentives.¹⁹

Have teachers' attitudes toward teaching changed over the decade?

Teachers seem to be happier about their choice of profession. In 1981, 46 percent of teachers said that they would be willing to teach again. In 1991, this percentage had increased to 59 percent.²⁰

In summary, the teacher workforce has changed over the decade. The teacher workforce has grown faster than enrollments over the decade, though average class size has generally not fallen. Almost all teachers are certified to teach in their main assignment field. However, one-quarter to one-third of teachers with a main assignment in mathematics or science neither majored nor minored in those subjects. A higher percentage of teachers had master's degrees in 1991 than in 1981 and the college course-taking patterns of new teachers are generally comparable to those of other college graduates. Teacher salaries have risen and the teacher workforce is more experienced in terms of the number of years of teaching experience. Teacher attrition is not particularly high, though some schools have difficulty finding qualified teachers to fill vacancies. Few districts, however, provide salary incentives or bonuses to recruit or retrain teachers where there is a shortage.

Progress in the Achievement and Attainment of Black Students

Attaining a high quality education has always been seen as a way to improve one's prospects. This is especially true for those who are socially and economically disadvantaged. Black children are at an educational disadvantage relative to whites because of several factors, including: lower average levels of parental education, a greater likelihood of living with only one parent,

and different community characteristics deriving from income-based residential segregation. Furthermore, black children are much more likely to experience poverty than white children. In 1992, 46 percent of black children compared to 16 percent of white children lived in families with an income level below the poverty line (*Indicator 47*).

In many regards, blacks continue to trail whites with respect to educational access, achievement, and attainment, though many of these differences have narrowed over time. Outlined below are some examples of the educational differences between blacks and whites with respect to preschool attendance, grade retention, academic achievement, dropout rates, parental involvement, school climate, course-taking patterns, educational aspirations, college attendance and completion, labor market outcomes, and adult literacy levels. Although many of these differences remain large, some of the gap between blacks and whites has decreased over time.

Do black children start elementary school with less preschool experience than white children?

There are differences in participation in education before kindergarten among black and white children. Several federal programs, such as Head Start, a popular program for disadvantaged preschoolers, were begun to give children from low income families an early start in education. Yet, even though these programs exist, fewer black children are enrolled in preschool than white children, and the gap has widened. In 1991, 31 percent of black 3- and 4-year-olds were in nursery school programs compared to 40 percent of white children. However, during the middle 1970s, white and black enrollment rates were similar, around 25 percent. While there has been an increase in the proportion of both white and black 3- and 4-year-olds attending nursery school, the proportion for whites has increased at a faster rate. Black 3- and 4-year-olds, however, are more likely than whites to be enrolled in kindergarten, 8 and 4 percent respectively (*Indicator 2*).

Since the provision of preprimary education is

not mandatory, it is usually not offered in public schools whereas kindergarten typically is. Limited financial resources may make it difficult for many black families to afford private preschool tuition. Differences, then, in black and white enrollment rates in preschool may be due to a lack of available low-cost nursery schools. In 1991, a far lower proportion of black preschool students (29 percent) were enrolled in private preschools than white preschool students (68 percent) (table 3-2).

Do black children progress through school more slowly than white children?

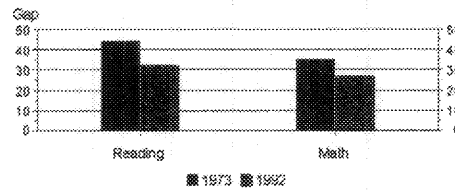
Since the mid-1970s the percentage of 8- and 13-year-old children who were one or more years below the modal (most common) grade for their age has risen for all children (Indicator 3, Condition 1992).²¹ More black than white children were behind at age 13 than at age 9, however.²² In 1989, 27 percent of black 8-year-old boys were in second grade or below, about the same as their white counterparts, while 49 percent of black 13-year-olds were in seventh grade or below, compared to 32 percent of their white counterparts.

Studies have shown that students who have repeated at least one grade are more likely to become dropouts,²³ so differential retention rates for blacks and whites may be associated with differential dropout rates. In 1992, 18 percent of black 16- to 24-year-olds had repeated one or more grades compared to 11 percent of their white counterparts. On the other hand, of the young adults who had been retained, blacks were no more likely than whites to drop out before completing 12th grade. Among those who had not been retained, however, blacks had twice the dropout rate as whites, 12 and 6 percent respectively (Indicator 4).

Does the academic performance of white and black students differ in the early grades?

As early as age 9 there are differences in the academic performance of black and white students. Academic proficiency in reading, mathematics, and science, as measured at age 9 by the National Assessment of Educational Progress (NAEP), is lower for black children than for white children.

The achievement gap between blacks and whites at age 9 remains large, though it has narrowed over the past two decades



SOURCE: indicators 12 and 14

The black-white achievement gap narrowed in the 1970s and early 1980s, but has not narrowed further. In 1992, black 9-year-olds were 33 scale points behind whites in reading, compared to 44 scale points behind in 1971 (Indicator 12); 27 points behind whites in mathematics, compared to 35 points in 1973 (Indicator 14); and 39 points behind in science, compared to 57 points behind in 1970 (Indicator 15). The black-white achievement gaps for 13-year-olds show similar patterns.

Although the gap between the proficiency scores of black and white students has narrowed, it remains large. For example, the average reading proficiency scores of black 13-year-olds (238 in 1992) fell about midway between the average proficiency scores of white 9- and 13-year-olds (218 and 266 respectively).

This gap suggests that black children may be reading on average at a level as much as 2 years behind their white peers by age 13, a deficiency that they will carry with them into high school.

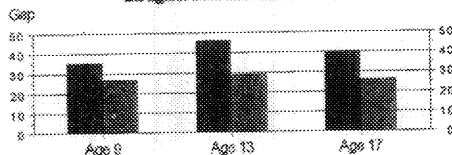
Does the gap in achievement that we see between whites and blacks at age 13 persist in high school?

When tested again near the end of high school, the NAEP scores for 17-year-old blacks again indicate a large, but narrowing, gap in achievement between whites and blacks. Since the early 1970s, the proficiency scores for blacks have improved relative to those of whites in reading, mathematics, and science. For example, in 1971 average reading proficiency among 17-year-old blacks was well below (52 scale points) that of 17-year-old whites and also below (22 points) that of 13-year-old whites; in 1992, the proficiency of 17-year-old blacks was closer (36 points) to that of 17-year-old whites, and about the same as that of 13-year-old whites (Indicator 12). In 1973, average mathematics

proficiency among 17-year-old blacks was 40 scale points behind that of their white counterparts and about the same as that of 13-year-old whites; in 1992, it was 26 points behind that of 17-year-old whites, and 7 points above that of 13-year-old whites (*Indicator 14*).

Even though the black-white achievement gap has closed somewhat over time, the gap persists across ages. In 1992, the black-white differences in mathematics at ages 9, 13, and 17 are remarkably similar (27, 29, and 26 points respectively). In other words, the achievement gap that exists at age 9 persists through age 17, though it does not widen.

The gap between the mathematics proficiency of blacks and whites does not narrow with age, though it does not widen either



SOURCE: Indicator 14

Do the learned abilities of college-bound blacks differ on average than those of college-bound whites?

While blacks made substantial gains on the SAT between 1976 and 1993, a gap remains between the performance of blacks and whites. In 1993, average scores of blacks were 91 points lower than those of whites on the verbal component of the SAT and 106 points lower on the mathematics component; in 1976 they had been 119 and 139 points lower, respectively (*Indicator 19*).

Are fewer black students dropping out of high school now than previously?

Fewer black teenagers are dropping out of high school before graduating. Although the dropout rate is still considered too high by many educators, the 10th- to 12th-grade rate among blacks (7.9 percent) was substantially lower in 1992 than it was a decade earlier (12.6 percent)²⁴ and the gap between black and white dropout rates has been closing.²⁵ However, the difference in black-white dropout rates is still large in earlier grades. Blacks in the 8th grade class of 1988 were almost twice as likely as whites to drop out between 8th and 10th grade: 10.2 and

5.2 percent respectively (*Indicator 6*).

Many dropouts later complete their high school education, either by returning to school to earn a diploma or by obtaining a GED. Although blacks in the sophomore class of 1980 were less likely than their white classmates to complete high school by June 1982 (79 percent compared to 86 percent), they were equally likely to have completed by 1992 (*Indicator 6*).

With fewer black students dropping out, the high school completion rate for blacks has increased. In 1991, 73 percent of black 19- to 20-year-olds had graduated from high school compared to 66 percent in 1972 (*Indicator 20, Condition 1993*). The completion rate for whites was higher (87 percent) than for blacks, but it was largely unchanged over the same period.

How does the learning environment of black and white students differ?

A student's achievement can be affected by the degree to which a safe and orderly environment is maintained in their school. Black sophomores are more likely than white sophomores to report that disruptions by other students interfere with their learning (51 percent compared to 37 percent) and that other students often disrupt their classes (76 percent compared to 70 percent). Blacks are also less likely than whites to feel that students get along well with teachers at their school (63 percent compared to 77 percent). Furthermore, in 1990, black sophomores were almost twice as likely as whites to report that they did not feel safe at their school (13 percent compared to 7 percent).²⁶

Between 1976 and 1991, blacks were both more likely to be threatened with and more likely to be injured with a weapon in school than whites. In 1991, for example, about 1 in 10 black compared to 1 in 19 white high school seniors reported being injured with a weapon at school. However, there were few other differences in the in-school victimization rates for black and white high school seniors over this period (*Indicator 50, Condition 1993*).

Are the parents of black students more or less likely than those of whites to be involved in their children's education?

The degree to which parents are involved in their children's education is another factor linked to effective schooling. Although the vast majority of eighth grade students report that they talk to their parents about school, black eighth-graders were slightly less likely than whites to talk with their parents about selecting their courses (80 percent compared to 87 percent). However, blacks were just as likely as whites to talk to their parents about their classes or have their parents check their homework, limit their television viewing, and limit their going out with friends. And black eighth-graders were more likely than their white counterparts to report that their parents had spoken with a teacher or guidance counselor and visited their classes (*Indicator 43*).

Are the course-taking patterns of white high school graduates different than those of black graduates?

The total number of courses taken and the type of curriculum followed appear not to vary by race. In 1992, black and white high school graduates on average earned a similar number of total course units (23 and 24 respectively) and academic units (17 and 18) (*Indicator 23*). And there was no measurable difference in 1992 between the percentage of black and white graduates who had taken the core curriculum (4 units of English, 3 units of science, 3 units of social science, and 3 units of mathematics) recommended in *A Nation at Risk* (*Indicator 24*).

However, black graduates were less likely than their white counterparts to take the higher level mathematics, science, and foreign language courses. In 1992, black graduates were twice as likely as white graduates to have taken remedial mathematics and were less likely to have taken algebra II, geometry, or trigonometry than white graduates (table 25-2). Although black graduates were about as likely as whites to have taken biology, they were less likely to have taken chemistry, physics, or the combination of biology, chemistry, and physics (table 25-2). Furthermore, black college-bound graduates were far less likely than whites to have taken at least 2 years of a foreign language in high school (60 percent and 75 percent respectively), which could affect their eligibility to attend selective colleges (*Indicator 26*).

Do the educational aspirations of white and black students differ?

The educational aspirations of black and white students are very similar. In 1990, 11 percent of black sophomores aspired to a high school diploma or less, compared to 9 percent of whites. Fifty-nine percent of black sophomores aspired to a bachelor's degree or higher, compared to 61 percent of whites.²⁷

Black sophomores were more likely than whites to have teachers recommend college attendance, and just as likely as whites to receive advice on college attendance from guidance counselors. However, black sophomores were less likely to be advised to attend college by their parents than their white counterparts (*Indicator 7*).

How are the gains made by blacks in elementary and secondary education reflected in higher education enrollments?

Gains made by blacks in higher education are not as dramatic as those in elementary and secondary education. The percentage of blacks enrolling in college in the fall following high school graduation was 47 percent in 1991, about the same as it was in 1978. Since 1988, the enrollment rate for white high school graduates has been rising while for blacks it appears to have leveled off, which increased the white-black enrollment difference to 17 percentage points in 1991 (*Indicator 9*). Some of the difference in enrollment rates may be made up by delayed entry, as blacks are more likely than whites to enroll in college after a delay (*Indicator 2:2, Condition 1991*).

Overall, about 30 percent of black high school graduates 16–24 years old were enrolled in college as undergraduates during the late 1980s, about the same as during the last half of the 1970s. In contrast, in 1990, about 38 percent of their white counterparts were enrolled in college, up from 30 percent a decade earlier (*Indicator 9, Condition 1992*).

Do black and white students study different subjects in college?

The distribution of fields of study of black degree recipients does differ from those of

whites at both the associate's and bachelor's degree levels, but these differences have narrowed over time. In 1991, at the associate's degree level, black men were less likely than white men to major in the trade and industrial fields, but more likely to major in business. Black women were also more likely than white women to earn associate's degrees in business, but less likely to earn degrees in health-related fields. Differences in the fields studied at the associate's degree level by black and white men narrowed between 1987 and 1991, while the differences between black and white women remained about the same (*Indicator 29*).

Among 1985–86 bachelor's degree recipients, blacks were less likely than whites to have taken courses in the physical sciences and calculus, but were more likely to have taken courses in area and ethnic studies and psychology (*Indicator 28*).

At the bachelor's degree level, in 1991 blacks were more likely than whites to major in business and management and in computer and information sciences and less likely to major in engineering, the humanities, education, and health sciences. Overall, differences have narrowed since 1977 (*Indicator 30*).

How do differential higher education enrollment rates influence the educational attainment levels of young black adults relative to young white adults?

Although the persistence rates of first-time students pursuing vocational certificates, associate's degrees, and bachelor's degrees are generally similar for blacks and whites (*Indicator 10*), higher education attainment among blacks is far lower than among whites. In 1991, 41 percent of black high school graduates 25 to 29 years old had completed 1 or more years of college, compared to 55 percent of their white counterparts. In addition, 14 percent of black high school graduates in this age category had completed 4 or more years of college compared to 30 percent of whites. During the 1970s, the percentage of both white and black high school graduates completing 1 or more or 4 or more years of college grew; during the 1980s, however, there was little change in these college attainment rates (*Indicator 22, Condition 1992*).

Blacks who do complete college on average take

longer than whites. Of 1990 college graduates, 65 percent of black students completed in 5 or fewer years compared to 72 percent of white students. Taking longer to graduate may result from changing schools or majors, stopping out, or taking a reduced course load for financial, academic, or social reasons. The additional time in college can be costly to the individual, as it delays entrance into the full-time labor market (*Indicator 6, Condition 1993*).

Black women earn substantially more bachelor's degrees than black men and the difference in the number of degrees earned by black men and women doubled between 1977 and 1991. Following a period of decline, the number of degrees earned by black men increased between 1989 and 1991, approaching the level attained a decade earlier. Between 1981 and 1991, the number of bachelor's degrees earned by white women increased faster than those earned by black women and the number earned by white men has been stable (*Indicator 31*).

Does the relationship between education and labor market outcomes differ for blacks and whites?

Among both blacks and whites, those with more education have better employment and earnings outcomes. In 1991, only a quarter of blacks who dropped out of high school between 1990 and 1991 were employed. Among black recent high school graduates who did not enroll in college, about one-third were employed (*Indicator 32*). However, for the period between 1973 and 1992, white high school dropouts were more likely to be employed than black high school graduates not enrolled in college.

Earnings among 25- to 34-year-old blacks, particularly black women, show that the incentive to pursue additional education is sizeable. For example, in 1992, black males with 9–11 years of schooling earned 35 percent less than black high school graduates; those with bachelor's degree earned 83 percent more. Black females with 9–11 years of schooling earned 32 percent less than those with a high school diploma; those with a bachelor's degree earned 113 percent more. Between 1974 and 1992, the earnings advantage of completing college increased for black males and females as well as for white males and females (*Indicator 34*).

However, black-white earnings differentials exist at each level of educational attainment. For example, white college graduates 25 to 34 years old earned 23 percent more in 1992 than black college graduates of the same age (table 34-3).

How do the literacy levels of blacks and whites differ in the population?

Large gaps between the literacy skills of blacks and whites exist both within and across levels of education. On the National Adult Literacy Survey, blacks scored at levels similar to whites with less education. For example, blacks with a high school diploma or a GED have literacy levels similar to whites who completed 9 to 12 years of high school but did not receive a diploma. The difference in prose literacy between black and white college graduates is 40 points, eight-tenths of the difference between the scores of white high school and college graduates (50 points). However, the gap in literacy between blacks and whites is less for 16- to 24-year-olds than for 40- to 64-year-olds (*Indicator 20*). The differences in the labor market opportunities of blacks relative to whites noted above may be related to the differences in the literacy levels of blacks and whites at similar levels of educational attainment.

In summary, black children are less likely to be enrolled in preprimary education and are more likely to be below modal grade for their age. Gaps in reading, mathematics, and science achievement appear at age 9, and do not narrow with age. Black students are more likely to drop out of school than whites, although this gap has closed over time. Black students are no less likely than whites to have their parents involved in their schooling, although black students are more likely to face a disorderly school environment than their white peers. Blacks are less likely to take advanced science and mathematics courses or foreign languages in high school. Even though they have similar educational aspirations and take a similar number of academic courses as whites, blacks are less likely than whites to make the immediate transition from high school to college. Educational attainment is positively associated with employment and earnings for blacks, although earnings and employment rates are lower for blacks than for whites with the same

amount of education. Blacks have lower literacy levels than whites, both in general and at similar levels of educational attainment.

Sub-baccalaureate Postsecondary Education

Lifelong learning is at the core of goal 5 of the National Education Goals adopted by President Bush and the governors in 1990 and included in the Educate America Act submitted by President Clinton to the Congress in 1993. Goal 5 states: "By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship."

High school graduates seeking occupational and technical training to help them prepare for a career may enroll in sub-baccalaureate postsecondary education programs. Also, people who have been in the labor market for some time and want to upgrade their skills in order to advance in their careers or to change careers may enroll in these programs. This sector of education, which is characterized by diversity in its programs, institutions, and students, is a very important resource to people who want to learn throughout their lives.

What is sub-baccalaureate education?

Traditional higher education is usually imagined as enrollment in a 4-year college soon after high school graduation and continuation through the award of a bachelor's degree in an academic field. However, this educational path is only one of many after high school. Much of postsecondary education is occupationally specific.²⁸ Many postsecondary institutions offer less-than-4-year or less-than-2-year programs, and many students in postsecondary education do not pursue bachelor's or more advanced degrees and enroll years after completing high school or without completing high school. The description below of the sub-baccalaureate sector of education is partly of less-than-4-year institutions, partly of postsecondary vocational education, and partly of students who do not attain bachelor's or more advanced degrees. This sector of education is diverse and there are no clear dividing lines between it and traditional

higher education. In fact, many students in this sector are preparing to go on to a 4-year institution to pursue a bachelor's degree.

Students. In 1993, about half of the population aged 25 to 49 reported they had attained a level of education beyond high school. About half of these had earned a bachelor's or more advanced degree. The remaining half had attended "some college" but had no degree or had earned an associate's degree (*Indicator 21*). Many of these people may have pursued occupational-technical programs of short duration. Others, however, may have dropped out of programs leading to a bachelor's or associate's degree.

Institutions. Postsecondary institutions that do not offer bachelor's or more advanced degrees (less-than-4-year) are of two major types: 1) community and junior colleges and 2) vocational and technical education institutions. Public community and junior colleges, which are higher education institutions, enroll 86 percent of all students at less-than-4-year institutions and offer both occupationally specific training and the opportunity to complete the first 2 years of a bachelor's degree program.²⁹ Vocational and technical institutions, which are noncollegiate postsecondary institutions, almost exclusively offer training programs designed to prepare students for specific occupations and careers. Typically, vocational-technical institutes differ from public 2-year institutions in that they do not award associate's degrees and are more likely to provide programs lasting 1 year or less. Proprietary (private, for-profit) schools, which enroll over half the students at less than 1-year institutions, offer a variety of vocational programs ranging from very short programs in truck driving to 2-year associate's degree programs in business, allied health, or other subjects.

Programs. Less-than-4-year programs vary considerably in length and type. Programs leading to an associate's degree typically take 2 years. However, there are many programs that lead to certificates, licenses, and other awards. Some are as short as 6 weeks, while others can take almost 4 years. Most of these programs are offered in less than 4-year institutions but some are offered in 4-year institutions. For example,

14 percent of all associate's degrees and 2 percent of less-than-4-year awards (certificates) were conferred by 4-year institutions in 1990-91.³⁰

Fields. Associate's degree programs include vocational programs to equip students with skills for the workforce and more academic programs to prepare students to transfer to 4-year institutions to pursue a bachelor's degree. Two out of every three students receiving an associate's degree in 1990 specialized in technical/professional fields. The remainder pursued the arts and sciences fields, mainly liberal/general studies.³¹ Among those in technical/professional fields, the most popular programs were business and management, business administrative support, nursing, and engineering technologies. These four fields made up 38 percent of all associate's degrees awarded in 1990.

How many students participate in the sub-baccalaureate sector of education?

The sub-baccalaureate sector of postsecondary education is large in terms of the number of institutions, the number of students, and the number of credentials conferred. In 1989, almost 7,800 postsecondary institutions offered occupational and technical programs leading to sub-baccalaureate awards. Five thousand of these were private proprietary schools. In addition, 1,000 public 2-year institutions, 756 private nonprofit less-than-4-year institutions, 315 4-year institutions (both public and private nonprofit), and 282 public vocational-technical institutions offered vocational education programs.³²

Almost all states support at least some form of postsecondary vocational education, although the number and type of institutions vary across the states. With the exception of Wyoming, in 1989 every state provided vocational education in both public and private 4-year and public 2-year institutions. California had the largest number of public 2-year institutions (102), followed by Texas (65) and North Carolina (60). Of the 5.4 million students enrolled in public 2-year institutions in 1991, 24 percent were in California alone. California also had the largest number of proprietary schools (644), followed by

Illinois (284) and Pennsylvania (280). However, Arkansas, Florida, Ohio, and Tennessee have the largest systems of public vocational-technical institutes. Only 12 states and the District of Columbia reported having no vocational-technical institutes.³³

Enrollment in less-than-4-year institutions is extensive. In 1991, 5.4 million students were enrolled in public 2-year institutions, compared to 8.7 million undergraduate and graduate students in 4-year colleges and universities. Not all of these students are in degree programs, however. Many are taking specific courses to acquire specific skills or to pursue hobbies. Enrollment in the less-than-2-year sector was 924,000 with over half of the students enrolled in proprietary institutions and the remainder in public (31 percent) and private nonprofit (17 percent) institutions.³⁴

Enrollment at public 2-year institutions increased from 2.6 million students in 1972 to 5.5 million students in 1992 and the share of all students in higher education increased from 29 percent in 1972 to 38 percent in 1992 (*Indicator 39*).

Institutions in the sub-baccalaureate sector confer many associate's degrees and other awards, primarily vocational certificates, each year. In 1990-91, 507,000 associate's degrees were awarded.³⁵ Most of these (363,000) were awarded by public 2-year colleges. In addition, 912,000 certificates were awarded that year. The majority of these (538,000) were awarded by less-than-2-year proprietary schools. By comparison, about 1 million bachelor's degrees were conferred that year.

What are the characteristics of students who participate in the sub-baccalaureate sector?

The characteristics of students in less-than-4-year institutions differ from those of students in 4-year institutions. Overall, the students at less-than-4-year institutions are more likely to be over 24 years old, married, living off campus, and attending part-time than those in 4-year institutions. Also, the students at less-than-4-year institutions are more likely to have parents with, at most, a high school education. However, there are some important differences within the less-than-4-year sector (*Indicator 51*).

- At public 2-year institutions, 70 percent of students attended part-time in 1989-90 compared to 29 and 17 percent at private not-for-profit and private for-profit less-than-4-year institutions, respectively.
- At public 2-year institutions, 70 percent of students attended part-time in 1989-90 compared to 29 and 17 percent at private not-for-profit and private for-profit less-than-4-year institutions, respectively.
- Students enrolled in public 2-year colleges are very likely to be attending part-time (70 percent), however, those enrolled at private not-for-profit and private for-profit less-than-4-year are very unlikely to be doing so (29 and 17 percent, respectively).
- The parents of students attending proprietary institutions have less education than the parents of students attending 2-year colleges.
- Financially dependent students at proprietary institutions are more likely to be from low and lower middle income families (64 percent) than dependent students at public 2-year colleges (44 percent).

What is the cost of enrolling in sub-baccalaureate programs and how much financial aid do students receive?

The cost of attending less-than-4-year postsecondary institutions varies. At public 2-year institutions the cost is low. Average (in-state) tuition and fees were just over \$1,000 in 1992-93, compared to \$2,600 at public universities and \$13,000 at private universities.³⁷ Average tuition charges also have risen more slowly at public 2-year colleges than at universities. Between 1980 and 1991, tuition charges, in constant dollars, grew 21 percent at public 2-year colleges, compared to 36 percent at public universities and 53 percent at private universities (*Indicator 55*).

At proprietary schools, tuition charges are higher. In 1989-90, the average tuition students paid was \$4,900 at propriety institutions compared to \$577 at public 2-year institutions.³⁸ These amounts are for the number of terms and

number of courses students were actually enrolled. The average tuition charges for full-year full-time students would have been higher.³⁹

Overall, 37 percent of students at less-than-4-year institutions received financial aid compared to 50 percent at 4-year-institutions. The average amount received was \$2,800 for students at less-than-4-year institutions compared to \$4,300 for those at 4-year institutions.⁴⁰ Because students attending less than half time are less likely to receive financial aid than those attending at least half time and because students attending public institutions receive on average less financial aid than those attending private or proprietary institutions, the figures above are determined in large part by the proportion of students in each sector who attend less than half time and who attend public institutions.⁴¹

Within the less-than-4-year sector, there is a great deal of variation in the percentage of students receiving financial aid and the average amount of this aid. For example, 28 percent of public 2-year college students received aid compared to 82 percent of students at proprietary less-than-2-year institutions. The average for public 2-year college students receiving aid was \$2,000 compared to \$4,100 for their counterparts at proprietary less-than-2-year institutions.⁴²

How much do institutions that offer sub-baccalaureate programs spend?

Expenditures per pupil at public 2-year colleges were less than at universities. In 1990-91, public 2-year colleges spent \$5,800 per full-time-equivalent student, compared to \$12,300 at public universities and \$21,900 at private universities.⁴³ Expenditures also grew more slowly at public 2-year colleges than at universities. Between 1980 and 1991, expenditures per full-time-equivalent student increased 8 percent at public 2-year colleges, compared to 20 percent at public universities and 37 percent at private universities (*Indicator 55*).

Faculty at public 2-year institutions are more likely to be part-time and earn lower average salaries than their counterparts at 4-year

institutions. In the fall of 1989, 61 percent of faculty at public 2-year institutions were part-time compared to 21 percent at public 4-year institutions and 36 percent at private 4-year institutions.⁴⁴ Average salaries for faculty at public 2-year colleges are lower than for those at 4-year institutions, particularly for those with higher academic rank. In 1992, full-time professors at public 2-year colleges earned an average salary of \$48,100 compared to \$59,800 at public 4-year colleges. However, full-time assistant professors earned an average salary of \$34,900 at 2-year colleges compared to \$37,700 for those at public 4-year colleges (*Indicator 57*).

How many students who begin sub-baccalaureate programs persist to completion of the program?

A large percentage of students pursuing sub-baccalaureate degrees do not complete those programs. Among students seeking an associate's degree in 1989-90, by spring 1992 only 12 percent completed it, while 19 percent were continuously enrolled and 23 percent had re-enrolled at least once (after an interruption). Nevertheless, close to half (46 percent) had left school without reenrolling (*Indicator 10*).

Among associate's degree students, not delaying entry into postsecondary education, being single without children, and being employed were associated with higher completion rates and lower interrupted enrollment (without re-enrollment) rates (table 10-1). For example, those who started postsecondary education within 12 months of high school graduation (no delay) were more likely to complete the program than those who started more than 12 months after high school graduation (delay), 16 percent and 5 percent, respectively. Similarly, a smaller percentage of the students who did not delay entry had an interruption in their enrollment (without reenrollment) (38 percent), compared with those who delayed entry (60 percent). On the other hand, the average number of hours worked per week while in school was not associated with the likelihood of completion or interrupting their enrollment.

Among first-time postsecondary students in the 1989-90 academic year whose degree objective was a vocational certificate, only 1 in 3 received one by early 1992, and most of these were in

very short programs of 1 month or less (*Indicator 10*). However, some of these students were more likely to finish than others. For example, those who started postsecondary education within 12 months of high school graduation were *less* likely to complete the certificate program than those who started more than 12 months after high school graduation.

How common is it for students to move from the sub-baccalaureate to the baccalaureate sector, that is, from 2-year to 4-year colleges?

Students can use community and junior colleges as a stepping stone to a bachelor's degree program at a 4-year-college or university. About one-quarter of the senior class of 1980 who enrolled in public 2-year institutions within 4 years of high school graduation had transferred to another postsecondary institution by 1984. Of those who transferred, 54 percent went on to public 4-year institutions and 18 percent went to private 4-year institutions.⁴⁵

In summary, the sub-baccalaureate sector is made up of a variety of institutions (ranging from proprietary schools to community colleges) and offers a variety of programs, though most are vocational in nature. Less-than-4-year institutions make up a large part of postsecondary education in terms of the number of institutions, size of enrollments, and number of degrees and certificates conferred. Students in this sector differ from those of traditional 4-year college students. They are more likely to be over 24, married, living off campus, attending part-time, and from lower income families. Completion rates of vocational certificate and associate's degree seekers are generally low, though a small portion do go on to 4-year institutions. In the late 1980s and early 1990s, enrollment in community colleges and universities grew faster than in 4-year institutions.

Conclusion

The preceding discussion has highlighted only a few of the issues treated by the 60 indicators in this volume. *The Condition of Education* presents data and analyses on a wide variety of issues in education. The reader is encouraged to read the overviews to each section for discussion of other

issues, to peruse the indicators of interest, and to use the tables for additional details.

NOTES:

1. The panel's recommendation of 0.5 units in computer science is not included in this description; however, it is included in supplemental tables 24-1 and 24-2.
2. R. Coley and M. E. Goetz. *Educational Standards in the Fifty States: 1990*. Princeton, N.J.: Educational Testing Service and U.S. Department of Education, National Center for Education Statistics. *Overview and Inventory of State Requirements for School Coursework and Attendance*. Washington, D.C.: 1992.
3. U.S. Department of Education, National Center for Education Statistics. *Dropout Rates in the United States: 1992*, Washington, D.C.: 1993, table 21, based on High School and Beyond (Base Year Survey) and National Educational Longitudinal Study of 1988 (First Follow-up Survey).
4. U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics, 1993*. Washington, D.C.: 1993 table 150. (footnote about Montana)
5. *Dropout Rates in the United States: 1992*, table 19, based on the National Educational Longitudinal Study of 1988 (Base Year, First Follow-up, and Second Follow-up Surveys) and *Dropout Rates in the United States: 1991*, Washington, D.C.: 1992, table 18, based on the National Educational Longitudinal Study of 1988 (First Follow-up Survey).
6. U.S. Department of Education, National Center for Education Statistics. *America's High School Sophomores: A Ten Year Comparison*. Washington, D.C.: 1993, table 6.1, based on High School and Beyond (Base Year Survey) and the National Educational Longitudinal Study of 1988 (First Follow-up Survey).
7. *Digest of Education Statistics, 1993*, table 132.
8. *Digest of Education Statistics, 1993*, table 300.
9. U.S. Department of Education, National Center for Education Statistics. National Postsecondary Student Aid Study, 1990. Data Analysis System.
10. *Harvard Education Letter*, IX(1) January, 1993.
11. *Digest of Education Statistics, 1993*, table 68, based on National Education Association, *Status of the American Public School Teacher, 1990-91*.
12. *Ibid.*
13. *Ibid.*
14. F. H. Nelson and T. O'Brien. *How U.S. Teachers Measure Up Internationally: A Comparative Study of Teacher Pay, Training, and Conditions of Service*. American Federation of Teachers, Washington, D.C.: 1993, table II-1.
15. *Digest of Education Statistics, 1993*, table 68.
16. F. H. Nelson. *Survey and Analysis of Salary Trends, 1993*. American Federation of Teachers, Washington, D.C.: 1993, table II-4.
17. U.S. Department of Education, National Center for Education Statistics. *Schools and Staffing in the United States: A Statistical Profile, 1990-91*. Washington, D.C.: 1993, table 7.2, based on Schools and Staffing Survey: 1990-91 (School Questionnaire).
18. *Schools and Staffing: 1990-91*, table 7.5, based on Schools and Staffing Survey: 1990-91 (Private School and Teacher

Demand and Shortage Questionnaire).

19. U.S. Department of Education, National Center for Education Statistics. *America's Teachers: Profile of a Profession*. Washington, D.C.: 1993, table 3.12, based on Schools and Staffing Survey: 1987-88 (Teacher Demand and Shortage Questionnaire).
20. *Digest of Education Statistics*, 1993, table 68.
21. This trend may be due to a variety of factors, including 1) parents being increasingly willing to have their children repeat kindergarten or start first grade late, 2) schools being increasingly less willing to let parents start their children in school early, and 3) a decline in the practice of "social promotion" or promoting academically unprepared children to the next grade for social reasons.
22. Most 8-year-olds are in third grade and most 13-year-olds are in the eighth grade. Many 8-year-olds who are in first or second grade did not start school until they were 7. This is particularly true for boys who are often less mature than girls at ages 5 and 6. However, the percentage of students below the modal (most common) grade for their age generally increases with age. The increase is an indication of the practice of parents and teachers deciding to hold a student in a grade who they believe is not ready for the next grade. The increase, which was larger for black than for white boys, is an indication that parents and teachers were frequently holding black boys back compared to white boys. This difference, in turn, is an indication that black boys were falling behind white boys academically.
23. See *Dropout Rates in the United States: 1988 and School Dropouts: Patterns and Policies*, ed. G. Natriello (New York, NY: Teachers College Press, 1989) for a discussion of the relationship between grade retention and dropping out of school.
24. *Dropout Rates in the United States: 1992*, table 21, based on High School and Beyond (Base Year Survey) and National Educational Longitudinal Study of 1988 (First Follow-up Survey).
25. Differences in family income may account for most of the differences in dropout rates between racial/ethnic groups. When comparisons are drawn across racial/ethnic groups within an income level, there were no differences in status dropout rates of white and black 16- to 24-year-olds in 1991 (*Dropout Rates in the United States: 1991*, table 10, based on the October Current Population Survey).
26. *Digest of Education Statistics*, 1993, table 140, based on the National Educational Longitudinal Study of 1988 (Base Year and First Follow-up Surveys).
27. *America's High School Sophomores: A Ten Year Comparison*, table 6.2, based on the National Educational Longitudinal Study of 1988 (First Follow-up Survey).
28. The Carl D. Perkins Vocational and Applied Technology Act of 1990 defines vocational education as programs that prepare students for paid or unpaid employment requiring other than a baccalaureate or advanced degree. These types of occupational-technical programs are offered in a wide variety of institutions, including some that also offer academic education.
29. *Digest of Education Statistics*, 1993, table 166.
30. Ibid.
31. *The Condition of Education*, 1993, Indicator 29, 1993.
32. U.S. Department of Education, National Center for Education Statistics. *Vocational Education in the United States:*

1969-1990. Washington, D.C.: 1993, table 31.

33. Ibid.
34. *Digest of Education Statistics*, 1993, table 166.
35. Ibid.
36. National Postsecondary Student Aid Study, 1990. Data Analysis System.
37. *Digest of Education Statistics*, 1993, table 300.
38. U.S. Department of Education, National Center for Education Statistics. *Financing Undergraduate Education: 1990*. Washington, D.C.: 1993, tables 3.6a and 3.6c.
39. For example, in 1989-90 at public 2-year institutions, tuition charges paid varied from \$277 for a part-time part-year student, to \$867 for a full-time full-year student. The National Postsecondary Student Aid Study, 1990. Data Analysis System.
40. National Postsecondary Student Aid Study, 1990. Data Analysis System.
41. In 1989-90, 40 percent of students at less-than-4-year institutions attended part-time compared to 74 percent at 4-year institutions. Whereas 57 percent of full-time students received financial aid, only 30 percent of half-time students received aid. In addition, 81 percent of students at less-than-4-year institutions were at public institutions compared to 69 percent of students at 4-year institutions. At public institutions 34 percent of students received some financial aid compared to 63 percent of those at private nonprofit institutions and 81 percent of those at private proprietary institutions.
42. National Postsecondary Student Aid Study, 1990. Data Analysis System.
43. *Digest of Education Statistics*, 1993, table 326.
44. *Digest of Education Statistics*, 1993, table 217.
45. *Vocational Education in the United States: 1969-1992*, figure 47.



Access, Participation, and Progress

Participation

Enrollment rates among children 6 to 15 years old are essentially 100 percent, while enrollment rates among children 3, 4, and 5 years old have increased substantially since 1970. In 1992, 28 percent of 3-year-olds were enrolled in school, compared to 13 percent in 1970; 52 percent of 4-year-olds were enrolled in school, up from 29 percent in 1970. In 1992, 92 percent of 5-year-olds were enrolled, up from 81 percent in 1970 (*Indicator 1*). Virtually all children now attend kindergarten before starting first grade.*

Enrollment rates (in schools and colleges) among 16- to 24-year-olds have also increased over the past two decades. For example, the enrollment rate of 22-year-olds was 29 percent in 1992, up from 20 percent in 1970 (*Indicator 1*). These increases reflect the fact that a higher proportion of high school graduates are going on to college.

While the *number* of 25- to 34-year-old students in colleges and universities has increased, surprisingly enrollment *rates* generally have not increased among this age group (table 1-1). The increase in the number of older students is due to an increasing number of older people in the population (the aging of those born during the post World War II baby boom), not to an increasing *percentage* of the older population enrolling in college.

Participation in education among adults is extensive. Among 25- to 34-year-olds in October 1992, the school enrollment rate (in 2- and 4-year colleges and universities) varied from 13 percent for 25-year-olds to 6 percent for 34-year-olds (*Indicator 1*). Furthermore, one out of three full-time workers and one out of six part-time workers received training to improve their current job skills in 1991 (*Indicator 11*).

The trends outlined above were not the same across all racial/ethnic groups. The increase in enrollment rates among 3- and 4-year-olds in pre-K was larger for whites than for blacks and Hispanics. Throughout the 1980s, the percentage of white 3- and 4-year-olds enrolled in pre-K increased while the rate for blacks and Hispanics was generally stable (*Indicator 2*). On the other hand, among 5-year-olds, the difference in the percentage of whites and blacks

enrolled in kindergarten disappeared between 1971 and 1992 (table 2-2).

Access

Access to preschool may be affected by family income because nursery schools are primarily private—62 percent of pre-K enrollment in 1992 (*Indicator 37*)—and charge tuition. Median tuition at private preschools was \$686 dollars at church-related schools and \$1,324 at non-church-related-schools in 1991 (*Indicator 3*). In 1992, 52 percent of 3- and 4-year-olds from high income families were enrolled in pre-K compared to 24 percent of those from low income families (*Indicator 2*). This difference is larger than it was in the early 1970s. The gap between the attendance rates of children from high and low income families closes by age 5 (table 2-3), however, because kindergartens are primarily public (85 percent of enrollment in 1992) (*Indicator 37*).

Since 1980, the cost of college attendance has increased much faster than family income. Tuition and room and board at public institutions increased 34 percent (in constant dollars) between 1980 and 1992. Median family income has not kept pace with the increased cost; it fell 3 percent over the same period. (*Indicator 8*). Student financial aid helps reduce the cost of attending college, particularly for students from low income families. Among dependent full-time students enrolled in the fall 1989 term, an average of 27 percent of the total cost of attendance was covered by student financial aid (*Indicator 10, Condition 1993*).

Despite the increasing cost of college attendance, the percentage of high school graduates who enrolled in college following graduation increased from 49 percent in 1980 to 62 percent in 1992 (*Indicator 9*). And, more high school sophomores in 1990 reported that they received advice to attend college by parents, teachers, and guidance counselors than in 1980 (*Indicator 7*). However, high school graduates from low income families were less likely than those from high income families to enroll in college (41 compared to 81 percent in 1992).

Persistence

As participation in school is almost universal for

children 6 to 15 years old, persistence is not an issue; however, progress through the grades is. An indication of such progress is the relationship between age and grade. Over the last 15 years, there has been a large increase in the percentage of first, fourth, and seventh graders who were above the modal age for their grade (*Indicator 3, Condition 1993*). The increases appear to be due to changes in or before first grade. There is no evidence of increasing proportions of children falling behind modal grade for their age between first and fourth grades or fourth and seventh grades. The changes at the first grade level may be due to children starting school later or repeating kindergarten or first grade. Contributing to this trend may be the change in age requirements for starting school that some states have instituted.

Studies have shown that students who have repeated at least one grade are more likely to drop out. In 1992, 12 percent of 16- to 24-year-olds had been retained at least once. Those who had been retained were more than twice as likely to drop out as those who had not been retained (*Indicator 4*).

Overall, the persistence rate in high school was 96 percent in 1992; that is, 96 percent of students in grades 10 to 12 in the fall of 1991 were enrolled again in the fall of 1992 (or had graduated during the year). The other 4 percent dropped out of school during the year or failed to return in the fall (*Indicator 5*).

Persistence in high school is strongly associated with family income. For students from high income families, the persistence rate was 99 percent, while that for students from low income families was 89 percent. A hopeful sign is that for students from low income families the persistence rate has gradually increased over the past two decades from below 83 percent in 1973 to 89 percent in 1992 (*Indicator 5*).

In postsecondary education, degree completion is an important outcome because it is associated with increased employment opportunity and income potential. And, persistent enrollment toward the degree, including reenrollment after stopping out, is a necessary prerequisite to completion. Among beginning students whose

goal in 1989-90 was a vocational certificate, only half had completed one by early 1992, and a majority of them were completed within nine months of starting a program. (*Indicator 10*).

The benefits associated with a higher degree seemingly encourage students to finish a postsecondary education. However, almost half of the students enrolled in an associate's degree program, and one-quarter of the students enrolled in a bachelor's degree program dropped out before completing the degree. Among students who sought an associate's degree in 1989-90, only 12 percent completed it; however, 19 percent were continuously enrolled and 23 percent had reenrolled at least once by early 1992. Nevertheless, close to half (46 percent) of these students had left school without reenrollment. About 57 percent of students who sought a bachelor's degree during the same period were continuously enrolled, while 19 percent left school and subsequently reenrolled by early 1992. About 1 in 4 of these students had left school without reenrollment.

Students are also taking longer to get the bachelor's degree—the percentage of college graduates who completed the degree within 5 years of graduating from high school was 57 percent in 1991 compared to 67 percent in 1977 (*Indicator 6, Condition 1993*).

NOTE:

*U.S. Department of Education, National Center for Educational Statistics, National Household Education Survey, spring 1991 (reported in *Statistics in Brief*, "Experiences in Child Care and Early Childhood Programs of First and Second Graders," January 1992.)

School enrollment rates, by age

- ▶ Since 1970, practically all children between the ages of 6 and 15 have been enrolled in school.
- ▶ Enrollment rates for 3- to 5-year-olds were substantially higher in 1992 than in 1970. However, most of the increase occurred by 1980.
- ▶ Enrollment rates among 16- to 24-year-olds were higher in 1992 than in 1970, with nearly all of the increase occurring after 1980; enrollment rates among those over age 24 did not increase over the period (see supplemental table 1-1).

Learning occurs throughout a person's life, even though participation in formal education traditionally has occurred during a person's youth. Changes over time in the enrollment rates of very young and older age cohorts are an indication of the changing role of formal education.

Percentage of the population enrolled in school, by age: October 1970, 1980, and 1992

October	Age															
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1970	13.2	28.7	80.6	98.9	99.7	99.8	99.9	100.0	99.9	99.9	99.7	99.0	98.1	94.1	87.2	57.8
1980	27.6	47.2	93.2	99.4	99.5	99.5	99.7	99.6	99.7	99.8	99.7	98.7	98.5	93.9	85.2	54.6
1992	27.7	52.1	92.4	98.6	99.3	99.3	99.5	99.3	99.3	99.5	99.4	99.4	98.9	96.3	91.9	68.1

October	Age															
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1970	45.8	39.1	30.7	20.2	16.3	14.7	12.6	10.8	9.6	7.7	7.6	6.4	7.0	5.4	5.2	5.4
1980	43.0	33.9	30.6	22.3	16.7	13.5	12.0	11.2	10.0	8.8	7.9	8.0	8.2	6.5	6.8	6.3
1992	54.6	46.6	41.5	29.0	21.9	17.6	13.3	10.2	10.6	7.9	7.4	7.0	7.4	5.6	4.7	5.7

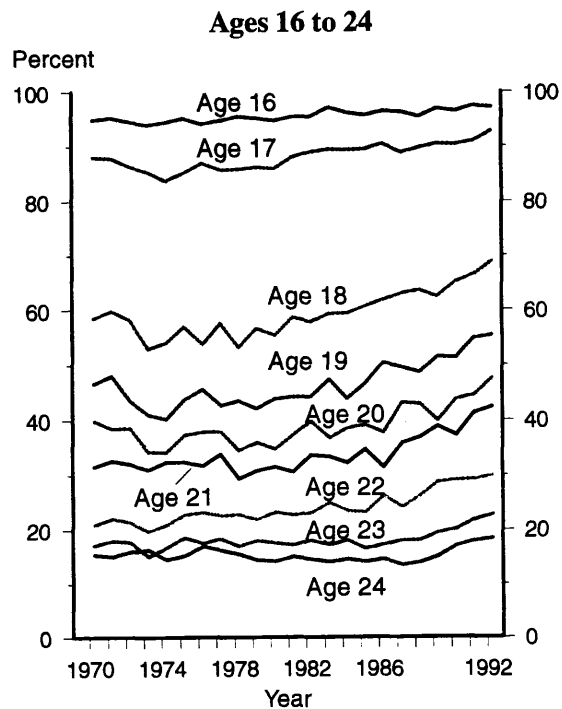
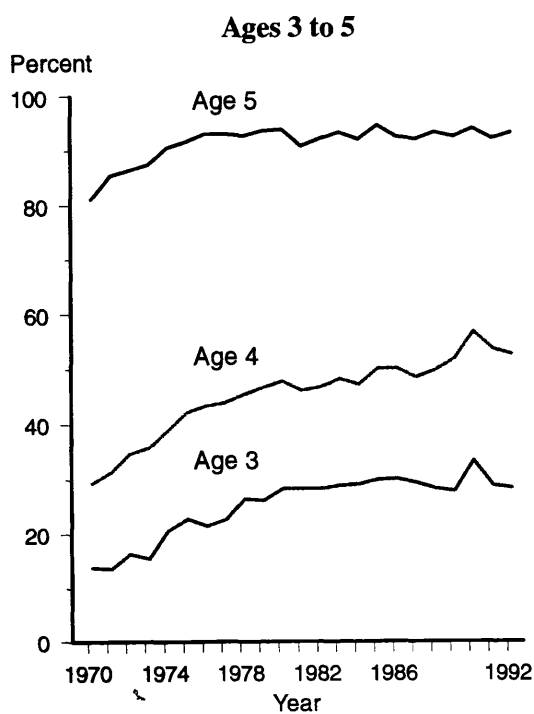
Percentage of the population enrolled in school for selected ages: Selected Octobers 1970-92

October	Age											
	3	4	5	16	17	18	19	20	21	22	23	24
1970	13.2	28.7	80.6	94.1	87.2	57.8	45.8	39.1	30.7	20.2	16.3	14.7
1972	15.8	34.0	85.7	93.8	85.6	57.5	42.7	37.8	31.2	20.5	16.9	15.2
1974	20.0	38.3	89.9	93.7	82.9	53.2	39.4	33.4	31.6	20.1	15.9	13.8
1976	20.8	42.7	92.3	93.3	86.2	53.0	44.8	37.1	30.9	22.3	16.7	16.1
1978	25.7	44.7	92.1	94.7	85.0	52.4	42.7	33.7	28.6	21.9	16.2	14.7
1980	27.6	47.2	93.2	93.9	85.2	54.6	43.0	33.9	30.6	22.3	16.7	13.5
1982	27.6	46.1	91.5	94.6	88.1	57.1	43.4	38.9	32.7	22.2	17.2	13.8
1984	28.5	46.5	91.4	95.3	88.5	58.6	43.1	37.7	31.4	22.5	17.2	13.8
1986	29.3	49.5	91.8	95.5	89.6	61.0	49.6	36.8	30.6	25.4	16.4	13.8
1988	27.6	49.2	92.6	94.6	88.8	62.8	47.8	42.1	36.0	25.4	17.1	13.2
1990	32.6	56.1	93.2	95.6	89.5	64.4	50.6	42.9	36.4	28.1	19.2	16.2
1991	28.2	53.0	91.4	96.5	90.0	65.5	54.0	43.6	40.5	28.2	20.9	17.0
1992	27.7	52.1	92.4	96.3	91.9	68.1	54.6	46.6	41.5	29.0	21.9	17.6

NOTE: School includes nursery schools but excludes day-care centers, and includes 2- and 4-year colleges and universities but excludes schools with programs of strictly less than 2 years.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of the population enrolled in school, by age: October 1970-92



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Enrollment rates in preprimary education

- ▶ In 1992, 34 percent of all 3- to 4-year-olds were enrolled in pre-k.
- ▶ In 1973, the enrollment rate in pre-k for children from low income families was about 20 percentage points lower than for those from high income families. By 1992, enrollment rates for both income groups had increased, with the gap between enrollment rates for children from high income families and those from low income families continuing to widen.
- ▶ During the mid-1970s, white and black pre-k enrollment rates were similar. In the 1980s, white pre-k enrollment rates continued to increase, while those of blacks and Hispanics were generally stable. By 1991, average white pre-k enrollment rates were nearly 10 percentage points higher than those of blacks and 20 percentage points higher than those of Hispanics. Yet, black and Hispanic 3- to 4-year-olds were more likely to be enrolled in kindergarten than their white agemates (see supplemental table 2-1).

Within most population groups, an increasing percentage of children receive pre-k instruction. This instruction contributes to the readiness of children to participate in elementary school. Many policymakers and educators believe that it is important to help children from disadvantaged backgrounds start elementary school on an equal footing with other children by involving them and their parents in prekindergarten programs.

Percentage of 3- to 4-year-olds enrolled in pre-k, by family income and race/ethnicity: October 1970-92

October	Total	Family income ¹			Race/ethnicity ²		
		Low	Middle	High	White	Black	Hispanic
1970	14.1	9.1	11.5	26.4	—	—	—
1971	14.2	10.6	11.6	26.7	—	—	—
1972	17.9	15.6	14.4	32.7	—	—	—
1973	17.7	15.0	13.7	34.7	19.5	19.0	13.8
1974	—	—	—	—	21.6	21.1	15.6
1975	24.4	20.2	21.4	37.7	23.6	22.2	15.8
1976	22.9	15.1	19.5	42.4	24.7	23.9	15.4
1977	24.9	18.2	22.0	40.7	26.1	25.8	15.4
1978	28.4	21.9	24.9	47.1	—	—	—
1979	28.7	22.1	24.6	48.7	—	—	—
1980	30.4	22.6	26.9	50.0	—	—	—
1981	30.0	20.7	27.5	46.8	32.3	28.4	18.7
1982	30.8	21.7	27.6	50.6	32.8	28.7	15.7
1983	30.9	21.1	27.7	51.5	32.9	28.9	15.3
1984	30.4	16.1	28.1	54.0	33.6	28.7	17.4
1985	32.1	18.4	30.1	53.1	34.6	28.6	19.2
1986	33.1	19.9	30.1	55.8	35.5	27.4	20.3
1987	31.8	17.9	29.7	51.4	36.1	25.9	18.7
1988	32.5	20.5	28.6	53.7	36.8	26.7	18.0
1989	34.6	23.8	31.4	52.4	39.9	30.4	19.6
1990	40.8	30.8	36.9	61.3	40.3	31.4	21.0
1991	34.1	22.4	31.5	53.2	40.1	30.8	21.0
1992	33.6	23.9	30.5	52.0	—	—	—

—Not available.

¹Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

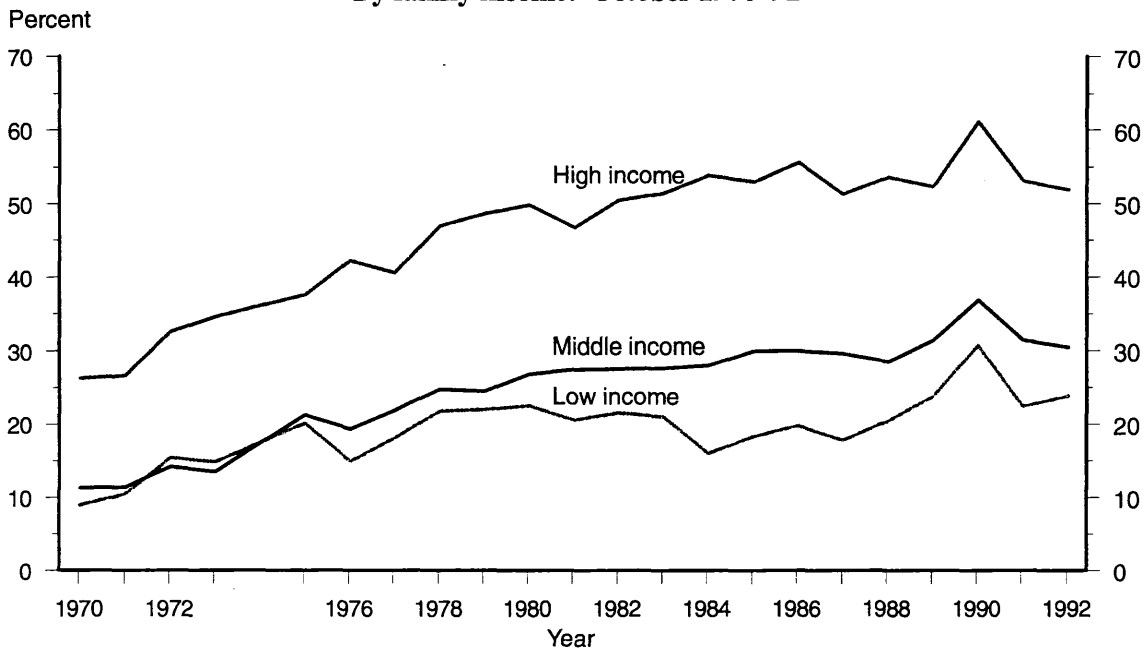
²Due to small sample sizes for blacks and Hispanics, 3-year averages were calculated. The 3-year average for 1991 is the average percentage enrolled in pre-k in 1990, 1991, and 1992.

NOTE: Total enrollment rates for 3- and 4-year-olds are higher than those presented here because some 3- to 4-year-olds are enrolled in kindergarten.

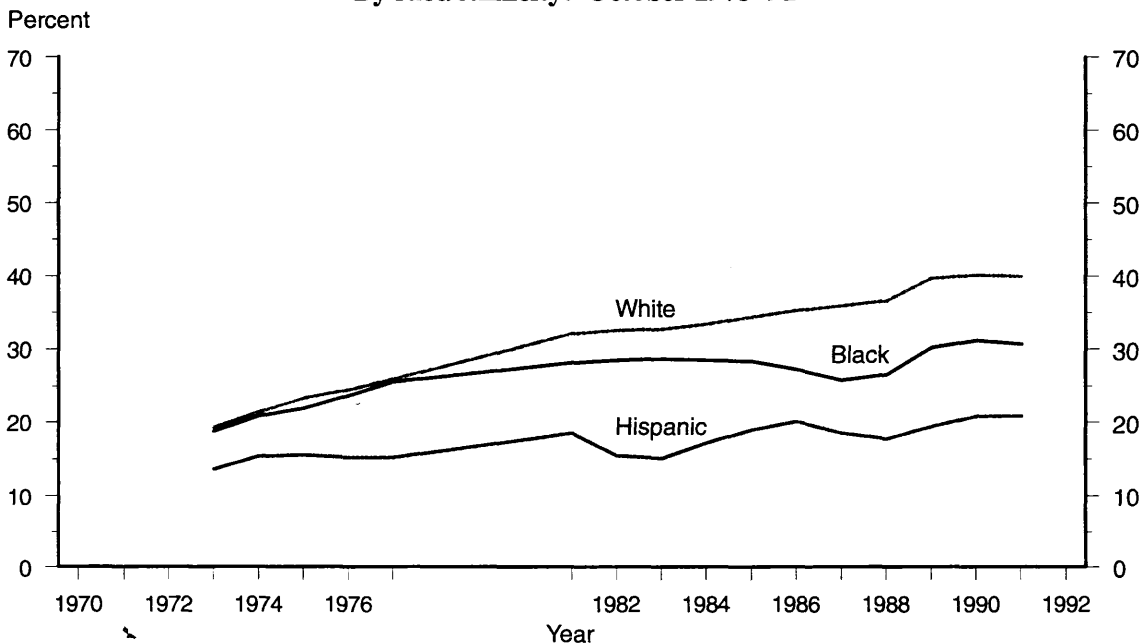
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of children 3 to 4 years old enrolled in prekindergarten

By family income: October 1970-92



By race/ethnicity: October 1973-91



NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Tuition and enrollment in private schools

- ▶ At successively higher grade levels, smaller percentages of students attend private schools. In 1991, this percentage ranged from 60 percent among preschool students to 7 percent among secondary students.
- ▶ Students from high income families were more likely to attend private schools at all grade levels. However, in 1991, a majority of preschool, kindergarten, elementary, and secondary students attending church-related schools were from low or middle income families (see supplemental table 3-3).
- ▶ Median tuition at all levels of private schools increased substantially between 1979 and 1985, and then remained relatively stable between 1985 and 1991, with the exception of tuition at the secondary level which increased again in 1991. In addition, tuition at the 75th percentile remained at least twice as high as tuition at the 25th percentile across all school levels and types with the exception of secondary church-related schools.
- ▶ Non-church-related schools had higher tuition and a lower share of enrollment than church-related schools. At the elementary level, median tuition at non-church-related schools was almost 3 times higher and enrollment was almost 4 times lower than church-related schools (see supplemental table 3-1).

Private schools provide alternatives to the public schools. Whether a family chooses a private school for their child will be a function of many factors, including private school tuition levels, family income, the relative value placed on education, satisfaction with public schools, and the availability of public schools (especially at the preschool level). Differences among population subgroups in the proportion of children enrolled in private schools may reflect differences in any of these factors.

Percentage of students who were enrolled in private schools, by family income and school level: October 1979, 1985, and 1991

School level	Total			Low income			Middle income			High income		
	1979	1985	1991	1979	1985	1991	1979	1985	1991	1979	1985	1991
Preschool	63.4	62.1	60.2	25.5	20.8	17.4	63.3	60.0	59.4	78.3	80.8	81.6
Kindergarten	13.9	14.6	14.2	3.2	4.2	4.0	13.5	14.6	12.5	23.2	24.7	28.3
Elementary	11.0	10.8	9.5	3.9	3.7	2.6	9.4	10.1	8.3	18.4	17.7	17.8
Secondary	7.1	8.2	6.9	2.3	2.9	2.2	5.4	6.2	5.5	11.8	14.0	12.5

Percentile distribution of tuition (in 1993 dollars) at private schools, by school level and type: October 1979, 1985, and 1991

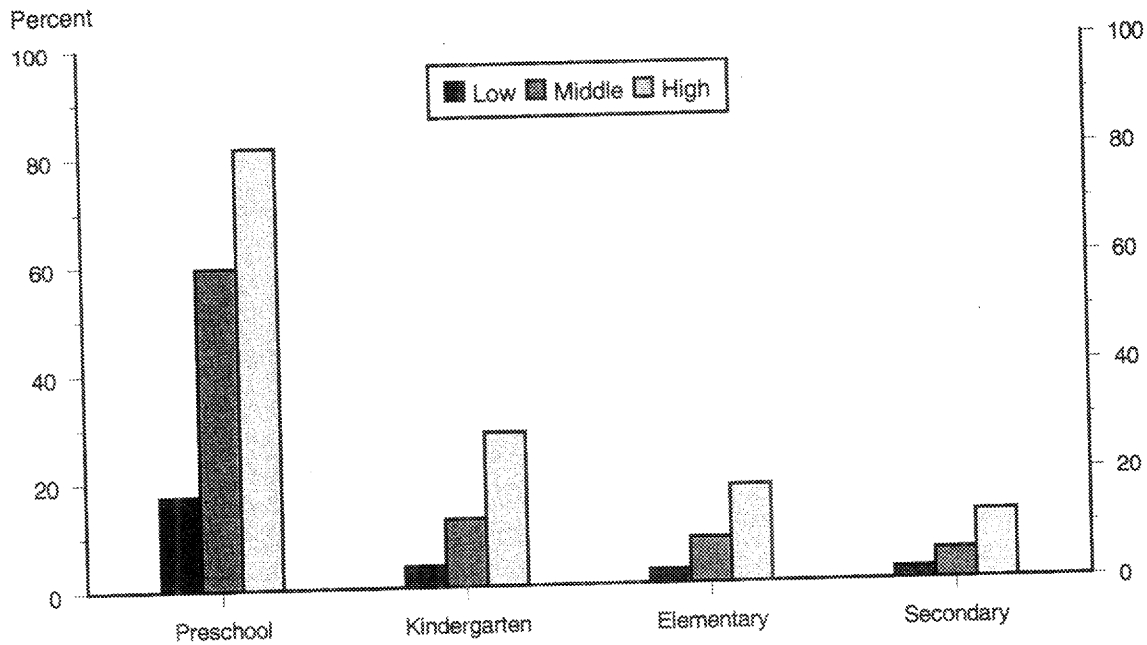
School level and type	Percentile distribution of tuition								
	1979			1985			1991		
	25th	50th	75th	25th	50th	75th	25th	50th	75th
Preschool	\$453	\$760	\$2,312	\$529	\$1,043	\$2,831	\$489	\$931	\$2,485
Church-related	405	632	1,475	481	761	2,000	433	686	1,644
Non-church-related	479	970	2,538	540	1,242	2,785	583	1,324	3,009
Kindergarten	471	884	2,000	626	1,243	2,830	601	1,324	2,334
Church-related	379	673	1,192	502	970	1,929	534	996	1,698
Non-church-related	819	1,532	2,856	1,130	2,037	3,446	1,630	2,596	3,572
Elementary (grades 1-8)	309	793	1,792	624	1,175	2,763	697	1,184	1,952
Church-related	250	665	1,324	548	977	1,594	650	1,083	1,664
Non-church-related	1,412	2,499	4,229	1,860	3,612	7,583	1,569	3,195	6,323
Secondary (grades 9-12)	1,311	1,723	2,730	1,558	2,224	4,270	1,855	2,728	4,009
Church-related	1,253	1,617	2,067	1,487	2,019	2,649	1,818	2,484	3,303
Non-church-related	1,629	3,096	6,344	2,264	5,783	9,476	2,123	5,371	7,287

NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

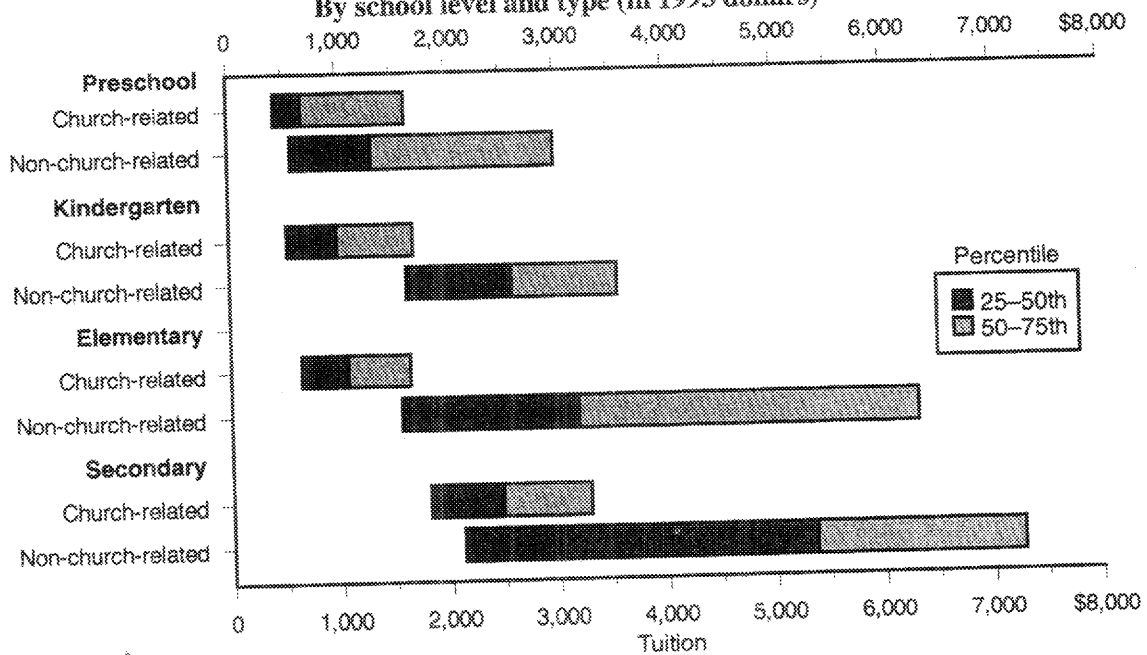
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of students who were enrolled in private schools and percentile distribution of tuition: October 1991

By family income and school level



By school level and type (in 1993 dollars)



NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Grade retention and dropout rates

- ▶ In 1992, the dropout rate for 16- to 24-year-olds who had repeated at least one grade was more than double that for those who had never been retained.
- ▶ When the highest grade repeated was between grades 7 and 10, the dropout rate was two to three times greater than at lower or higher grade levels.
- ▶ Those from low income families were more likely to repeat a grade and to drop out if they had repeated than those from middle or high income families. One-third of low-income 16- to 24-year-olds who had repeated a grade were dropouts in 1992.
- ▶ Young adults with disabilities were far more likely to repeat one or more grades than those without a disability. Among those who had been retained, those with disabilities had dropout rates similar to those with no disability.
- ▶ Half of the 16- to 24-year-olds with a learning disability only had been retained. However, among this group, dropout rates were similar for those who had been retained as for those who had not.

Studies have shown that students who have repeated at least one grade are more likely to become dropouts. Knowledge about how that relationship varies among subgroups of students or by the grade repeated can help schools develop grade retention policies and services for students who have been retained.

Percentage of 16- to 24-year-olds who repeated a grade and who are dropouts, by number of grades repeated and highest grade repeated: 1992

Retention and dropout rates	Never repeated	Number of grades repeated			Highest grade repeated			
		One or more	One	More than one	K-2	3-6	7-10	11-12
Percent repeating	—	11.5	8.6	1.1	3.4	2.7	2.9	0.7
Dropout rate*	9.4	19.8	16.8	40.9	11.5	17.4	33.0	11.8

—Not applicable.

*The percentage who are not enrolled in school and do not have a high school diploma or equivalency credential.

Dropout and retention rates of 16- to 24-year-olds, by family income and disability status: 1992

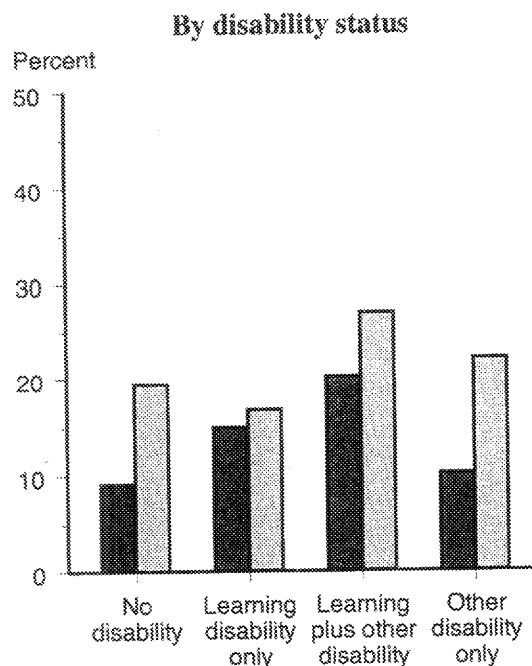
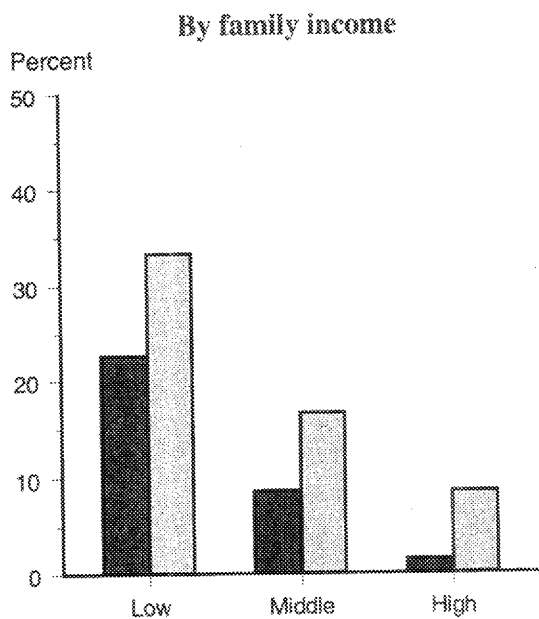
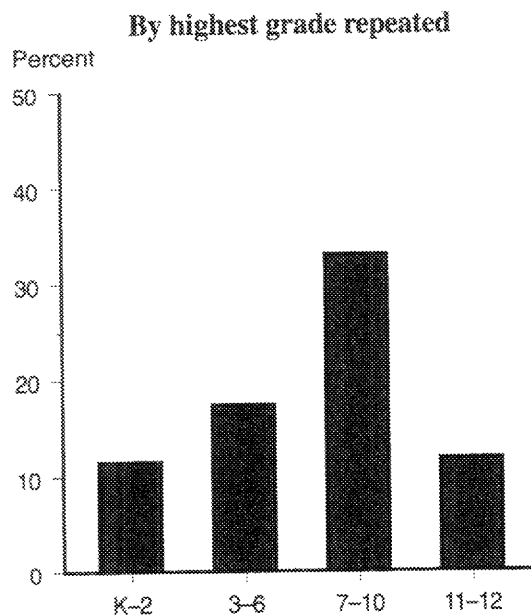
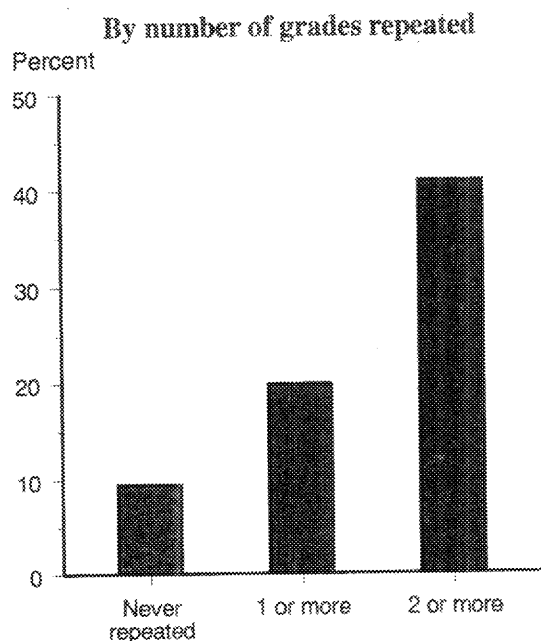
Student characteristic	Percent retained in one or more grades	Dropout rate ¹		
		Total	Never retained	Retained
Total	11.5	11.0	9.4	19.8
Family income ²				
Low	16.5	24.6	22.6	33.2
Middle	11.3	10.1	8.6	16.6
High	7.8	2.3	1.5	8.5
Disability status				
No disability	9.5	10.6	9.1	19.4
Disability	32.0	15.7	13.3	21.0
Learning disability only	51.8	15.6	15.0	16.8
Learning plus other disability	29.0	22.2	20.2	26.9
Other disability only	24.3	13.1	10.1	22.1

¹The percentage who are not enrolled in school and who have not received a high school diploma or equivalency credential.

²Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1992.

Dropout rates for 16- to 24-year-olds: 1992



■ Never retained □ Retained

NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1992.

Persistence in high school

▶ **Ninety-six percent of 15- to 24-year-olds in grades 10–12 in 1991 were enrolled again in 1992 or had graduated. Four percent were not enrolled in school in 1992, even though they had not completed high school. Some of these dropouts reenrolled during a subsequent school year.**

Persistent attendance, measured by the proportion of students enrolled in two consecutive years, is strongly associated with completing high school. Students who do not complete high school face a decreased opportunity for assuming a successful and fully functional place in the American work place and society at large.

▶ **The high school persistence rate for students from high income families is about 10 percent higher than the rate for students from low income families. The difference in persistence rates between students from high and middle income families is small, about 3 percent.**

▶ **Between 1972 and 1992, the high school persistence rate for blacks increased from 91 to 95 percent. For black males, the rate increased from 90 to 97 percent over the same period (see supplemental table 5-1).**

Percentage of high school students in grades 10–12, ages 15–24, enrolled the previous October who are enrolled again the following October¹, by sex, race/ethnicity, and family income: October 1972–92

October	Total	Sex		Race/ethnicity ²			Family income ³		
		Male	Female	White	Black	Hispanic	Low	Middle	High
1972	93.9	94.1	93.7	94.7	90.5	88.8	86.2	93.3	97.5
1973	93.7	93.2	94.3	94.5	90.1	90.0	82.9	93.2	98.2
1974	93.3	92.6	94.0	94.2	88.4	90.1	—	—	—
1975	94.2	94.6	93.9	95.0	91.3	89.1	84.7	94.1	97.4
1976	94.1	93.5	94.8	94.4	92.6	92.7	85.0	93.3	97.9
1977	93.5	93.1	93.9	93.9	91.4	92.2	84.9	92.5	97.8
1978	93.3	92.5	94.1	94.2	89.8	87.7	82.9	92.8	97.0
1979	93.3	93.2	93.3	94.0	90.1	90.2	83.3	93.2	96.4
1980	93.9	93.3	94.5	94.8	91.8	88.3	84.5	93.7	97.6
1981	94.1	94.0	94.2	95.2	90.3	89.3	86.0	94.0	97.2
1982	94.5	94.2	94.9	95.3	92.2	90.8	85.3	94.6	98.2
1983	94.8	94.2	95.3	95.6	93.0	89.9	89.9	94.1	97.9
1984	94.9	94.6	95.2	95.6	94.3	88.9	86.8	95.0	98.4
1985	94.8	94.6	95.0	95.7	92.2	90.2	86.3	94.9	97.9
1986	95.3	95.3	95.3	96.3	94.6	88.1	89.5	95.0	98.4
1987	95.9	95.7	96.2	96.5	93.6	94.6	90.1	95.5	99.1
1988	95.2	94.9	95.6	95.8	94.1	89.6	86.6	95.3	98.9
1989	95.5	95.5	95.5	96.5	92.2	92.2	90.0	95.0	98.9
1990	96.0	96.0	96.1	96.7	95.0	92.1	90.7	95.8	98.9
1991	96.0	96.2	95.8	96.8	94.0	92.7	89.4	96.0	99.0
1992 ⁴	95.6	96.1	95.1	96.3	95.0	91.8	89.1	95.6	98.7

—Not available.

¹Or who had completed high school.

²Not shown separately but included in the total are non-Hispanics who are neither black nor white.

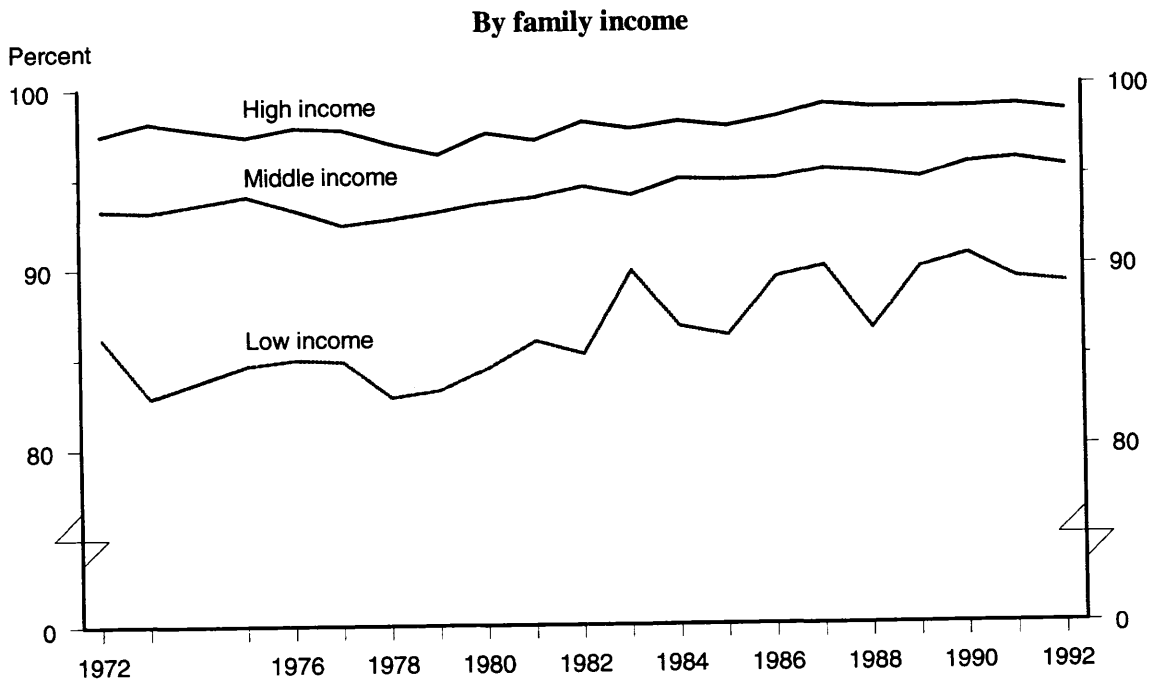
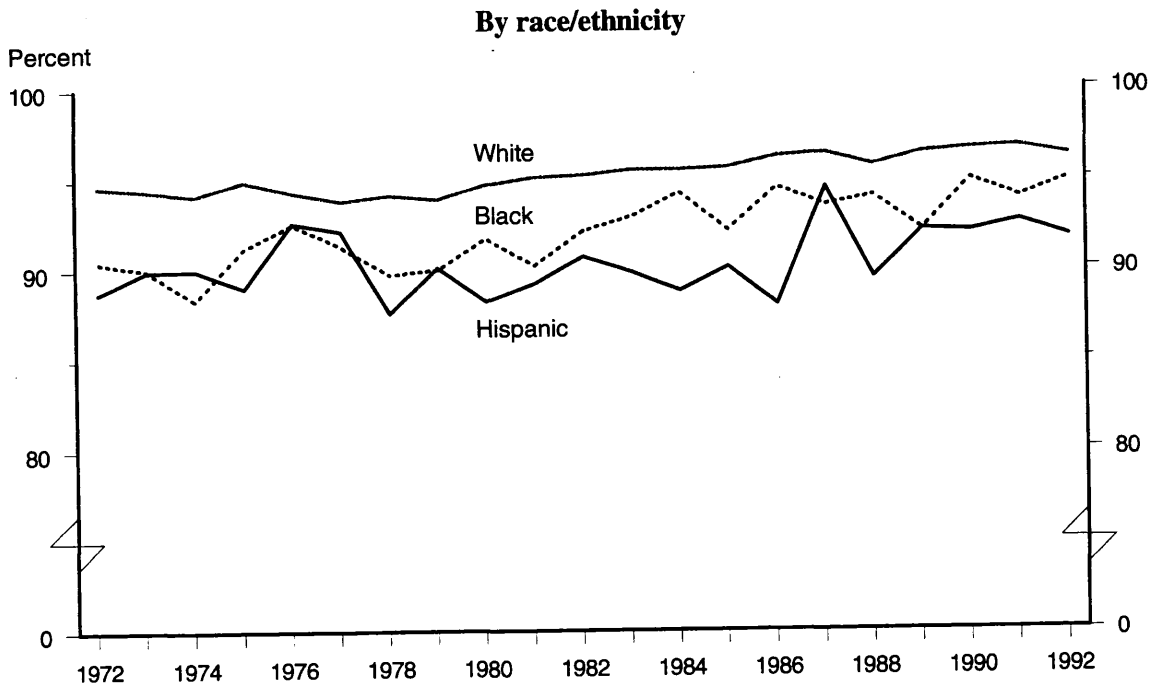
³Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

⁴Beginning in 1992, the Current Population Survey changed the questions used to obtain the educational attainment of respondents. See the supplemental note to *Indicator 21* for further discussion.

NOTE: See the supplemental note to *Indicator 5* for details on how the persistence rates in this table were calculated.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys. U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1992*.

Percentage of high school students in grades 10–12, ages 15–24 enrolled the previous October who were enrolled again the following October*: 1972–92



*Or who had graduated high school.

NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U. S. Department of Commerce, Bureau of the Census, October Current Population Surveys. U. S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1992*.

Dropouts and late completers

- ▶ In 1990, 7 percent of the eighth-grade class of 1988 (most of whom were then 15 and 16 years old) were dropouts, that is, they were not enrolled in school and had not finished high school. In 1992, 12 percent were dropouts.
- ▶ Eighty-four percent of the sophomore class of 1980 completed high school on time (by 1982). About two-thirds of the remaining 16 percent (10 percent) completed high school over the next 10 years, and the vast majority of these (8 percent) completed within the first four years (by 1986).
- ▶ Among the sophomore class of 1980, white and Asian students were more likely to complete high school on time (by 1982) than black, Hispanic, or American Indian students.

Dropping out of school occurs for a variety of reasons and at various times. Many dropouts later complete their high school education, either by returning to school to earn a diploma or by obtaining an alternative credential. Such actions may lessen the consequences of dropping out of school.

Dropout rates for the eighth-grade class of 1988 and high school completion rates for the tenth-grade class of 1980, by selected background and school characteristics

Characteristics	Dropout rate for the eighth-grade class of 1988 in: ¹		High school completion rates for the tenth-grade class of 1980:			
	1990	1992	Completed on time (June 1982)	Completed between 1982 and 1986	Completed between 1986 and 1992	Completion rate 1992
Total	6.8	11.6	83.6	8.3	1.7	93.7
Sex						
Male	7.2	11.6	81.5	9.9	1.5	93.0
Female	6.5	11.6	85.6	6.8	2.0	94.4
Race/ethnicity ²						
White	5.2	9.4	85.7	7.4	1.6	94.7
Black	10.2	14.5	78.9	11.4	1.9	92.2
Hispanic	9.6	18.3	72.6	11.9	2.8	87.5
Asian/Pacific Islander	4.0	7.0	90.8	7.7	0.9	99.4
American Indian	9.2	25.4	65.4	12.0	4.3	81.7
Metropolitan status						
Urban	8.9	13.7	76.4	11.7	2.4	90.6
Suburban	5.4	9.6	85.8	8.0	1.2	95.1
Rural	7.1	12.5	85.1	6.4	2.2	93.7
Region						
Northeast	5.9	8.4	85.8	9.2	1.5	96.8
North Central	5.5	10.4	84.3	8.0	1.7	94.2
South	8.9	13.8	82.9	7.8	2.0	92.8
West	5.8	12.2	80.8	8.6	1.5	91.0
Control of school						
Public	7.6	12.7	82.5	8.8	1.9	93.2
Catholic	1.3	3.8	95.2	3.6	0.1	98.9
Other private	0.4	2.1	93.2	4.1	0.2	97.5

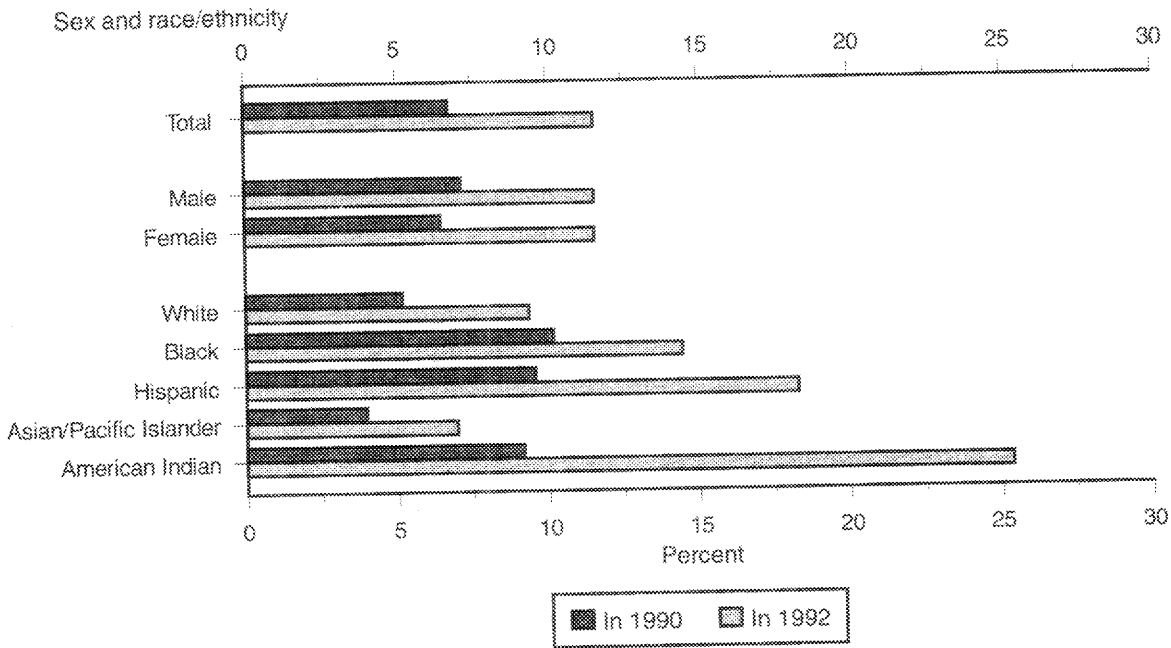
¹Dropouts are those not enrolled in school and who have not received a high school diploma or equivalency certificate.

²Not shown separately for the eighth-grade class of 1988 are 434 persons whose race/ethnicity is unknown.

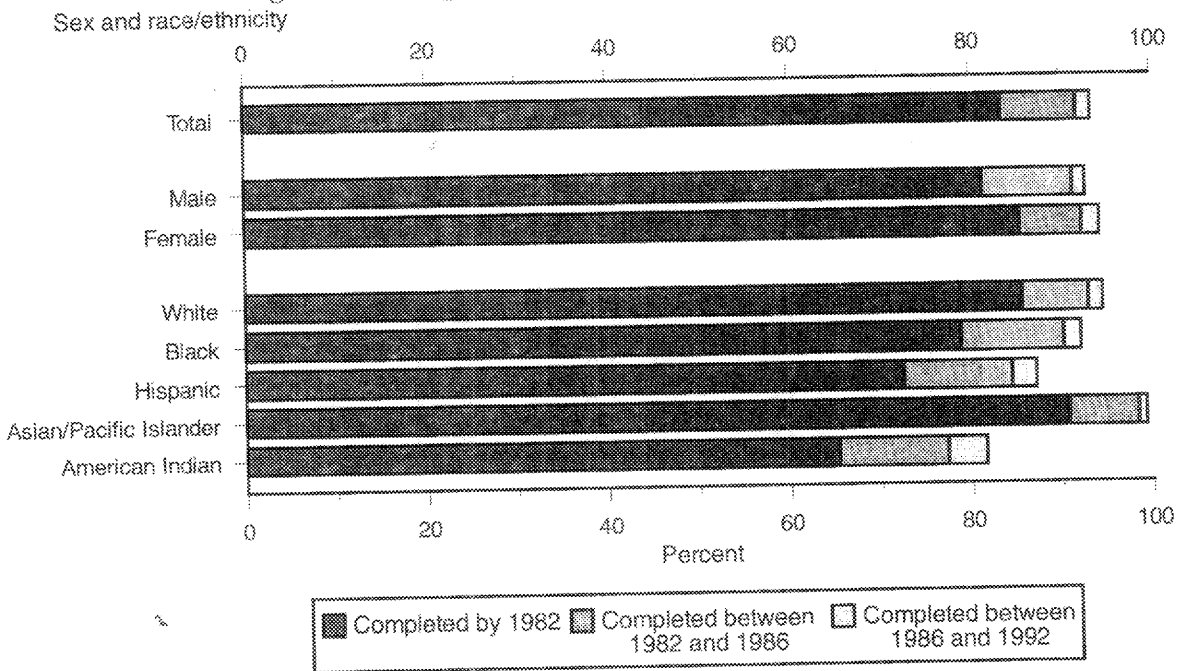
SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond (Sophomore Cohort), and National Education Longitudinal Study of 1988 (Student and Dropout Surveys).

Dropout and completion rates, by sex and race/ethnicity

Dropout rates for the eighth-grade class of 1988



High school completion rates for the tenth-grade class of 1980



SOURCE: U. S. Department of Education, National Center for Education Statistics, High School and Beyond (Sophomore Cohort) and National Education Longitudinal Study of 1988 (Student and Dropout Surveys).

Adult advice to attend college received by sophomores

▶ **More sophomores reported that they were advised to attend college after high school by parents and school personnel in 1990 than in 1980. While parents were still more likely to have given this advice, guidance counselors and teachers were twice as likely to have recommended college attendance in 1990 than in 1980.**

The increasing gap between the wages earned by high school and college graduates may be enticing more students to want to attend college. Yet, many adolescents struggle with the question of whether or not college attendance is right for them. To answer this question, students often turn to the adults in their lives, such as parents, guidance counselors, and teachers, for advice.

▶ **Black sophomores were less likely to have been advised to attend college by their parents in 1990 than their white counterparts. However, black sophomores were more likely than whites to have had teachers recommend college attendance, and just as likely as whites to have had guidance counselors recommend college attendance.**

▶ **Sophomores from high socioeconomic status (SES) backgrounds were more likely to have received advice to attend college from parents, guidance counselors, and teachers than sophomores from low or middle SES backgrounds.**

Percentage of sophomores who reported fathers, mothers, guidance counselors, and teachers recommended college attendance after high school, by selected characteristics: 1980 and 1990

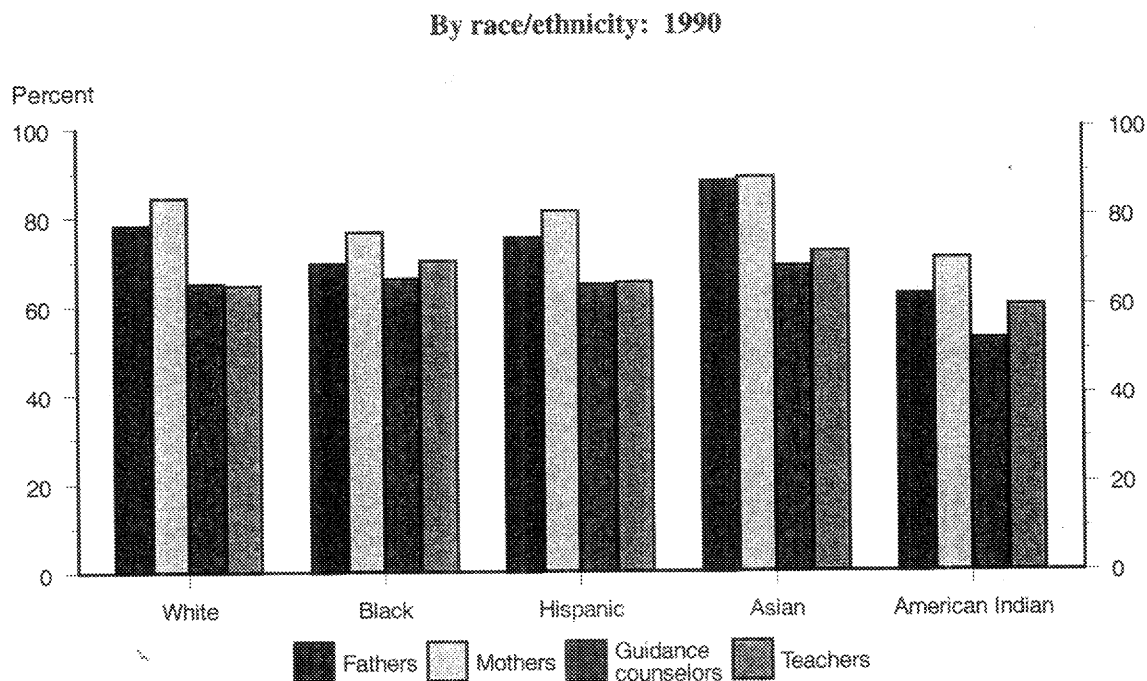
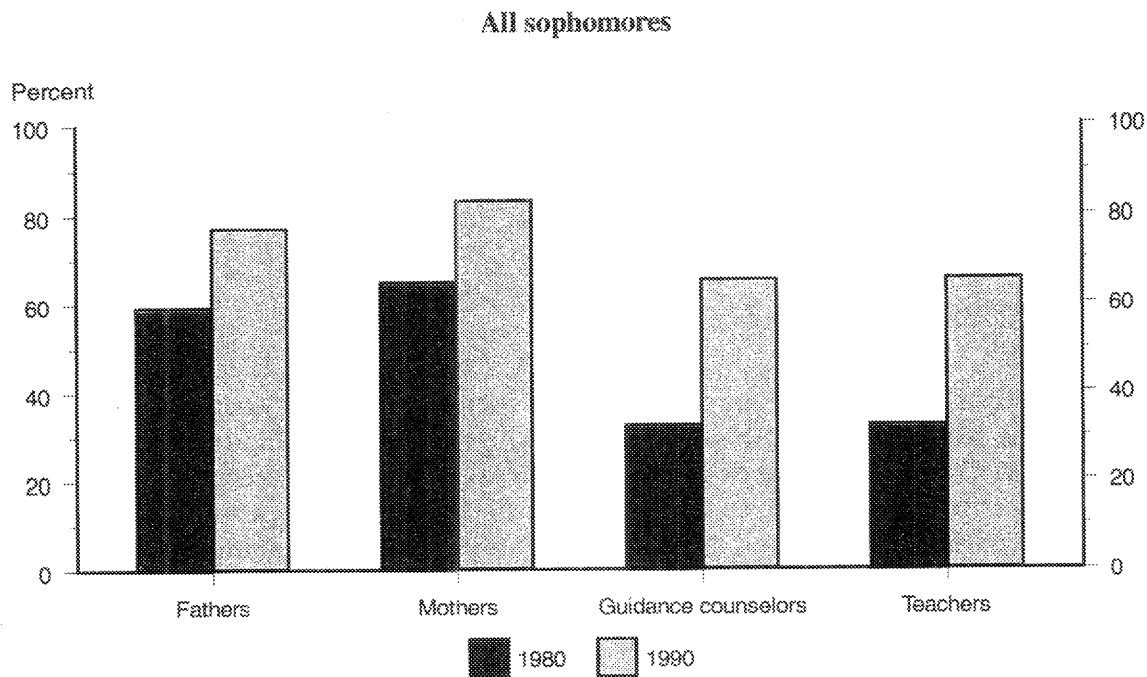
Characteristics	Father		Mother		Guidance counselors		Teachers	
	1980	1990	1980	1990	1980	1990	1980	1990
All sophomores	59.1	77.0	64.8	82.9	32.3	65.2	32.3	65.5
Sex								
Male	55.6	74.0	61.6	80.7	32.2	64.0	32.1	64.2
Female	63.5	80.0	68.6	85.2	32.7	66.3	32.5	66.8
Race/ethnicity								
White	59.7	78.2	64.5	84.3	31.4	65.1	30.4	64.6
Black	56.6	69.4	67.2	76.6	37.1	66.1	42.0	70.0
Hispanic	56.3	75.3	63.2	81.1	32.2	64.8	34.5	65.2
Asian	78.7	87.9	81.1	88.8	32.9	68.6	34.6	72.0
American Indian	46.8	62.4	51.9	70.3	31.7	52.4	29.6	59.9
SES quartile ¹								
Lowest	36.7	58.0	47.0	66.5	24.9	56.1	26.3	59.0
Middle	57.4	76.6	63.9	84.2	30.1	63.6	30.1	63.8
Highest	84.5	94.5	86.2	96.7	44.5	77.7	42.7	76.1
Control of school								
Public	57.1	75.2	63.1	81.5	31.3	63.5	31.5	64.0
Catholic	78.1	92.9	82.5	95.4	40.6	80.8	37.1	77.6
Other private	77.1	91.2	78.8	94.4	45.5	80.5	45.1	79.3
Test quartile ²								
Lowest	40.4	59.9	47.6	64.7	26.1	56.4	28.2	57.2
Second	49.7	71.7	55.6	79.3	26.1	61.1	26.5	60.7
Third	63.9	83.1	69.2	89.7	31.3	66.4	30.1	65.5
Highest	79.8	90.6	85.1	95.9	43.1	74.3	41.7	75.3

¹SES quartiles provide a relative measure of the socioeconomic status of families. The middle two quartiles were collapsed, creating a three-level SES scale with the values "lowest" (lowest quartile), "middle" (the two middle quartiles), and "highest" (highest quartile). See Glossary for further explanation.

²Test quartiles provide a general ability measure of students. The composite test quartile was computed from the average weighted nonmissing responses to standardized test scores for reading, vocabulary, and mathematics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *America's High School Sophomores: A Ten Year Comparison*; High School and Beyond, Base Year Student Survey (1980); and National Education Longitudinal Study of 1988, First Follow-up Student Survey (1990).

Percentage of sophomores who reported fathers, mothers, guidance counselors, and teachers recommended college attendance after high school, by selected characteristics: 1980 and 1990



SOURCE: U.S. Department of Education, National Center for Education Statistics, *America's High School Sophomores: A Ten Year Comparison*. High School and Beyond, Base Year Survey (1980); and National Education Longitudinal Survey of 1988, First Follow-up Student Survey (1990).

College costs and family income

- ▶ **Since 1980, college costs have risen rapidly in both public and private institutions with tuition, room, and board increasing more at private colleges than at public colleges, 58 percent versus 34 percent.**
- ▶ **Median family income (in families with children 6 to 17 years old) has not kept pace with the increased cost of college; it fell 3 percent over the same period. The income of families at the 25th percentile fell 10 percent over the period, while income of families at the 75th percentile grew 2 percent.**
- ▶ **At public institutions, tuition, room, and board increased from 10 percent of median family income (for families with children 6 to 17 years old) in 1980 to 14 percent in 1992. For those at the 25th percentile of family income, public college costs increased from 17 percent of their income in 1980 to 25 percent in 1992; at the 75th percentile, the figures were 7 and 9 percent in 1980 and 1992, respectively (see supplemental table 8-1).**

A family's ability to afford college for its children depends on many factors, including tuition levels, availability of financial aid, family income, and family size. Tuition, room, and board are a measure of the gross price of college. The average cost for tuition, room, and board as a percentage of family income is an indicator of the affordability of a college education.

Average tuition, room, and board and selected percentiles of family income (1993 dollars) for families with children 6–17 years old: 1975–92

Year	Undergraduate tuition (in-state), room and board		Percentiles of family income distribution among families with children 6–17 years old*				
	Public	Private	10th	25th	50th	75th	90th
1975	\$4,479	\$9,849	\$13,968	\$26,500	\$42,508	\$59,885	\$81,061
1976	4,549	9,932	14,284	27,082	44,189	61,769	83,445
1977	4,508	9,927	14,180	26,837	44,397	62,465	83,914
1978	4,423	10,013	13,947	27,073	44,803	61,994	84,582
1979	4,317	9,794	14,387	26,686	44,284	63,566	87,246
1980	4,167	9,605	12,255	24,332	41,416	60,455	82,562
1981	4,238	9,813	11,806	23,121	40,245	58,709	80,158
1982	4,416	10,376	10,465	22,281	39,325	58,325	80,713
1983	4,585	10,908	10,579	22,041	39,137	59,566	82,397
1984	4,747	11,425	10,667	22,780	39,872	60,738	84,759
1985	4,804	11,952	11,008	23,375	41,368	61,730	85,681
1986	5,023	12,774	10,670	23,246	41,706	63,553	88,576
1987	5,158	13,387	10,606	23,354	42,701	64,979	90,191
1988	5,230	13,691	11,177	23,755	42,652	64,986	90,196
1989	5,257	14,028	11,781	24,000	42,656	64,577	91,503
1990	5,268	14,297	11,102	23,178	40,844	62,838	89,518
1991	5,455	14,775	10,278	22,477	40,647	61,824	86,805
1992	5,563	15,203	10,602	22,000	40,127	61,808	87,439

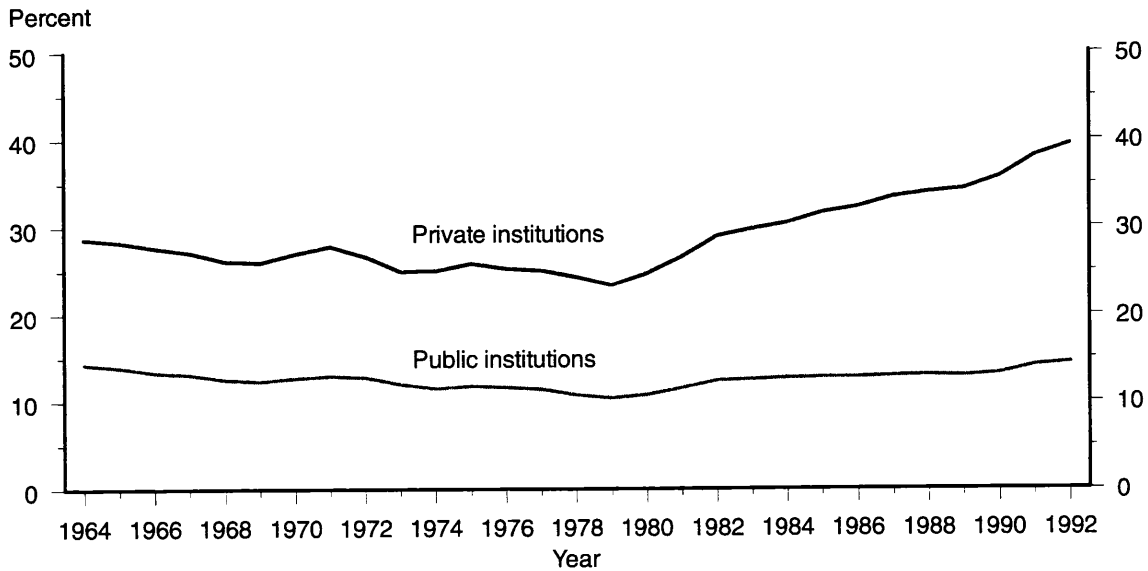
*These families may have children 18 or over; however, there is at least one child between 6 and 17 years old and none under 6. All families, not just married-couple families, are included.

NOTE: Year denotes the beginning of the academic year for tuition, room, and board and the calendar year for family income. The 1993 calendar year Consumer Price Index was used to calculate constant dollar figures.

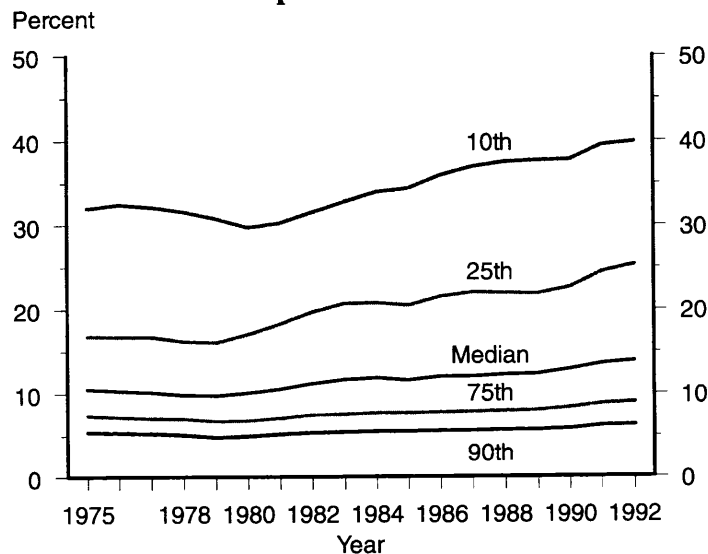
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS Institutional Characteristics Survey, U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-60, "Money Income of Families and Persons: March . . ." various years.

Undergraduate tuition, room, and board as a percentage of family income

As a percentage of median income of all families,
by control of institution: 1964-92



For public institutions, as a percentage of income of
families with children 6 to 17 years old at selected
income percentiles: 1975-92



NOTE: Year denotes the beginning of the academic year for tuition, room, and board and the calendar year for family income.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS Institutional Characteristics Survey.
U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-60, "Money Income of Families and Persons: March ..., " various years.

Immediate transition from high school to college

- ▶ Sixty-two percent of 1992 high school graduates were enrolled in college the October following graduation—23 percent in 2-year colleges and 39 percent in 4-year colleges.
- ▶ Between 1973 and 1992, the proportion of high school graduates going directly to college increased from 47 to 62 percent. Historically, more students enroll in 4-year colleges, but the proportion of students choosing 2-year colleges has increased.
- ▶ The proportion of high school graduates going directly to college rose 7 percentage points between 1974 and 1991 for blacks, but rose 15 percentage points for whites. Black (47 percent) graduates were less likely than whites (64 percent) to go directly to college.
- ▶ High school graduates from low income families were twice as likely to go directly to college in 1992 than in 1973. Yet, only 41 percent of high school graduates from low income families went directly to college as compared to 81 percent of those from high income families.

Most college students enroll in college immediately after finishing high school. The percentage of high school graduates enrolled in college the October following graduation is a leading indicator of the total proportion of that year's graduates who will ever enroll in college. The percentage enrolling is a measure of the immediate accessibility of higher education to high school graduates.

Percentage of high school graduates who were enrolled in college the October following graduation, by type of college, family income, and race/ethnicity: 1973–92

October	Type of college			Family income			Race/ethnicity*		
	Total	2-year	4-year	Low	Middle	High	White	Black	Hispanic
1973	46.6	14.9	31.7	20.3	41.0	64.4	—	—	—
1974	47.6	15.2	32.4	—	—	—	48.7	40.5	53.1
1975	50.7	18.2	32.6	31.2	46.2	64.5	49.1	44.5	52.7
1976	48.8	15.6	33.3	39.1	40.5	63.0	50.3	45.3	53.6
1977	50.6	17.5	33.1	27.7	44.4	66.3	50.1	46.8	48.8
1978	50.1	17.0	33.1	31.4	44.3	64.2	50.4	47.5	46.1
1979	49.3	17.5	31.8	30.5	43.1	63.4	50.1	45.2	46.3
1980	49.3	19.4	29.9	32.5	42.7	65.2	51.5	44.0	49.6
1981	53.9	20.5	33.5	33.6	49.3	67.6	52.4	40.3	48.7
1982	50.6	19.1	31.5	32.8	41.7	71.7	54.2	38.8	49.4
1983	52.7	19.2	33.5	34.6	45.4	70.2	55.5	38.0	46.7
1984	55.2	19.4	35.8	34.5	48.4	74.0	57.9	39.9	49.3
1985	57.7	19.6	38.1	40.2	50.7	74.5	58.6	39.5	46.1
1986	53.8	19.3	34.5	33.9	48.4	71.4	58.5	43.5	42.3
1987	56.8	18.9	37.9	36.9	49.9	74.0	58.8	44.2	45.0
1988	58.9	21.9	37.1	42.5	54.7	72.8	60.1	49.7	48.5
1989	59.6	20.7	38.9	48.1	55.4	70.9	61.6	48.0	52.7
1990	60.1	20.1	40.0	46.7	54.5	76.5	63.0	48.9	52.5
1991	62.5	24.9	37.7	39.5	58.4	78.2	64.2	47.2	52.5
1992	61.9	23.0	38.9	40.9	56.9	80.9	—	—	—

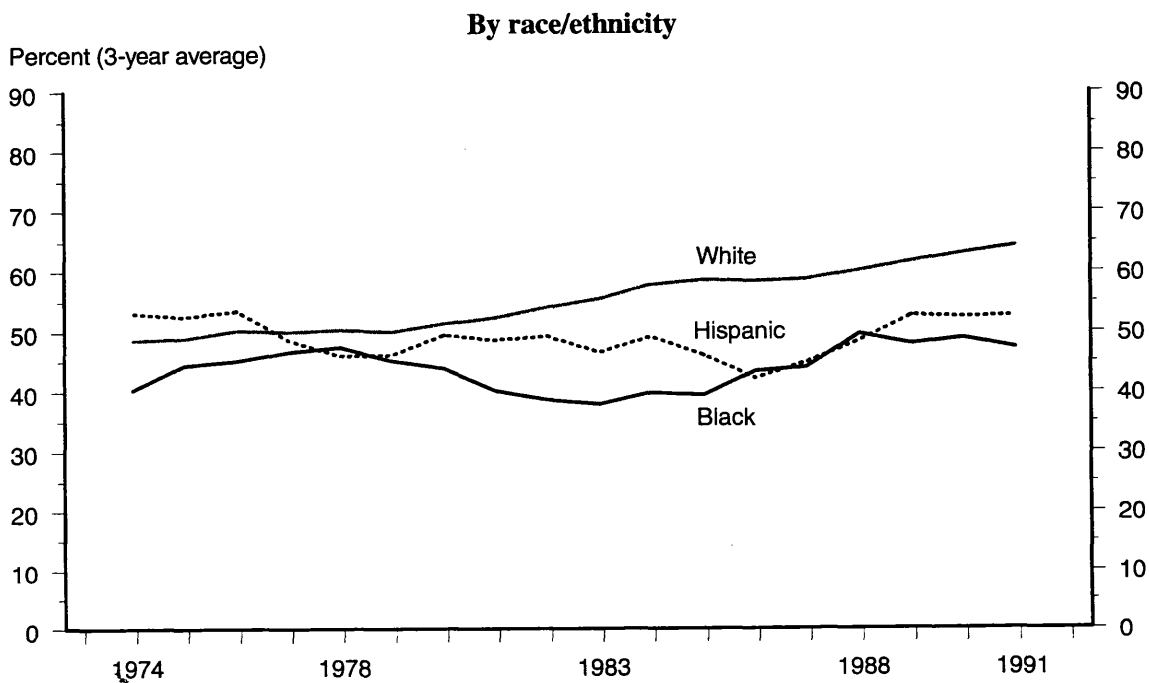
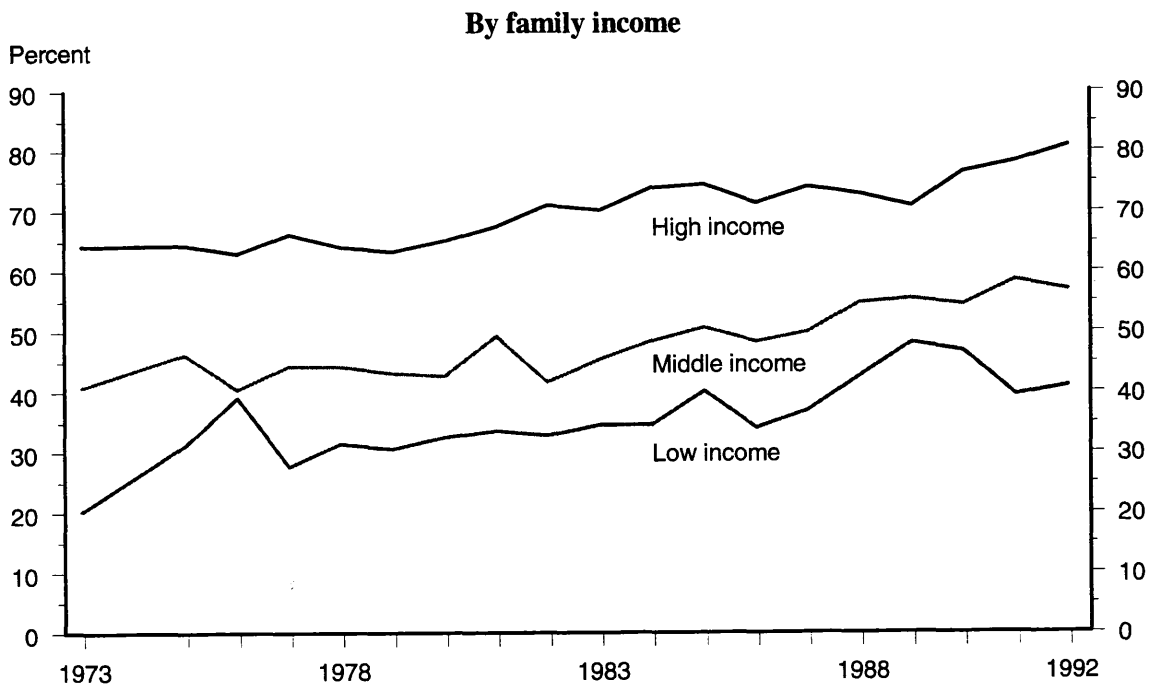
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*Due to small sample sizes for the Black, Hispanic, and Other categories, 3-year averages were calculated. The 3-year average for 1991 is the average percentage of graduates enrolled in college in 1990, 1991, and 1992.

NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

**Percentage of high school graduates enrolled in college
the October following graduation: 1973-92**



NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Persistence in postsecondary education

▶ Among beginning students whose goal in 1989–90 was a vocational certificate, half had completed one by early 1992, and a majority of them were completed within nine months of starting a program. A lower percentage of Hispanic students seeking a certificate completed one than did white students (32 versus 53 percent).

Degree completion is associated with increased employment opportunities and income potential. Persistent enrollment toward the degree, including reenrollment after stopping out, is a necessary prerequisite to completion. On the other hand, educational experimentation can be a productive, though somewhat costly, way for students to discover what their interests and talents are.

▶ Among beginning students who sought an associate's degree in 1989–90, only 12 percent completed one, while 19 percent were continuously enrolled and 23 percent had reenrolled at least once by early 1992. Nevertheless, close to half (46 percent) had left school without completing the program and had not reenrolled. A smaller percentage of those who had started postsecondary education in the year following high school had left and not reenrolled than did those who delayed entry by at least one year (38 percent versus 60 percent).

▶ About 57 percent of beginning students who sought a bachelor's degree were continuously enrolled, while 19 percent left school and subsequently had reenrolled by early 1992. About 1 in 4 had left school without reenrollment. Students who were sometimes or often involved in academic and social activities in school were less likely to leave and not return.

Completion and enrollment status of first-time postsecondary students during the 1989–90 academic year, by degree objective and selected student characteristics: Spring 1992

Student characteristic	Degree objective:									
	Vocational certificate			Associate's degree				Bachelor's degree		
	Completed in:			Completed	Continuously enrolled	Reenrolled after interruption	No re-enrollment after interruption	Continuously enrolled	Reenrolled after interruption	No re-enrollment after interruption
Nine months or less ¹	Over nine months ¹	Not completed								
Total	29.2	21.3	49.5	12.3	19.1	22.5	46.1	56.8	18.9	24.2
Race/ethnicity										
White	29.6	23.1	47.3	12.8	18.5	21.6	47.2	57.6	17.9	24.5
Black	26.4	17.5	56.1	7.9	12.2	27.1	52.9	50.3	23.4	26.3
Hispanic	23.2	9.2	67.6	16.6	27.0	28.0	28.4	46.0	27.7	26.3
Time between high school graduation and entry into postsecondary education										
12 months or less	19.4	22.2	58.4	16.6	23.5	22.0	37.9	59.5	18.0	22.5
More than 12 months	36.1	20.7	43.2	5.1	11.6	23.4	60.0	37.7	25.3	37.0
Degree of involvement in academic and social activities in school										
Never involved	34.7	14.4	50.9	7.4	14.6	24.7	53.3	35.1	25.5	39.4
Once	24.2	26.3	49.6	13.8	21.2	22.9	42.3	52.5	19.3	28.2
Sometimes	26.1	24.8	49.1	15.2	21.0	20.0	43.8	61.0	19.3	19.7
Often	34.5	26.2	39.3	15.3	21.0	16.2	47.5	66.4	14.4	19.2
Type of postsecondary institution first enrolled in										
4-year	18.6	9.4	72.0	6.5	26.6	18.9	48.0	61.6	16.1	22.3
2-year	27.8	12.5	59.7	13.1	18.3	22.7	45.9	43.1	27.5	29.4
Less than 2-year	31.8	30.4	37.9	(?)	(?)	(?)	(?)	(?)	(?)	(?)

¹From the time of starting the program.

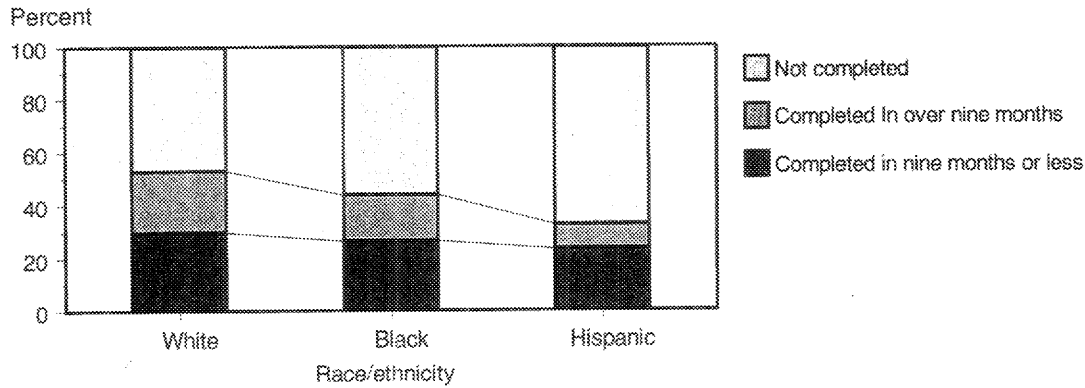
²Too few observations for a reliable estimate.

NOTE: See the supplemental note for detailed information on the definition of terms and how they were measured.

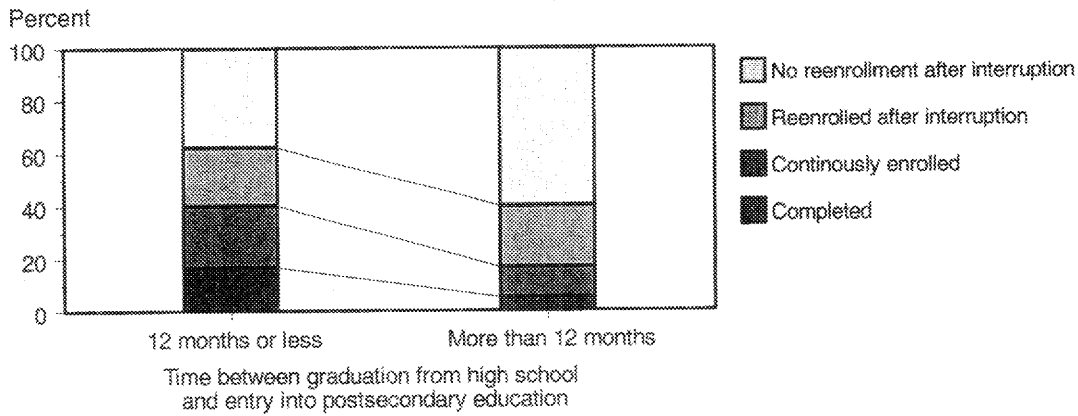
SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992.

Completion and enrollment status of first-time postsecondary students during the 1989-90 academic year: Spring 1992

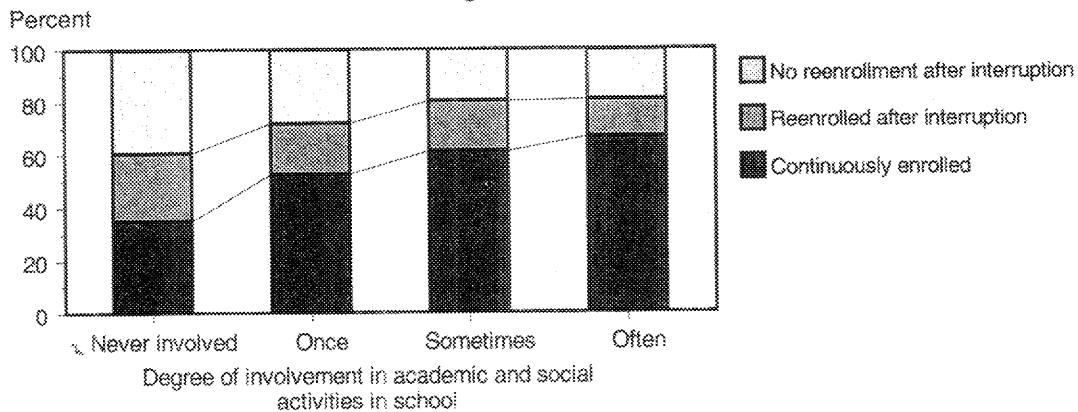
By race/ethnicity for students seeking a vocational certificate or license



By time of entry into postsecondary education for students seeking an associate's degree



By degree of involvement in academic and social activities in school for students seeking a bachelor's degree



SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992.

Skill improvement training among currently employed workers

- ▶ One out of three full-time workers and one out of six part-time workers received training to improve their current job skills during a 12-month period in 1990–91.
- ▶ In both 1983 and 1991, women were as likely as men to have received training while on their current job.
- ▶ The proportion of workers who had ever received skill improvement training on their current job increased between 1983 and 1991.
- ▶ The likelihood of workers receiving skill improvement training is related to their education, occupation, and age. In 1991, college graduates, workers in executive, professional, and technical occupations, and those age 35–54 were more likely to have received training on their current job than other workers.

In the face of changing technologies, work methods, and markets, firms and workers may benefit from education or training that upgrades or reorients worker skills. The proportion of workers receiving skill improvement training on their current job is an indication of the extent to which firms invest in the reeducation of the employed work force. Differences in the proportions between types of workers who receive training are an indication of which professions find it valuable to invest in training.

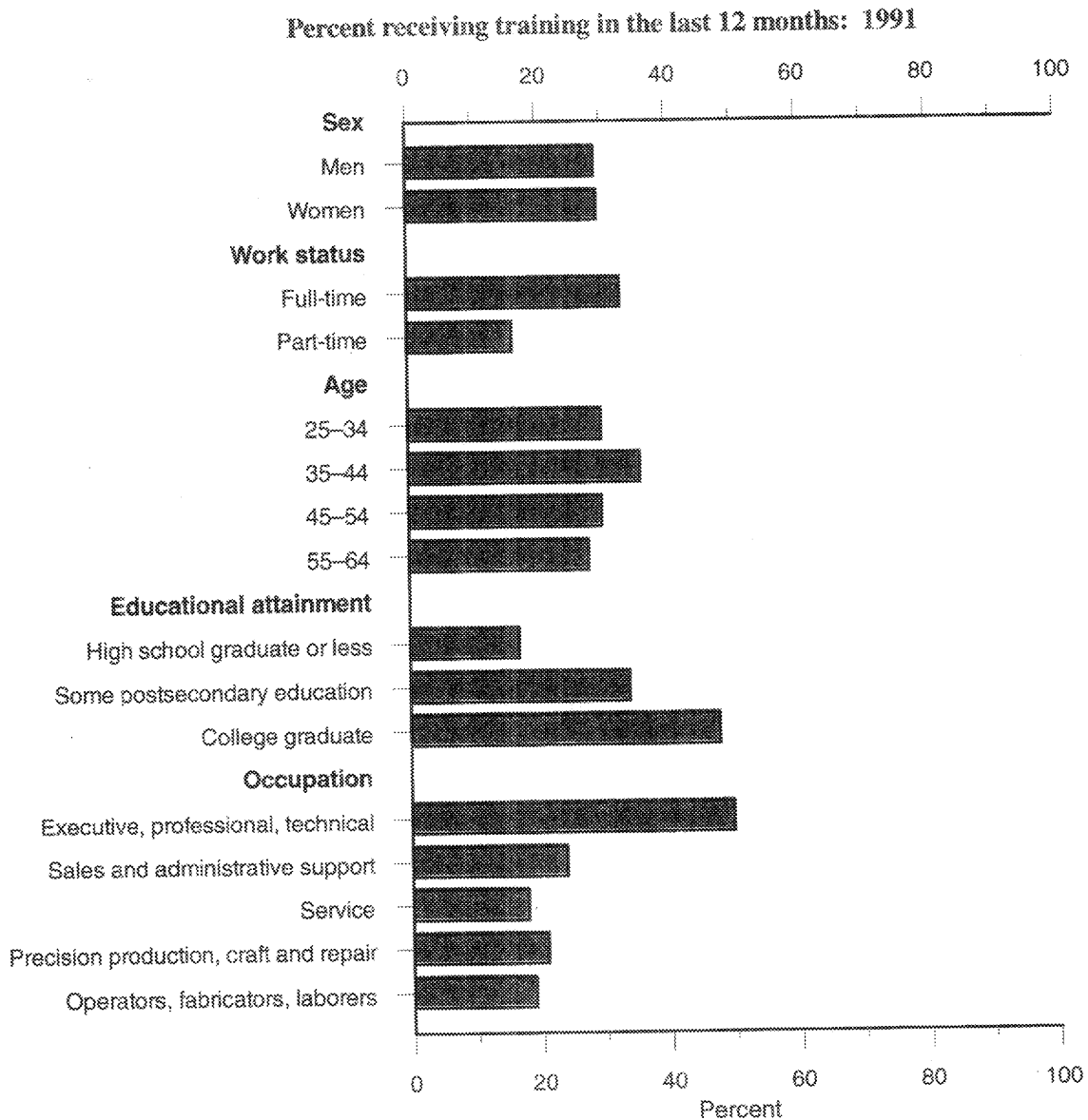
Percentage of workers age 16 years and over who received skill improvement training while on their current job, by worker characteristics: 1983 and 1991

Characteristic	In the last 12 months	At any time while on current job	
	1991	1983	1991
Total	30	35	41
Sex			
Men	29	35	40
Women	30	34	41
Work status			
Full-time	33	—	—
Part-time	16	—	—
Age			
20–24	20	28	31
25–34	30	39	41
35–44	36	41	48
45–54	30	37	46
55–64	28	31	37
65 and over	19	19	25
Educational attainment			
High school graduate or less	17	26	29
Some postsecondary education	34	41	46
College graduate	48	54	61
Occupation			
Executive, professional, technical	50	54	60
Sales and administrative support	24	32	38
Service	18	23	28
Farming, forestry, fishing	7	16	21
Precision production, craft and repair	21	35	38
Operators, fabricators, laborers	19	19	22

—Not available.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *How Workers Get Their Training: A 1991 Update*, Bulletin 2407, August 1992. U.S. Department of Education, National Center for Education Statistics, 1991 National Household Education Survey.

**Workers who received skill improvement training while on their current job,
by worker characteristics: 1991**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1991 National Household Education Survey (NHES:91).



Achievement, Attainment, and Curriculum

Indicators of what students have learned in school are perhaps the most important measures of the outcomes of education. Performance on examinations is one measure of what has been learned. However, examinations do not measure the wide array of skills and experiences that formal education provides. Educational attainment (e.g., finishing high school or college) is an indirect measure of how much subject matter students may have learned, as well as how much students potentially have gained in learning civic responsibilities, social skills, work ethics, and life skills. In addition to achievement and attainment measures, information about courses taken in high school and fields of study in college is another indirect indicator of the content of students' knowledge.

Achievement

The National Assessment of Educational Progress (NAEP) has assessed for more than 20 years what students know in reading, writing, science, mathematics, and other subjects. Generally, the evidence shows a pattern of decreasing scores between the early 1970s and the mid-1980s, followed by an increase in proficiency in the late 1980s and early 1990s. Average reading proficiency among 9-year-olds was about the same in 1992 as in 1971; among 13- and 17-year-olds it was slightly higher in 1992. Average science proficiency among 9-year-olds was higher in 1992 than in 1970; among 13-year-olds, it was the same in 1992 as in 1970; among 17-year-olds, it was lower. Average writing proficiency of 11th-graders was about the same in 1992 as in 1984; however, 4th- and 8th-graders showed marked progress over the last 2 years (*Indicators 12, 13, and 15*).

Average mathematics proficiency among 9- and 13-year-olds was slightly higher in 1992 than in 1973; among 17-year-olds it was about the same (*Indicator 14*). Moreover, average scores on the mathematics section of the SAT showed similar patterns of change as average proficiency in NAEP. SAT scores fell somewhat during the 1970s and then rose during much of the 1980s. Unlike with NAEP, not all of the decline in SAT math scores during the 1970s was recouped during the 1980s. However, participation in the SAT exam has increased significantly—in 1993, 41 percent of high school graduates took the

SAT, up from 33 percent in 1980 (Table 19-1). The percentage of minority test takers has also increased substantially during this time period—up from 15 percent in 1976 to 30 percent in 1993. This increase may be due in part to the growing percentage of Asians taking the SAT: in 1993 they made up 8 percent of the test-taking population compared to 2 percent in 1976.

Although overall scores have not changed much over the last two decades, NAEP gives evidence that the large gap in achievement between whites and minorities has narrowed substantially. Blacks have improved relative to whites in reading, mathematics, and science. For example, in 1971 average reading proficiency among 17-year-old blacks was well below (52 scale points) that of 17-year-old whites and also below (22 points) that of 13-year-old whites; although the gap was still large in 1992, the proficiency of 17-year-old blacks was closer (36 points) to that of 17-year-old whites, and about the same as that of 13-year-old whites. In general, improvement in average reading proficiency among Hispanics relative to whites was not as widespread as it was among blacks. The same trend was found on the SAT where the verbal scores of blacks increased by 21 points between 1976 and 1993, those of whites decreased 7 points and those of Hispanics remained relatively stable.

International comparisons. Recent international comparisons of student achievement are available in basic reading literacy, mathematics, and science. Generally, U.S. students compare favorably to their counterparts in other large industrialized countries in reading, but unfavorably in mathematics and science (*Indicators 16, 17, and 18*). However, differences among countries do not seem so large when they are compared to the variation within countries. Although the United States is a large culturally diverse country in one respect—language—it is less diverse than other large industrialized countries. A smaller percentage of age 9 students in the United States than in West Germany, France, Italy, or Canada speak a language at home different from the one spoken at school (*Indicator 16*).

Adult Literacy. In 1992, the literacy of adults aged 16 and older was assessed in three areas: prose, document, and quantitative. Performance in each area was divided into five levels. Scoring at only the first proficiency level, some would argue, contributes to a lower quality of life. Approximately 20 percent of the adults in the United States performed at or below the lowest level of proficiency. Hispanics and blacks were more likely to reach only level one than were whites. Scores of whites averaged 67 to 75 points higher than those of Hispanics and 49 to 63 points higher than those of blacks in each of the three areas. In addition, older Americans had lower literacy scores than younger ones, and adults with more education had higher literacy scores than adults with less education (*Indicator 20* and Tables 20-1 and 20-3).

Attainment

High school completion. In 1993, between 86 and 88 percent of all 20- to 49-year-olds had a high school diploma or an equivalency certificate. The rate for older Americans was slightly lower, 72 to 82 percent. The graduation rate also varied between racial/ethnic groups. In 1993, 91 percent of whites had a high school diploma or equivalent, compared to 83 percent of blacks and 61 percent of Hispanics (*Indicator 21*). The percentage of 19- to 20-year-olds who were dropouts (neither a high school graduate nor still enrolled in high school) was about the same in 1991 as it was in 1990. However, over the longer term (since 1972) there has been a general decline in the percentage of this age group who were dropouts. The dropout rate among blacks was somewhat higher than it was among whites (17 compared to 11 percent); however, among Hispanics it was much higher (36 percent) (*Indicator 20, Condition of Education 1993*). In terms of high school attainment, the United States compares favorably to other large industrialized countries. A similar or higher percentage of 25- to 64-year-olds in the United States have completed high school than 25- to 64-year-olds in any other country (*Indicator 22*).

College attainment. After high school, many people stop (or delay) further formal education. In 1993, while 87 percent of 30- to 34-year-olds had completed high school, 51 percent had some college or an associate's degree (or 59 percent of

those who completed high school). Among the same age group, 24 percent had a bachelor's degree (or 47 percent of those with some college or an associate's degree), and 6 percent had an advanced degree (or 25 percent of those who graduated from college) (*Indicator 21*). Once again, the United States had a larger portion of its students completing higher education than other industrialized countries (*Indicator 22*).

Curriculum

The courses students take in high school (*Indicators 23, 24, 25, 26*) and college (*Indicator 28*) are an indication of the content of student's knowledge. A larger percentage of 1992 than 1982 high school graduates took mathematics and science courses (both overall and in specific subject areas), particularly in geometry, algebra I, biology, and chemistry. The improvement was seen among both sexes and all racial/ethnic groups. A larger percentage of 1992 than 1982 high school graduates took the number of units in the core courses—4 in English, 3 in science, 3 in social studies, and 3 in mathematics—recommended by the commission that issued *A Nation at Risk* in 1983. In 1992, 47 percent of high school graduates had taken at least these courses compared to 13 percent in 1982. Again, the improvement was seen among both sexes and all racial/ethnic groups. Also, high school students of both sexes and all racial/ethnic groups had taken more foreign language courses in 1992 than in 1982. The evidence from indicators of course-taking patterns suggests that high school students are taking more courses in the important core subjects and in foreign language, and are more frequently taking higher level courses in those subjects.

Business is the most popular major in college—24 percent of all bachelor's degree recipients in 1990 majored in business (*Indicator 27*). However, the percentage of students receiving an associate's degree in business decreased between 1987 and 1990 while the percentage earning an associate's degree in Arts and Sciences increased (*Indicator 29*). Regardless of the degree earned, at least 60 percent of students take courses in the arts, English literature, psychology, sociology/anthropology, history, physical science, and mathematics, reflecting a wide diversity of studies in college (*Indicator 28*).

Trends in the reading proficiency of 9-, 13-, and 17-year-olds

- ▶ Overall, reading proficiency for 9-year-olds improved between 1971 and 1980, then declined between 1980 and 1992, essentially returning to its original level. At age 13, little change occurred from year to year, but average performance was higher in 1992 than in 1971. Scores for 17-year-olds increased between 1971 and 1984, then remained stable through 1992.
- ▶ Females continue to outscore males in all age groups.
- ▶ Although no progress has been made since 1988, average reading proficiency of black students was higher in 1992 than in 1971. Scores for Hispanic students increased between 1975 and 1992 for 9- and 17-year-olds. The gap between white students and their black and Hispanic counterparts decreased for blacks at all three age levels and for Hispanic 17-year-olds.
- ▶ Reading proficiency increases more between ages 9 and 13 than between ages 13 and 17. For example, in 1992, there was an average proficiency difference of 50 points between ages 9 and 13, and 30 points between ages 13 and 17. This pattern holds for both genders and all racial/ethnic groups.

A student's ability to read is essential to the educational process. If students fall behind in reading proficiency, they may find it difficult to benefit from other aspects of the curriculum. In the future, poor readers may also find it difficult to participate effectively in an economy requiring increasingly sophisticated job skills.

Average reading proficiency (scale score), by sex and age: 1971-92

Year	Total			Males			Females		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1971	208	¹ 255	¹ 285	¹ 201	250	¹ 279	214	¹ 261	291
1975	210	¹ 256	¹ 286	204	250	280	216	262	¹ 291
1980	^{1,2} 215	258	¹ 286	² 210	² 254	282	^{1,2} 220	263	¹ 289
1984	² 211	257	² 289	² 208	² 253	² 284	214	262	294
1988	² 212	258	² 290	² 208	252	² 286	216	263	294
1990	209	257	² 290	204	250	284	214	263	² 296
1992	210	² 260	² 290	² 206	254	² 284	215	² 265	296

Average reading proficiency (scale score), by race/ethnicity and age: 1971-92

Year	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1971	¹ 214	¹ 261	¹ 291	¹ 170	¹ 222	¹ 239	—	—	—
1975	217	¹ 262	¹ 293	² 181	¹ 226	¹ 241	183	232	¹ 252
1980	^{1,2} 221	² 264	¹ 293	² 189	² 233	¹ 243	190	237	261
1984	² 218	¹ 263	² 295	² 186	² 236	² 264	187	240	² 268
1988	218	¹ 261	295	² 188	² 243	^{1,2} 274	² 194	240	² 271
1990	217	¹ 262	² 297	² 182	² 242	² 267	189	238	² 275
1992	² 218	² 266	² 297	² 184	² 238	² 261	192	239	² 271

—Not available.

¹Statistically significant difference from 1992.

²Statistically significant difference from 1971 for all except Hispanics. Statistically significant difference from 1975 for Hispanics.

NOTE: **Reading proficiency scale has a range from 0 to 500.** (See supplemental table 12-1 for further explanations of levels.)

Level 150: Simple discrete reading tasks.

Level 300: Understands relatively complicated information.

Level 200: Partial skills and understanding.

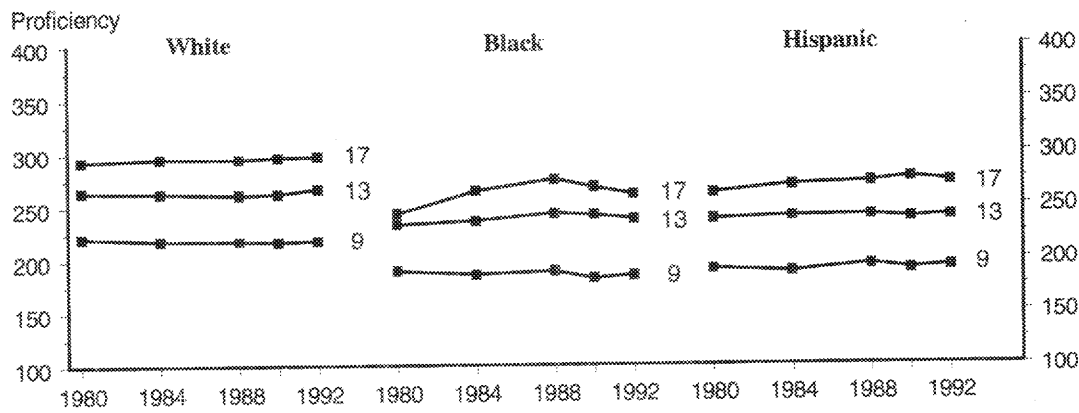
Level 350: Learns from specialized reading materials.

Level 250: Interrelates ideas, and makes generalizations.

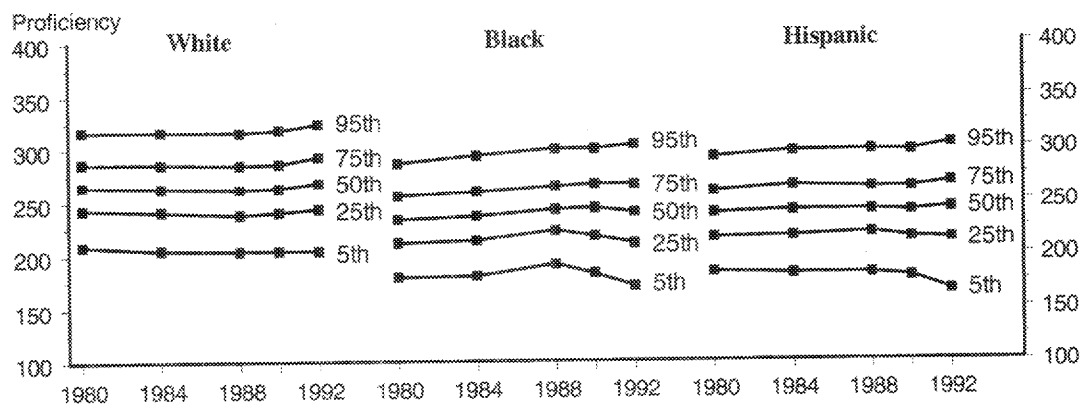
SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.*

Average reading proficiency (scale score), by race/ethnicity, age, and percentile ranking: 1980-92

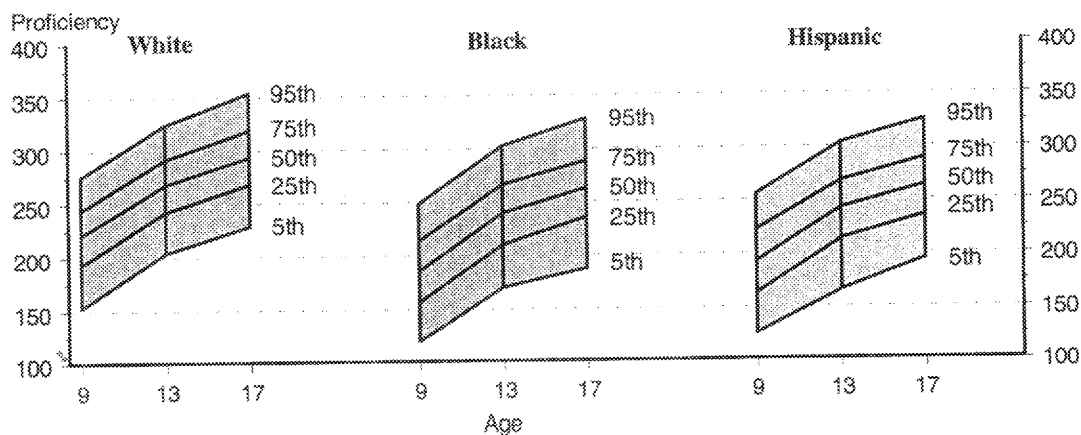
Average reading proficiency, by race/ethnicity and age



Percentile distribution of reading proficiency for 13-year-olds, by race/ethnicity



Percentile distribution of reading proficiency, by age and race/ethnicity for 1992



NOTE: The reading proficiency scale has a range from 0 to 500.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992*, 1994.

Trends in writing proficiency in grades 4, 8, and 11

- ▶ Average writing scores remained relatively stable for fourth grade students between 1984 and 1990, then rose between 1990 and 1992. Eighth grade writing scale scores increased 17 points in 1992 after a decline between 1984 and 1990. Eleventh-grade scores have remained relatively unchanged since 1984.
- ▶ Females have outscored males at all levels since 1984.
- ▶ Scores for white eighth grade students decreased between 1984 and 1990, and then rose dramatically in 1992. Hispanic and black eighth grade students also showed strong improvements between 1990 and 1992.
- ▶ In 1992, 87 percent of 11th-graders could write focused, clear responses (Level 250); 36 percent were generally able to write more complete responses (Level 300); and only 2 percent provided effective, coherent responses (Level 350) (see supplemental table 13-2).
- ▶ Scores at the fifth percentile rose between 1990 and 1992 for all age groups, while scores at the 95th percentile decreased for 11th-graders and remained the same for 4th-graders. This shift caused a decrease in the variability of scores for 4th- and 11th-graders. Eighth-grade scores increased at the upper percentile levels, causing the entire distribution to shift upward (see supplemental table 13-3).

Effective writing skills are important in all stages of life from early education to future careers. In the business world, as well as in school, students often must convey complex ideas and information in a clear, succinct manner. Inadequate writing skills, therefore, could inhibit achievement across the curriculum and in future careers.

Trends in average writing proficiency (scale score), by grade and sex: 1984-92

Year	Total			Male			Female		
	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11
1984	204	¹ 267	290	201	258	281	¹ 208	¹ 276	299
1988	206	¹ 264	291	199	¹ 254	282	213	¹ 274	299
1990	¹ 202	¹ 257	287	195	¹ 246	276	¹ 209	¹ 268	298
1992	207	² 274	287	198	264	279	² 216	² 285	296

Average writing proficiency (scale score), by grade and race/ethnicity: 1984-92

Year	White			Black			Hispanic		
	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11
1984	211	¹ 272	297	182	247	270	189	¹ 247	259
1988	215	¹ 269	296	173	246	¹ 275	190	¹ 250	274
1990	211	¹ 262	293	171	¹ 239	268	184	¹ 246	² 277
1992	217	² 279	294	175	258	263	189	² 265	274

¹Statistically significant difference from 1992.
²Statistically significant difference from 1984.

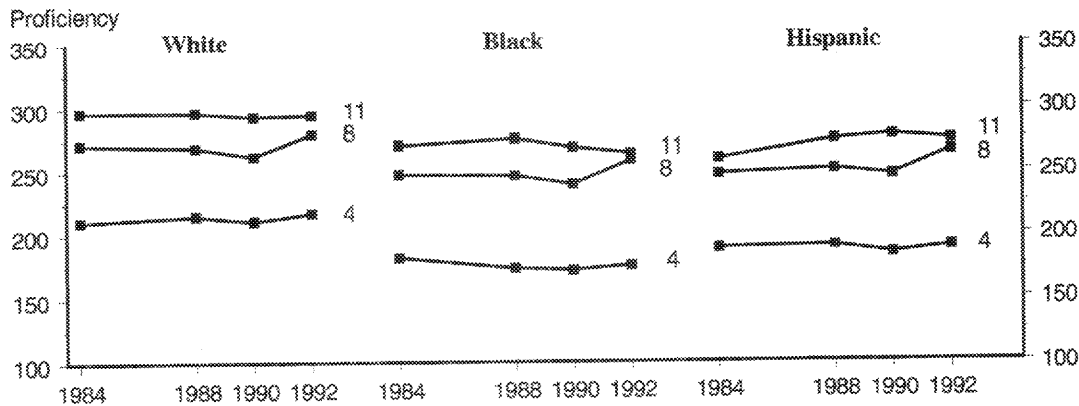
NOTE: **Writing proficiency scale has a range from 0 to 500 with a mean of 250.** (See supplemental table 13-1 for detailed explanations of levels.)

- Level 150: Disjointed, unclear writing.
- Level 200: Incomplete, vague writing.
- Level 250: Focused, clear writing.
- Level 300: Complete, sufficient writing.
- Level 350: Effective, coherent writing.

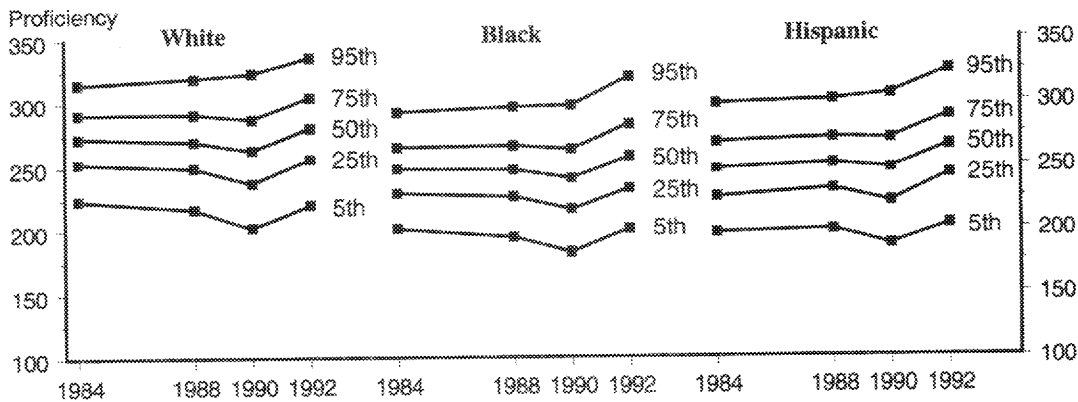
SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.*

Average writing proficiency (scale score), by race/ethnicity, grade, and percentile ranking: 1984-92

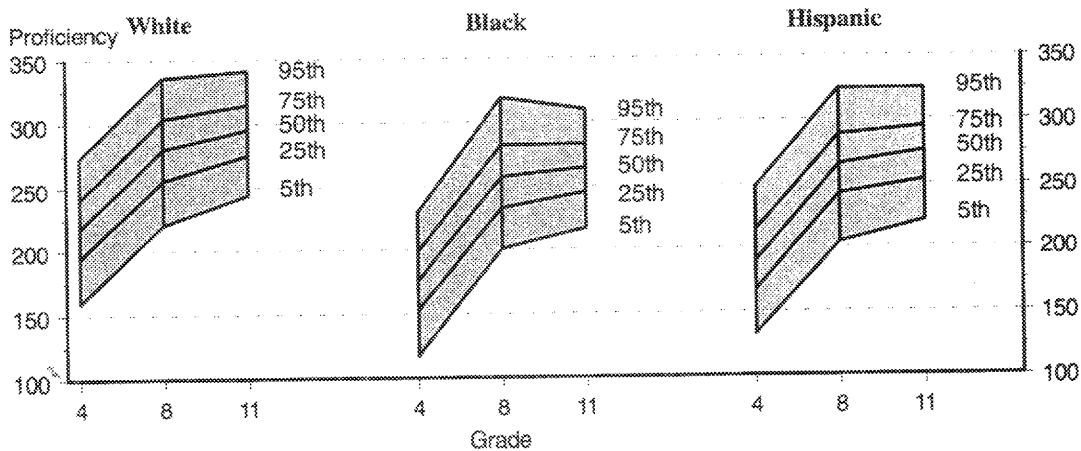
Average writing proficiency, by race/ethnicity and grade



Percentile distribution of writing proficiency in grade 8, by race/ethnicity



Percentile distribution of writing proficiency, by grade and race/ethnicity for 1992



NOTE: The writing proficiency scale has a range from 0 to 500.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.*

Trends in the mathematics proficiency of 9-, 13-, and 17-year-olds

- ▶ Average mathematics proficiency improved between 1973 and 1992 for all age groups, with the largest improvements occurring among 9- and 13-year-olds.
- ▶ White, black, and Hispanic 9-year-olds showed large improvements in average mathematics proficiency between 1982 and 1992, after a rather flat trend between 1973 and 1982.
- ▶ Although a large gap in mathematics proficiency exists for all age groups between whites and their black and Hispanic peers, at ages 13 and 17, white scores increased at a slower rate than black and Hispanic scores, causing this gap to decrease over the last 20 years.
- ▶ Between 1978 and 1992, the average mathematics proficiency of 17-year-olds increased 7 scale points from 300 to 307. This increase varied across proficiency levels. The percentage of students scoring at or above level 250 increased from 92 percent to 97 percent; those scoring at or above level 300 increased from 52 to 59 percent; but those scoring at or above level 350 stayed at 7 percent (see supplemental table 14-2).
- ▶ There is a great deal of variation in the mathematics proficiency scores of students. For example, in 1992, scores for 9-year-old whites varied by more than 100 points between the 5th percentile and the 95th percentile. In addition, whites had higher scores at the 95th percentile at age 9 than at the 50th percentile at age 13 (see supplemental table 14-3).

Proficiency in mathematics is an important outcome of education. In an increasingly technological world, the mathematics skills of the nation's workers may be a crucial component of economic competitiveness. In addition, knowledge of mathematics is critical for success in science, computing, and a number of other related fields of study.

Average mathematics proficiency (scale score), by sex and age: 1973-92

Year	Total			Male			Female		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1973	¹ 219	¹ 266	304	¹ 218	¹ 265	309	¹ 220	¹ 267	301
1978	¹ 219	¹ 264	¹ 300	¹ 217	¹ 264	¹ 304	¹ 221	¹ 265	¹ 297
1982	¹ 219	¹ 269	¹ 298	¹ 217	¹ 269	¹ 302	¹ 222	¹ 268	¹ 296
1986	¹ 222	¹ 269	¹ 302	¹ 222	¹ 270	¹ 305	¹ 222	268	¹ 299
1990	² 230	² 270	305	² 229	² 271	306	² 230	270	303
1992	² 230	² 273	307	² 231	² 274	309	² 228	² 272	304

Average mathematics proficiency (scale score), by race/ethnicity and age: 1973-92

Year	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1973	¹ 225	¹ 274	310	¹ 190	¹ 228	¹ 270	¹ 202	¹ 239	¹ 277
1978	¹ 224	¹ 272	¹ 306	¹ 192	¹ 230	¹ 268	¹ 203	¹ 238	¹ 276
1982	¹ 224	¹ 274	¹ 304	¹ 195	¹ 240	¹ 272	¹ 204	¹ 252	¹ 277
1986	¹ 227	¹ 274	¹ 308	² 202	² 249	² 279	205	² 254	283
1990	² 235	276	² 310	² 208	² 249	² 289	² 214	² 255	284
1992	² 235	² 279	² 312	² 208	² 250	² 286	² 212	² 259	² 292

¹Statistically significant difference from 1992.

²Statistically significant difference from 1973.

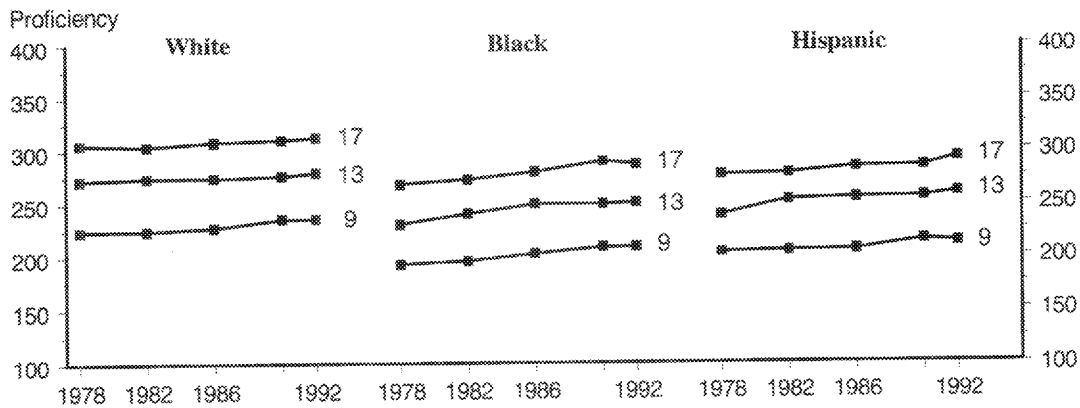
NOTE: **Mathematics proficiency scale has a range of 0 to 500.** (See supplemental table 14-1 for detailed explanations of levels.)

- Level 150: Simple arithmetic facts.
- Level 200: Beginning skills and understandings.
- Level 250: Numerical operations and beginning problem solving.
- Level 300: Moderately complex procedures and reasoning.
- Level 350: Multi-step problem solving and algebra.

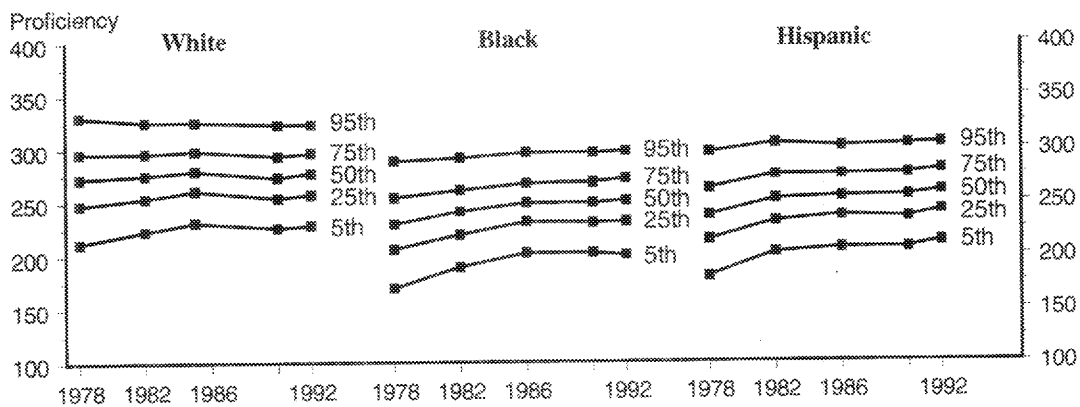
SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, and Writing, 1984 to 1992, 1994.*

Average mathematics proficiency (scale score), by race/ethnicity, age, and percentile ranking: 1978-92

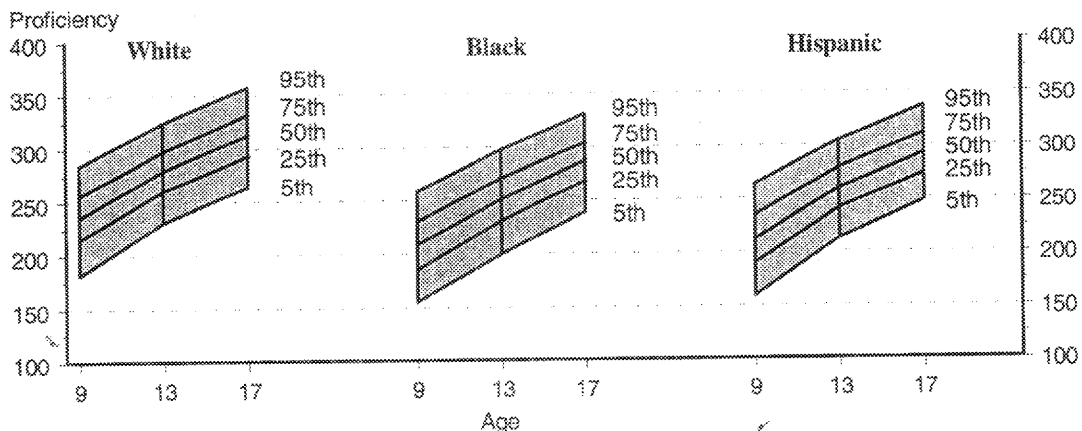
Average mathematics proficiency, by race/ethnicity and age



Percentile distribution of mathematics proficiency for 13-year-olds, by race/ethnicity



Percentile distribution of mathematics proficiency, by age and race/ethnicity for 1992



NOTE: The mathematics proficiency scale has a range from 0 to 500.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading 1971 to 1992, Writing 1984 to 1992*, 1994.

Trends in the science proficiency of 9-, 13-, and 17-year-olds

- ▶ In 1992, average science achievement was higher at all three age levels than in 1982, the year before *A Nation at Risk* was published. In addition, the gap between male and female scores has decreased over the past 10 years at ages 13 and 17.
- ▶ In 1992, the average proficiency of blacks and Hispanics remained well below that of whites. However, between 1977 and 1992, the proficiency gap decreased between whites and blacks at age 9, and between whites and Hispanics at age 13.
- ▶ A higher percentage of 9- and 13-year-olds demonstrated basic science skills by reaching levels 150, 200, and 250 in 1992 than in 1982. In addition, a greater percentage of 17-year-olds reached level 300 in 1992, exhibiting detailed knowledge and analytical understanding of scientific principles (see supplemental table 15-2).
- ▶ There is a great deal of variation in science proficiency scores within an age group. For example, the proficiency of white 9-year-olds varies by 120 scale points from the 5th percentile to the 95th percentile. By comparison, the difference in the proficiency of median white 9- and 17-year-olds is only 66 scale points (see supplemental table 15-3).

Competence in science is an important outcome of education. The ability to apply scientific information, interpret data, and make inferences about scientific findings is required in a world which relies heavily on technological and scientific advances.

Average science proficiency (scale score), by sex and age: 1970-92

	Total			Male			Female		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1970	1225	255	1305	1228	257	1314	223	253	1297
1973	12220	12250	2296	12223	12252	2304	12218	12247	2288
1977	12220	12247	12290	12222	12251	2297	12218	12244	12282
1982	1221	12250	12283	12221	256	12292	1221	12245	12275
1986	1224	1251	12288	1227	256	2295	1221	12247	12282
1990	229	255	2290	1230	258	2296	227	1252	2285
1992	2231	258	2294	2235	260	2299	227	256	2289

Average science proficiency (scale score), by race/ethnicity and age: 1970-92

	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1970	236	1263	1312	1179	215	258	—	—	—
1973	12231	12259	2304	1177	12205	2250	—	—	—
1977	12230	12256	12298	1175	1208	12240	1192	1213	262
1982	12229	12257	12293	12187	217	12235	1189	12226	12249
1986	12232	2259	12298	2196	222	253	199	12226	259
1990	238	264	2301	2196	2226	253	2206	2232	262
1992	239	2267	2304	2200	224	256	2205	2238	2270

—Not available.

¹Statistically significant difference from 1992.

²Statistically significant difference from 1970 for all except Hispanics. Statistically significant difference from 1977 for Hispanics.

NOTE: Science proficiency scale has a range from 0 to 500. (See supplemental table 15-1 for detailed explanations of levels.)

Level 150: Knows everyday science facts.

Level 300: Analyzes scientific procedures and data.

Level 200: Understands simple scientific information.

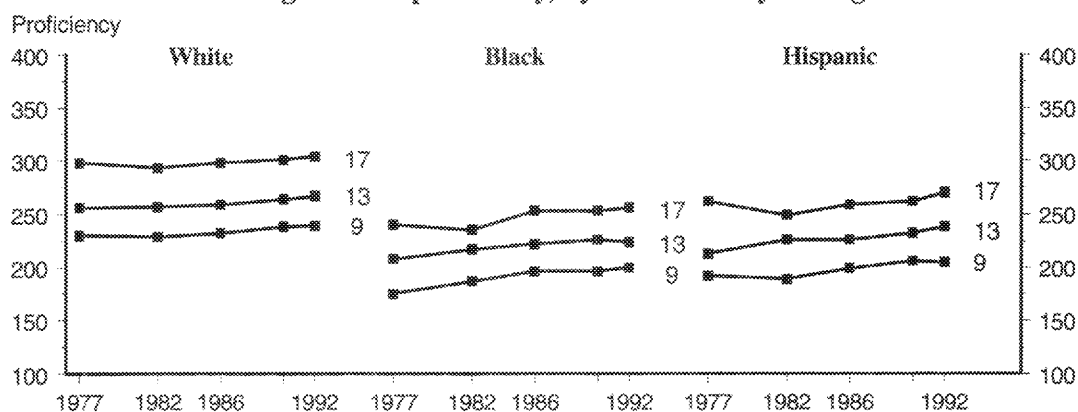
Level 350: Integrates specialized scientific information.

Level 250: Applies general scientific information.

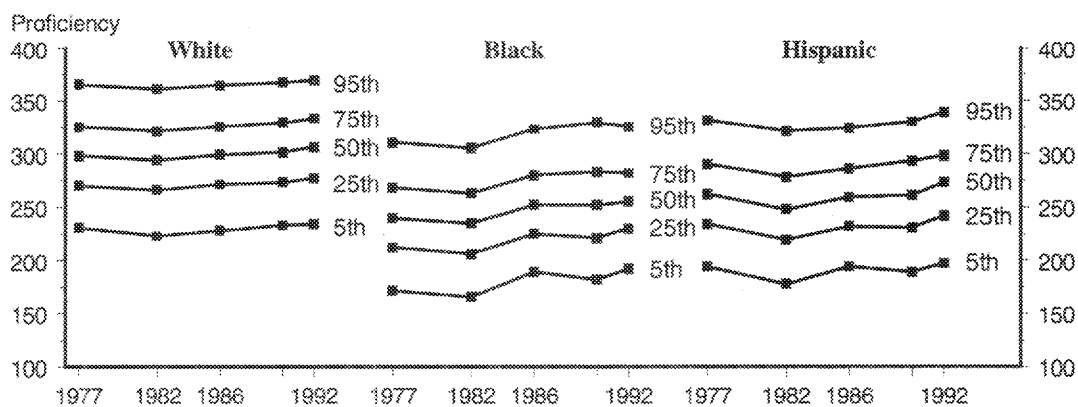
SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.*

Average science proficiency (scale score), by race/ethnicity, age, and percentile ranking: 1977-92

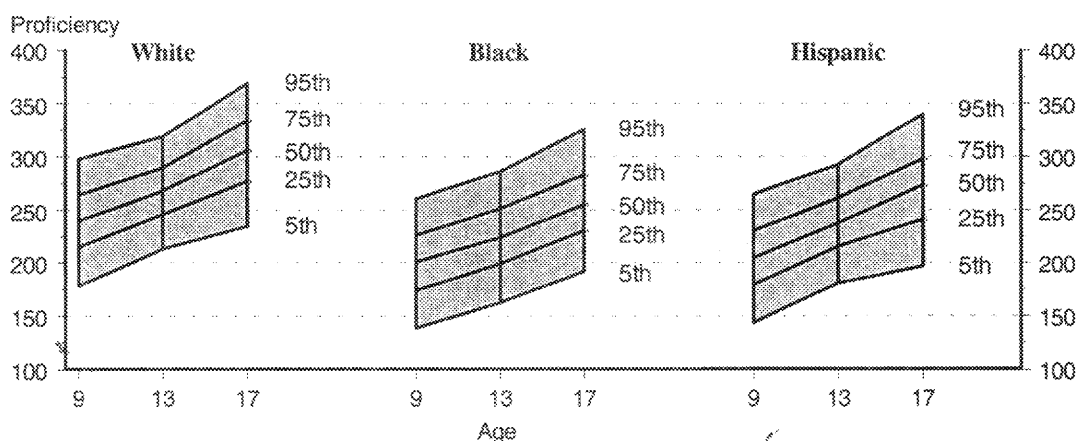
Average science proficiency, by race/ethnicity and age



Percentile distribution of science proficiency for 17-year-olds, by race/ethnicity



Percentile distribution of science proficiency, by age and race/ethnicity for 1992



NOTE: The science proficiency scale has a range from 0 to 500.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading 1971 to 1992, Writing 1984 to 1992, 1994.*

International comparisons of reading literacy

- ▶ In an international assessment of basic reading literacy, 9-year-olds from the United States performed better on average on the narrative domain than students from other large countries.
- ▶ At age 14, students in the United States scored higher on the expository domain on average than students of similar ages in West Germany and Spain.
- ▶ There is far greater variation in the basic reading literacy of students within each country than differences in averages among countries. For example, among 9-year-olds, the difference between the 10th and the 90th percentile on the narrative domain was 235 scale points in the United States, compared to a difference of 62 scale points between the United States and West Germany (see supplemental table 16-2).
- ▶ Children whose home language is different from the one spoken at school showed lower literacy levels in most countries, including the United States, at both ages 9 and 14.

The ability to read is a minimum requirement to participate productively in a global economy and to fulfill basic civic responsibilities. Comprehending and effectively using written language are critical for both future learning and the development of basic job skills.

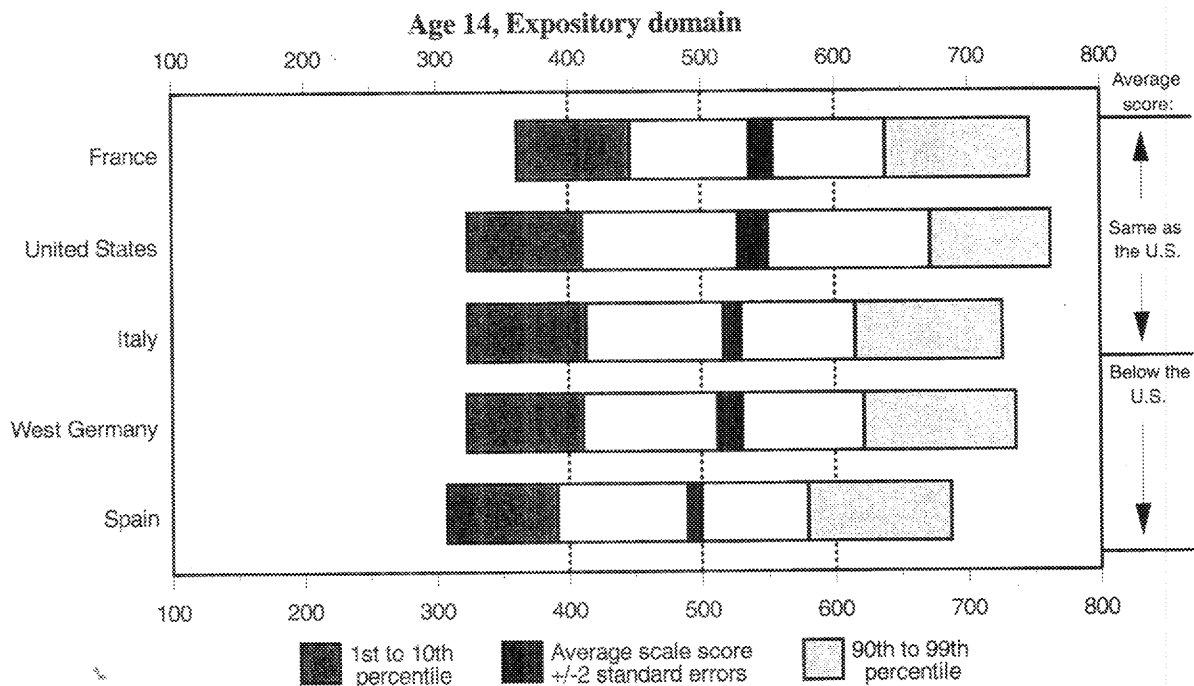
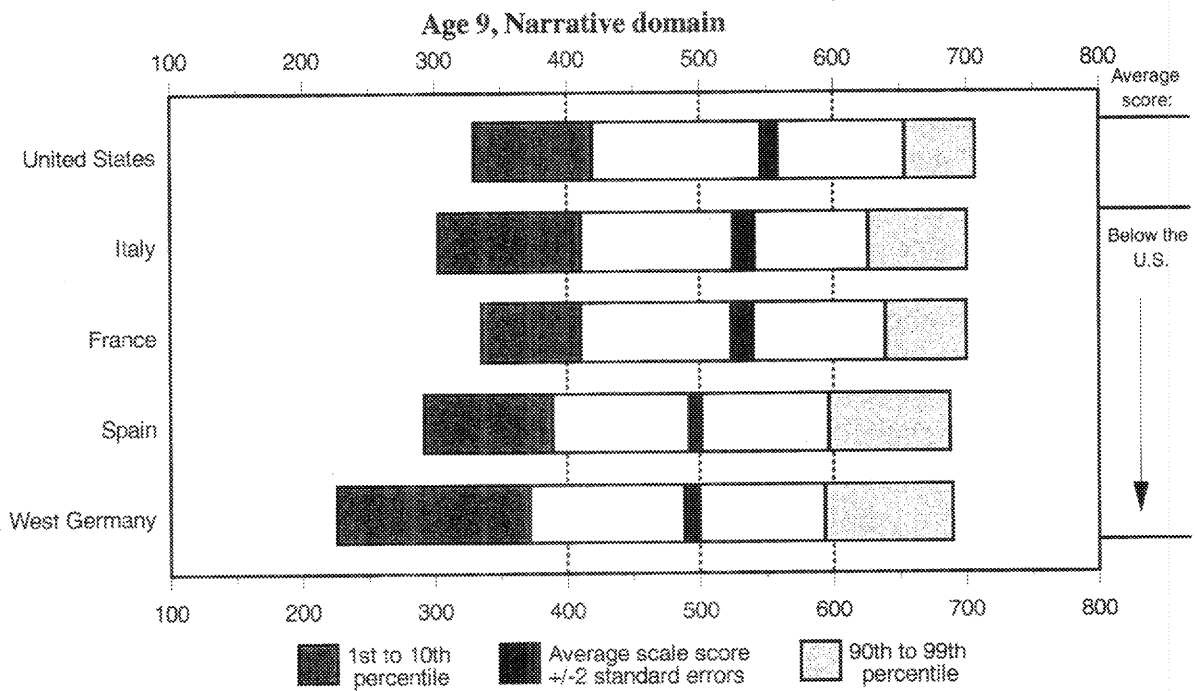
Average reading literacy scale score, by age and country: School year 1991-92

Larger countries	Average overall score			Average domain scale score			Nonschool language spoken at home		School language spoken at home	
	Total	Male	Female	Narrative	Expository	Documents	Percentage of students	Average score	Percentage of students	Average score
Age 9										
United States	547	543	552	553	538	550	3	520	97	549
France	531	530	533	532	533	527	9	491	91	536
Italy	529	525	537	533	538	517	27	513	73	537
Spain	504	500	508	497	505	509	13	499	87	505
West Germany	503	501	508	491	497	520	10	461	90	509
Age 14										
France	549	553	549	556	546	544	4	516	96	552
United States	535	530	543	539	539	528	4	478	96	539
West Germany	522	522	526	514	521	532	8	455	92	530
Italy	515	511	520	520	524	501	26	488	74	525
Spain	490	488	492	500	495	475	11	481	89	491

NOTE: In the Study of Reading Literacy, 32 countries assessed the reading achievement of students in the grades where most 9- and 14-year-olds were enrolled. The countries above are the larger countries. The above scores were scaled using the Rausch procedure. The domain scores for each age group were scaled to a mean of 500 and a standard deviation of 100. The average overall score is the mean of the domain scale scores. Some student groups were excluded by the participating countries, such as those in private schools, schools serving handicapped children, or schools where the language of instruction is different than the primary national language. See supplemental tables 16-1 through 16-4 for details on excluded populations and performance information on other countries.

SOURCE: International Association for the Evaluation of Educational Achievement, Study of Reading Literacy, *How in the World Do Students Read?*, 1992.

**Distribution of scale scores on reading literacy assessment, by country:
School year 1991-92**



NOTE: The vertical lines at ability score 500 mark the average score for each age group for all participating countries. The standard deviation is 100.

SOURCE: International Association for the Evaluation of Educational Achievement, Study of Reading Literacy, *How in the World Do Students Read?*, 1992.

International comparisons of mathematics performance

- ▶ In the second International Assessment of Educational Progress (IAEP), 9-year-old students from the United States scored lower on average in mathematics performance than 9-year-olds from all other large countries.
- ▶ Thirteen-year-olds from the United States scored lower on average than students of the same age in other large countries, except Spain.
- ▶ Average mathematics proficiency among 9-year-old students in the United States was 53 scale points below their Korean counterparts. This is close to three-quarters of the difference between 9-year-olds and 13-year-olds in the United States, suggesting that Korean students at age 9 may be performing at levels similar to U.S. students 2 to 3 years older.
- ▶ There is far greater variation in the mathematics proficiency of students within each country than differences in averages among countries. For example, among 13-year-olds the difference between the 10th and 90th percentile was 124 scale points in the United States, compared to a difference in average proficiency between the United States and Taiwan of 51 scale points.

The technical skills of a nation's workers are a critical component of its economic competitiveness. The youth of today will be tomorrow's workers and will be competing in the global marketplace. They will depend on the mathematics learned in this decade to succeed in the complex business and technological environments of the future.

Proficiency scores on mathematics assessment, by age and country: 1991

Larger countries ¹	Average proficiency score			Percentile scores						
	Total	Male	Female	1st	5th	10th	Median	90th	95th	99th
Age 9										
Korea	473	480	465	334	383	407	475	534	550	586
Taiwan	454	455	453	304	360	384	457	521	539	571
Soviet Union ²	447	448	446	310	349	374	450	514	532	579
Spain ³	432	432	432	287	330	353	437	499	518	551
Canada ⁴	430	430	431	296	337	363	435	490	506	537
United States	420	422	419	278	305	333	427	492	513	549
Age 13										
Taiwan	545	546	544	368	424	454	550	631	659	694
Korea	542	546	537	390	445	470	545	609	629	665
Soviet Union ²	533	533	532	413	458	477	536	584	596	629
France	519	523	515	404	442	460	521	574	588	616
Canada ⁵	513	515	512	400	443	462	515	564	580	608
Spain ³	495	498	492	390	429	446	496	542	556	577
United States	494	494	494	366	407	430	495	554	574	616

¹In the second International Assessment of Educational Progress (IAEP), 14 countries assessed the mathematics achievement of 9-year-olds and 20 countries assessed the mathematics achievement of 13-year-olds. The countries above are the larger countries that assessed virtually all age-eligible children, except as noted. See supplemental tables 17-1 through 17-4 for performance information on other countries.

²Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.

³Regions except Cataluña; Spanish-speaking schools.

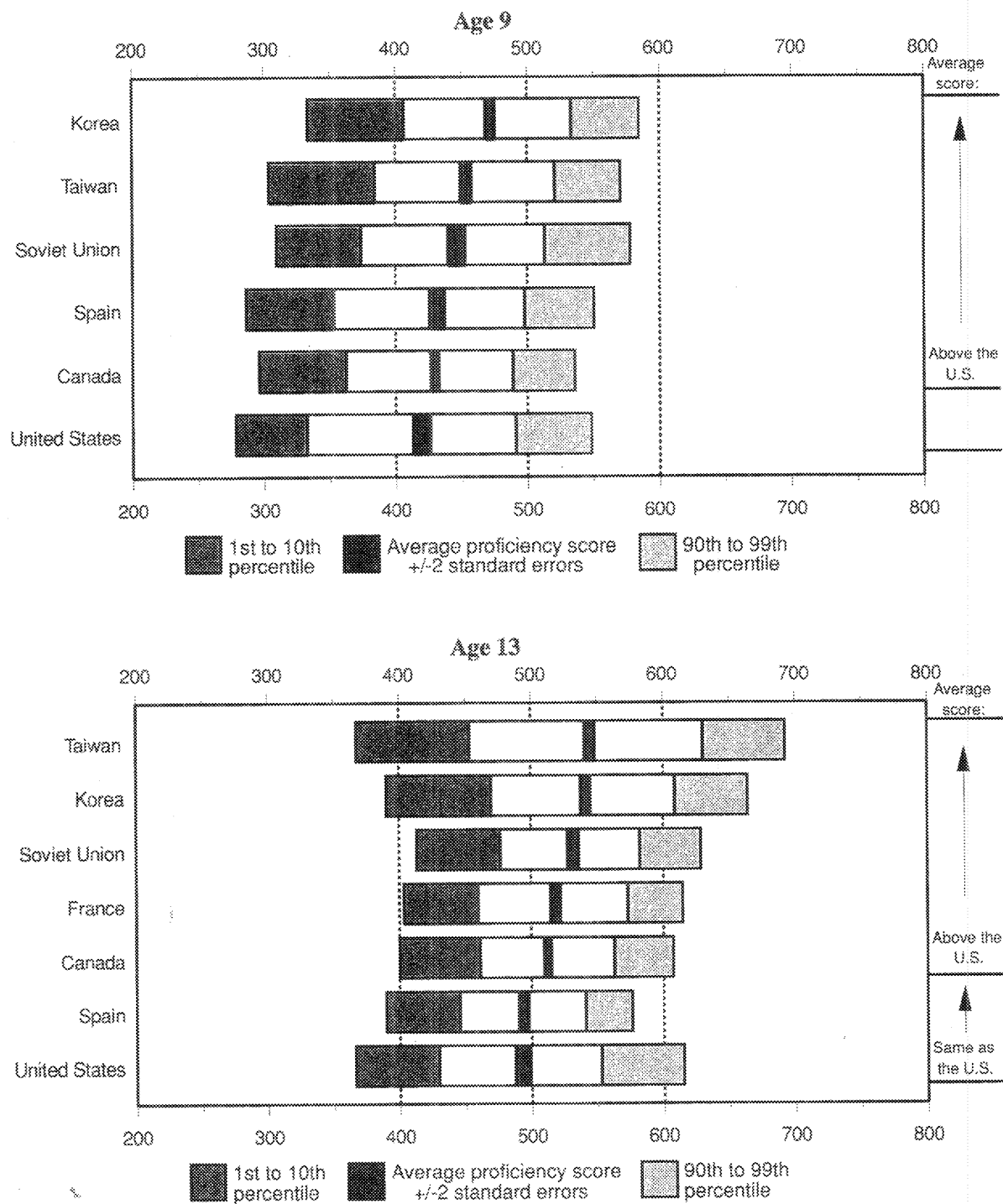
⁴Four out of 10 provinces; see supplemental table 17-1 for the scores of 9-year-olds in individual Canadian provinces.

⁵Nine out of 10 provinces; see supplemental table 17-2 for the scores of 13-year-olds in individual Canadian provinces.

NOTE: Proficiency scores range from 0 to 1,000. The mean proficiency score for all participating populations, 9- and 13-year olds together, is 500. The standard deviation is 100. See the supplemental note to *Indicator 17* for a discussion of proficiency scaling.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

Distribution of proficiency scores on mathematics assessment, by age and country: 1991



NOTE: The scale for proficiency scores ranges from 0 to 1,000. The mean proficiency score for all participating populations, 9- and 13-year-olds together, is 500. The standard deviation is 100.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

International comparisons of science performance

- ▶ In the second International Assessment of Educational Progress (IAEP), 9-year-old students from Korea scored higher on average in science performance than 9-year-olds from the United States. Students of the same age from Spain scored lower on average.
- ▶ Thirteen-year-olds from Korea, Taiwan, the former Soviet Union, and Canada scored higher on average than U.S. students of the same age.
- ▶ The difference in science proficiency between 9- and 13-year-olds in the United States (75 points) was less than the proficiency difference in other large countries (ranging from 95 to 111 points).
- ▶ Among 9-year-olds, boys performed better than girls in Korea, Taiwan, and Spain. At age 13, this gender difference held across all large participating countries except Taiwan.

The scientific and technological skills of a nation's workers are a critical component of its economic competitiveness. The youth of today will be tomorrow's workers and will be competing in the global marketplace. They will depend on the science learned in this decade to succeed in the complex business and technological environments of the future.

Proficiency scores on science assessment, by age and country: 1991

Larger countries ¹	Average proficiency score			Percentile scores						
	Total	Male	Female	1st	5th	10th	Median	90th	95th	99th
Age 9										
Korea	460	474	446	303	357	383	460	541	563	609
Taiwan	456	466	445	254	321	359	459	553	576	627
United States	446	451	441	235	292	328	453	543	567	605
Canada ²	437	439	434	257	316	346	443	517	538	582
Soviet Union ³	434	441	428	284	328	356	433	515	547	588
Spain ⁴	430	439	421	250	305	334	435	522	541	567
Age 13										
Korea	571	580	559	395	457	490	575	648	670	710
Taiwan	563	567	560	339	420	463	572	655	673	715
Soviet Union ³	541	546	535	383	438	465	545	612	629	661
Canada ⁵	533	539	527	384	434	460	534	606	628	670
France	532	540	524	370	417	442	534	611	639	677
Spain ⁴	525	531	519	380	428	453	524	596	617	663
United States	521	530	513	334	410	436	523	601	627	665

¹In the second International Assessment of Educational Progress (IAEP), 14 countries assessed the science achievement of 9-year-olds and 20 countries assessed the science achievement of 13-year-olds. The countries above are the larger countries that assessed virtually all age-eligible children, except as noted. See supplemental tables 18-1 through 18-4 for performance information on other countries.

²Four out of 10 provinces; see supplemental table 18-1 for the scores of 9-year-olds in individual Canadian provinces.

³Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.

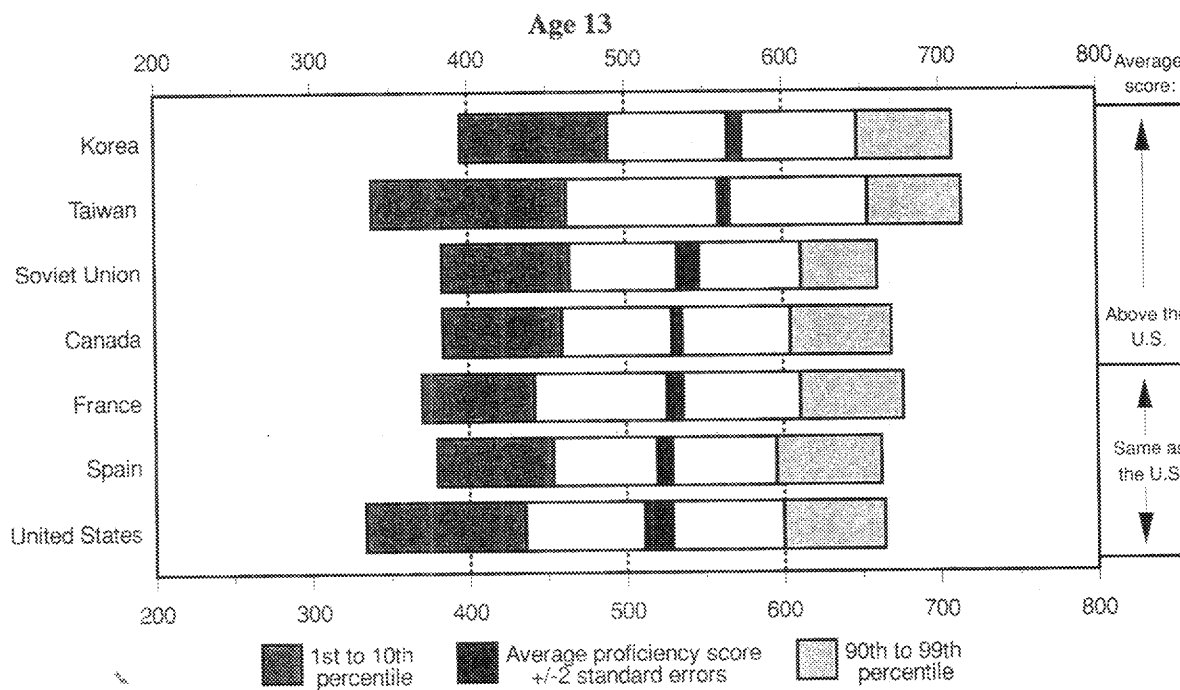
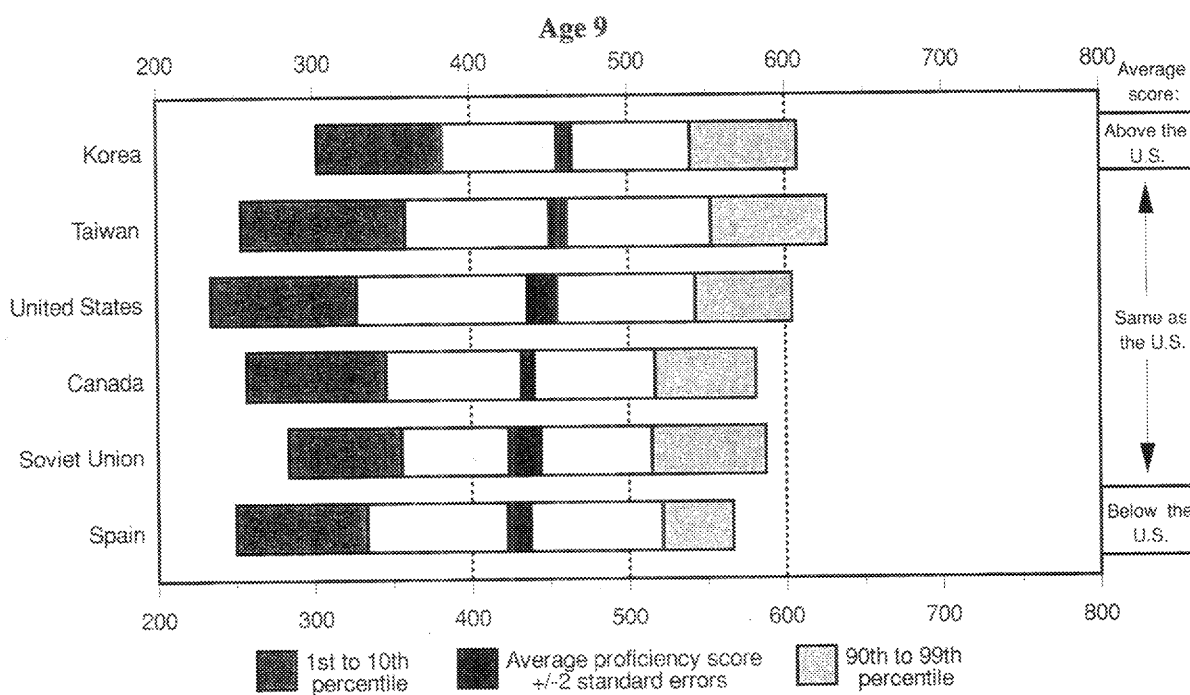
⁴Regions except Cataluña; Spanish-speaking schools.

⁵Nine out of 10 provinces; see supplemental table 18-2 for the scores of 13-year-olds in individual Canadian provinces.

NOTE: Proficiency scores range from 0 to 1,000. The mean proficiency score for all participating populations, 9- and 13-year olds together, is 500. The standard deviation is 100. See the supplemental note to *Indicator 17* for a discussion of proficiency scaling.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

Distribution of proficiency scores on science assessment, by age and country: 1991



NOTE: The scale for proficiency scores ranges from 0 to 1,000. The mean proficiency score for all participating populations, 9- and 13-year-olds together, is 500. The standard deviation is 100.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

Scholastic Aptitude Test (SAT) Scores

- ▶ Between 1992 and 1993, average SAT scores improved for all test-takers, both sexes (supplemental table 19-2) and nearly every racial/ethnic group. Since *A Nation at Risk* was published in 1983, SAT test takers as a percent of high school graduates has increased 8 percentage points (see supplemental table 19-1). Mathematics scores have increased by 10 points during the decade, while verbal scores are 1 point below 1983 scores.
- ▶ Since 1976, the mean SAT scores of black students have risen 21 points on the verbal section and 34 points on the mathematics section, while the mean scores of whites have fallen 7 points on verbal and risen only 1 point on the mathematics section. Between 1992 and 1993, American Indians had the largest gains on both sections.
- ▶ Over the past decade, mathematics scores have increased 9 points for males and 12 points for females. Males, however, continue to outscore females on the mathematics section by 45 points (see supplemental table 19-2).
- ▶ In 1993, students from families with the lowest parental education and income levels received the lowest scores overall, while scores increased with higher levels of parental education and income (see supplemental table 19-4).

The Scholastic Aptitude Test (SAT) is the test taken most frequently by college-bound students. It is designed to predict success in the freshman year of college, and to track the performance of groups of students across time. When interpreting these scores the reader should be aware that the proportion of high school graduates who take the exam changes over time.

SAT mean scores of college-bound seniors, by race/ethnicity: 1976-93

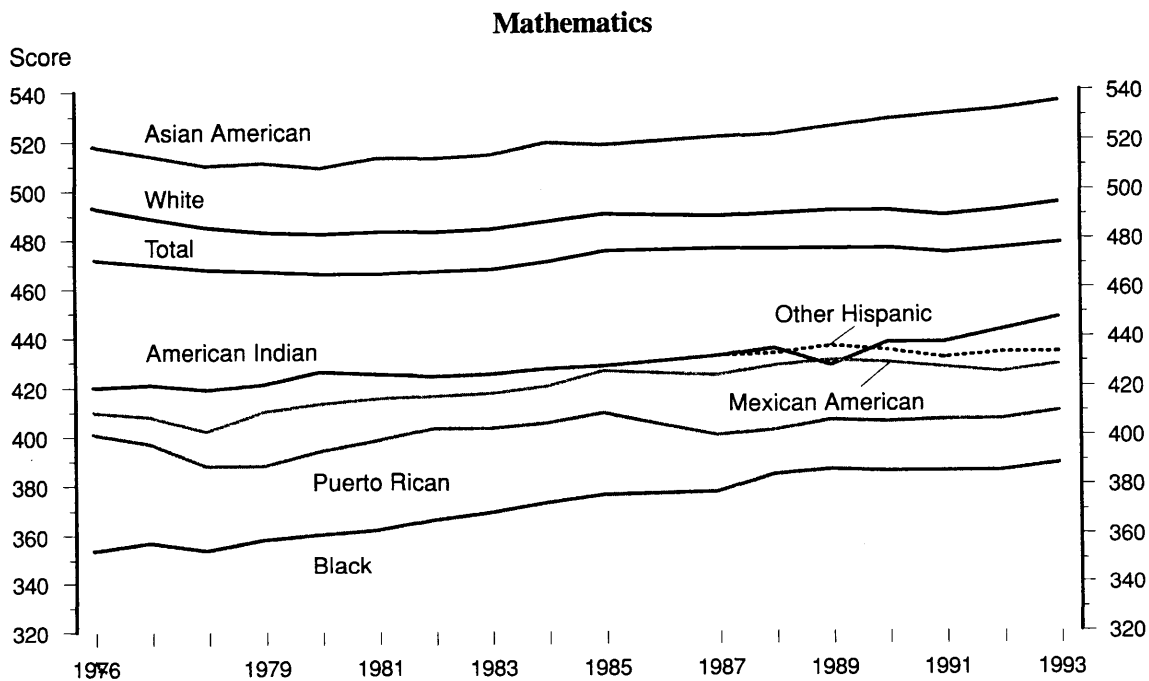
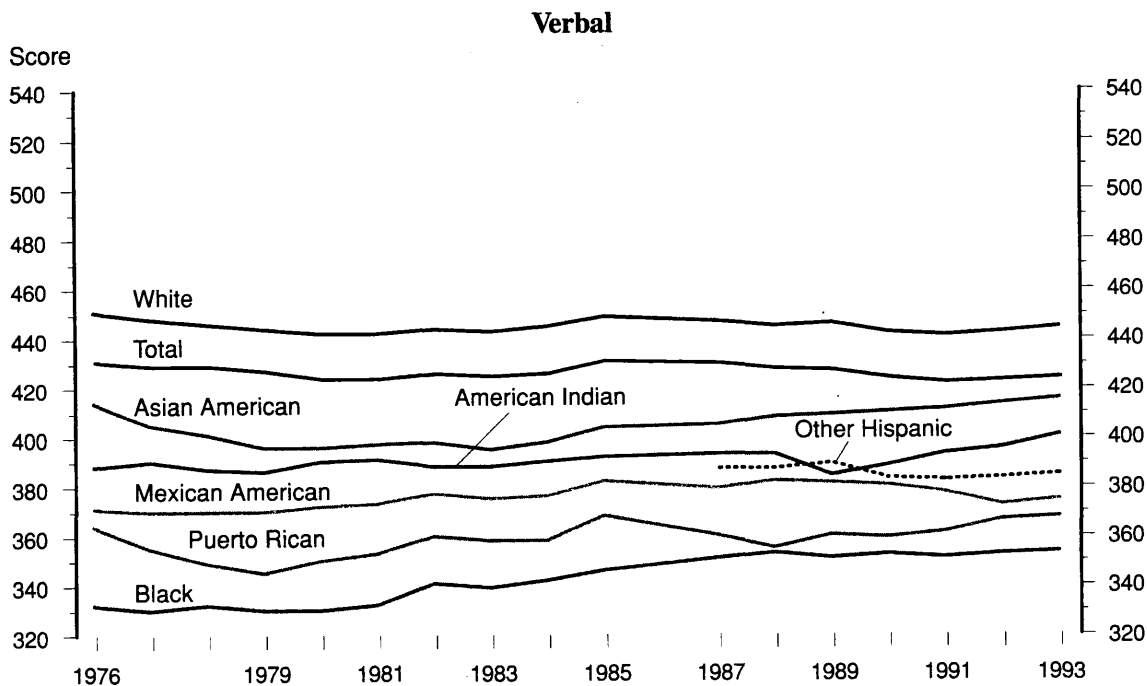
Year	Total		White		Black		Mexican American		Puerto Rican		Other Hispanic		Asian American		American Indian		Other	
	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math
1976	431	472	451	493	332	354	371	410	364	401	—	—	414	518	388	420	410	458
1977	429	470	448	489	330	357	370	408	355	397	—	—	405	514	390	421	402	457
1978	429	468	446	485	332	354	370	402	349	388	—	—	401	510	387	419	399	450
1979	427	467	444	483	330	358	370	410	345	388	—	—	396	511	386	421	393	447
1980	424	466	442	482	330	360	372	413	350	394	—	—	396	509	390	426	394	449
1981	424	466	442	483	332	362	373	415	353	398	—	—	397	513	391	425	388	447
1982	426	467	444	483	341	366	377	416	360	403	—	—	398	513	388	424	392	449
1983	425	468	443	484	339	369	375	417	358	403	—	—	395	514	388	425	386	446
1984	426	471	445	487	342	373	376	420	358	405	—	—	398	519	390	427	388	450
1985	431	475	449	490	346	376	382	426	368	409	—	—	404	518	392	428	391	448
1986	431	475	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1987	430	476	447	489	351	377	379	424	360	400	387	432	405	521	393	432	405	455
1988	428	476	445	490	353	384	382	428	355	402	387	433	408	522	393	435	410	460
1989	427	476	446	491	351	386	381	430	360	406	389	436	409	525	384	428	414	467
1990	424	476	442	491	352	385	380	429	359	405	383	434	410	528	388	437	410	467
1991	422	474	441	489	351	385	377	427	361	406	382	431	411	530	393	437	411	466
1992	423	476	442	491	352	385	372	425	366	406	383	433	413	532	395	442	417	473
1993	424	478	444	494	353	388	374	428	367	409	384	433	415	535	400	447	422	477

—Not available.

NOTE: The first year for which SAT scores by racial/ethnic group are available is 1976. Data were not collected by racial/ethnic group in 1986. See the supplemental note to *Indicator 19* for information on interpreting SAT scores.

SOURCE: College Entrance Examination Board, *National Report: College-Bound Seniors, 1972-1993* (Copyright © 1993 by College Entrance Examination Board. All rights reserved.)

Mean verbal and mathematics SAT scores, by race/ethnicity: 1976-93



SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors, 1972-1993* (Copyright © 1993 by College Entrance Examination Board. All rights reserved.)

Adult literacy

▶ In 1992, adults with higher levels of educational attainment had higher average levels of prose literacy. Also, adults aged 19 to 54 had higher average levels of literacy scores than those 55 and older. The differences in literacy between younger and older adults may be due to the higher level of educational attainment among younger adults (See *Indicator 21*).

▶ Blacks and Hispanics with a high school diploma or a GED¹ had literacy levels similar to whites who only completed 9 to 12 years of education with no high school diploma.

▶ On all three literacy scales² (prose, document, and quantitative), the average literacy score for Hispanics was below that of blacks which was well below that of whites. On the quantitative literacy scale, the difference between blacks and whites (63 points) was larger than the difference between white high school and college graduates (see supplemental table 20-1).

▶ More than one-fifth of adults scored at the lowest level on the prose literacy scale, meaning that they were unlikely to be able to match or integrate multiple pieces of information when irrelevant but distracting information was present, or when they had to use background knowledge or make inferences—common tasks faced in society (see supplemental table 20-3).

The ability to read and use materials printed and written in English has implications for a person's job opportunities, sense of fulfillment, and participation in society, as well as for educational goals. Limited literacy levels in the population are increasingly being viewed as a national problem, with economic and social consequences that extend beyond the individual. Literacy levels are affected by both the quantity and the quality of an individual's formal education, as well as their participation in informal learning activities throughout their lives.

Average prose literacy of adults, by level of educational attainment and race/ethnicity: 1992

Race/ethnicity	Total	Level of educational attainment							
		0-8 years	9-12 years, no diploma	GED ¹	High school diploma	Some college, no degree	2-year college degree	4-year college degree	Graduate/professional degree
Total	272	177	231	268	270	294	308	322	336
White	286	202	243	276	278	302	313	328	341
Black	237	159	213	243	242	267	276	288	298
Hispanic	215	135	200	240	242	265	291	282	312

Average prose literacy of adults, by age and race/ethnicity: 1992

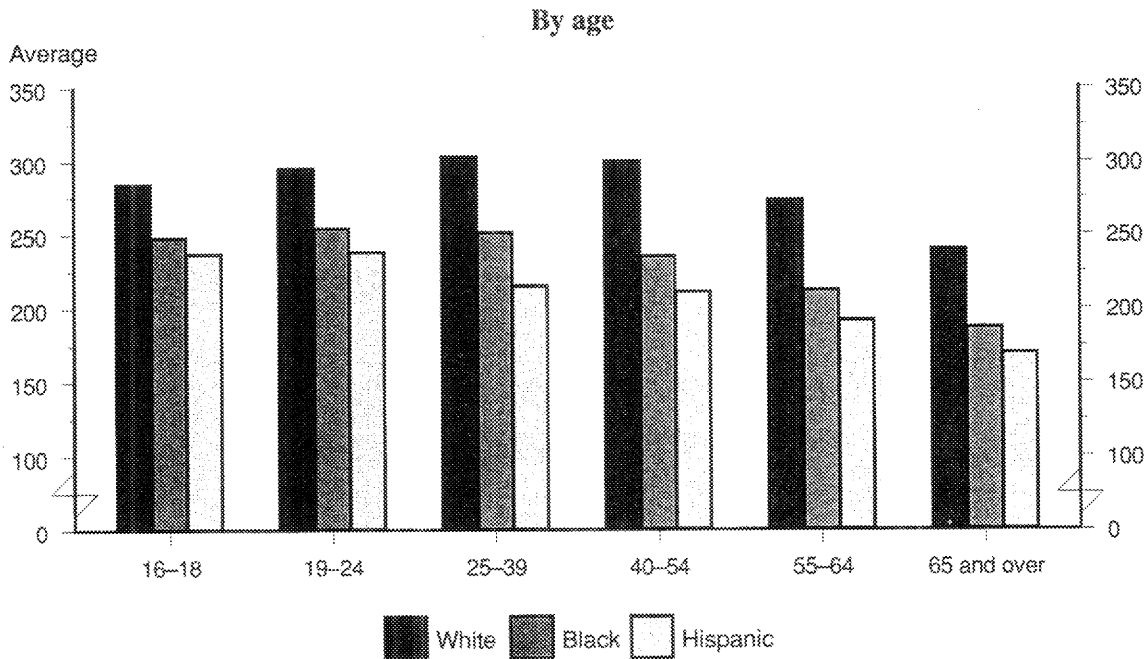
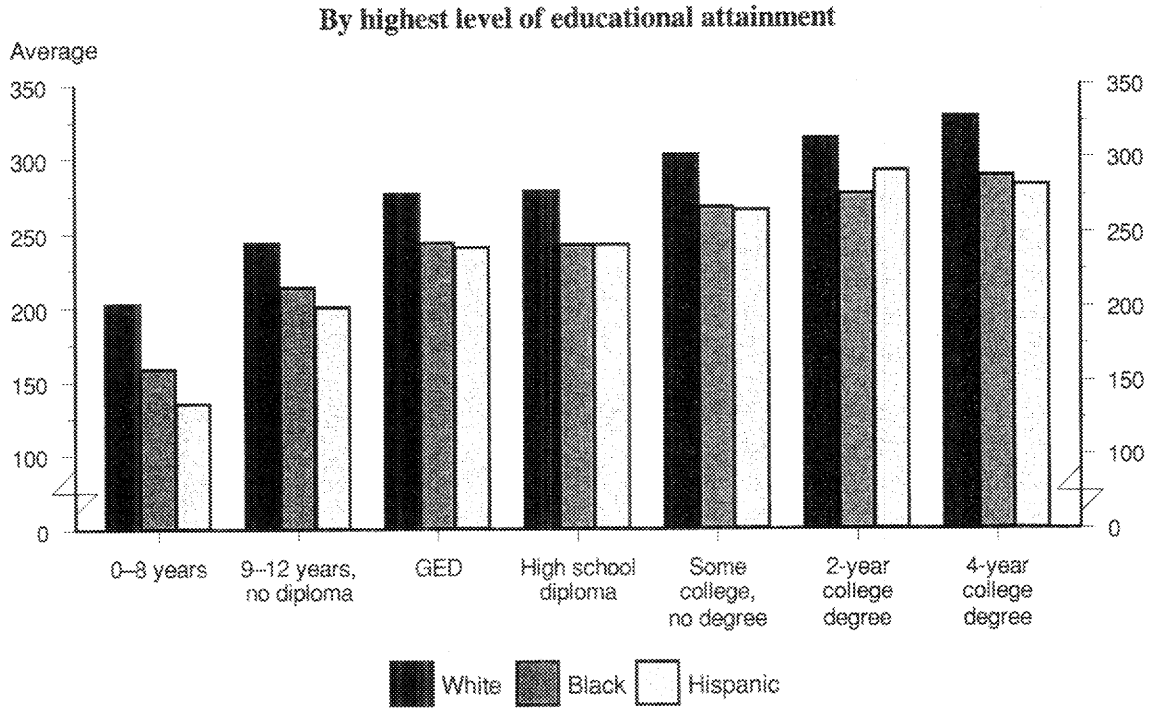
Race/ethnicity	Total	Age					
		16-18	19-24	25-39	40-54	55-64	65 and over
Total	272	271	280	284	286	260	230
White	286	284	295	303	300	273	240
Black	237	248	254	251	235	212	187
Hispanic	215	237	238	215	211	192	170

¹A GED diploma is earned by meeting state determined passage scores on the General Education Development (GED) exam.

²Scores are available in three domains of literacy: 1) prose, 2) document, and 3) quantitative. See supplemental tables 20-1 and 20-2 for document literacy and quantitative literacy scores. See the supplemental note to *Indicator 20* for a description of literacy domains and proficiency levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey*, 1993.

Average prose literacy of adults, by race/ethnicity: 1992



SOURCE: U.S. Department of Education, National Center for Education Statistics, *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey, 1993*.

Educational attainment

- ▶ In 1993, 87 percent of all 25- to 29-year-olds were high school graduates. However, this rate varied from 61 percent for Hispanics to 91 percent for whites.
- ▶ Among whites 25–29 years old, 56 percent had attended some college and about half of those (27 percent) had attained a bachelor's degree. Among blacks, 40 percent had attended some college and about a third of those (13 percent) had attained a bachelor's degree. For Hispanics, 30 percent had attended some college, and only 8 percent had attained a bachelor's degree.
- ▶ For those 40 and older, a higher percentage of men than women had completed a bachelor's degree. Among those under 40, however, the percentages were similar for both sexes.
- ▶ Those aged 40–49 were more likely to have an advanced degree than those aged 30–39 or those aged 50–59.

Completing four years of college is an important educational accomplishment that will yield many benefits to those who achieve it. It represents the end-result of both starting college and persistent enrollment. Some students stop out, others drop out, but the vast majority of those who will ever complete four years of college do so by their late twenties.

Percentage of the population who have attained various levels of education, by age, race/ethnicity, and sex: March 1993

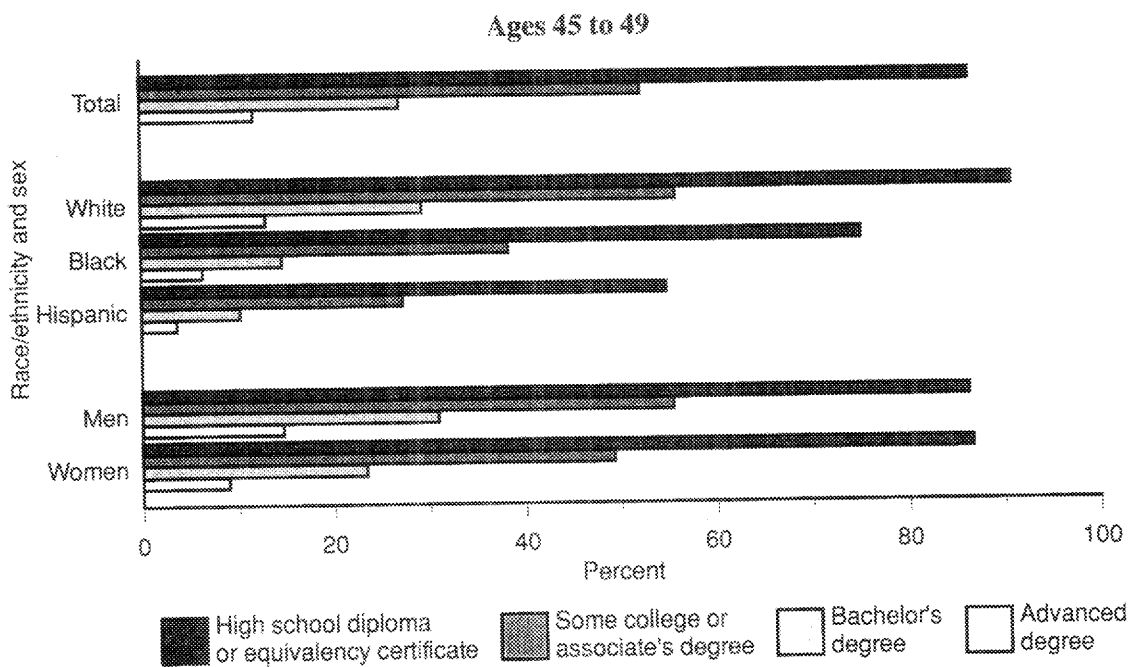
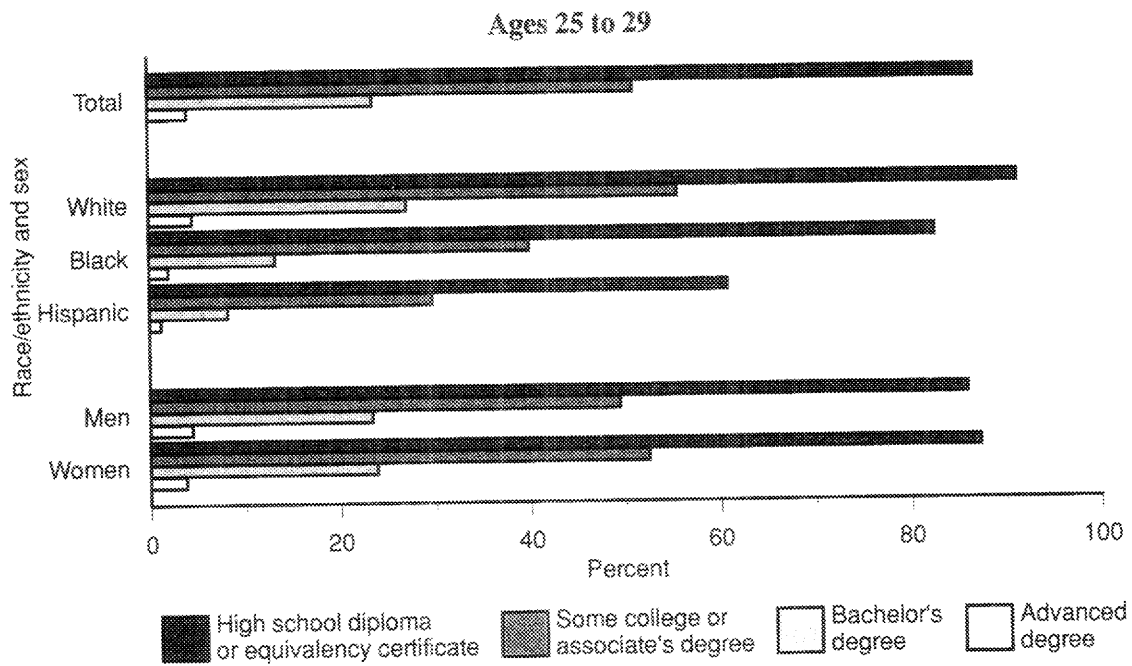
Age	High school diploma or equivalency certificate						Some college or associate's degree					
	Total	White	Black	Hispanic	Men	Women	Total	White	Black	Hispanic	Men	Women
20–24	85.6	90.1	82.6	59.4	84.3	86.9	53.4	58.6	40.7	30.0	51.2	55.6
25–29	86.7	91.2	82.6	60.9	86.0	87.4	51.0	55.6	40.0	29.7	49.5	52.5
30–34	87.0	91.1	83.5	59.8	86.1	87.9	50.9	54.2	43.3	29.8	49.7	52.0
35–39	88.4	92.6	83.3	59.1	87.8	88.9	53.3	57.1	43.0	31.4	52.8	53.8
40–44	88.8	92.9	82.1	57.4	89.0	88.7	56.0	60.5	41.5	29.3	58.7	53.4
45–49	86.6	90.9	75.2	54.9	86.4	86.7	52.4	55.8	38.4	27.3	55.6	49.3
50–54	82.4	86.9	68.5	50.8	82.2	82.7	44.6	47.4	32.8	22.8	48.5	40.9
55–59	76.7	80.9	63.5	44.5	76.5	76.9	39.1	41.6	27.0	23.2	43.3	35.2
60–64	71.8	77.0	49.8	34.1	71.7	72.0	33.6	36.6	18.5	12.2	39.0	28.6

Age	Bachelor's degree						Advanced degree					
	Total	White	Black	Hispanic	Men	Women	Total	White	Black	Hispanic	Men	Women
20–24	—	—	—	—	—	—	—	—	—	—	—	—
25–29	23.7	27.2	13.3	8.3	23.4	23.9	4.1	4.6	2.1	1.3	4.5	3.8
30–34	23.9	26.6	12.8	9.8	24.8	23.1	6.1	6.7	2.1	2.4	7.0	5.2
35–39	25.4	27.9	15.3	11.3	26.2	24.6	7.9	8.8	3.5	3.1	8.9	7.0
40–44	28.2	31.3	16.1	8.9	31.2	25.3	10.5	11.9	4.8	3.0	11.7	9.4
45–49	27.1	29.4	14.7	10.4	31.0	23.5	11.9	13.1	6.5	3.8	14.8	9.1
50–54	22.9	24.8	11.5	9.4	26.4	19.7	10.3	11.2	5.3	3.5	12.8	7.9
55–59	19.8	21.6	9.8	8.2	25.8	14.2	8.3	9.3	3.2	2.4	11.6	5.3
60–64	17.5	19.1	8.9	4.7	22.1	13.2	7.1	8.1	1.9	1.2	9.6	4.7

—Age group is too young for a meaningful estimate of attainment at this level.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey, 1993.

Percentage of the population who have attained various levels of education, by age, race/ethnicity, and sex: March 1993



SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey, 1993.

International comparisons of educational attainment, by age

- ▶ Compared to other large industrialized countries, the United States has the most educated population. A similar or higher percentage of 25- to 64-year-olds in the United States have completed secondary school and college than in Japan, Germany, the United Kingdom, France, Italy, or Canada.
- ▶ In Japan, Germany, and Canada, 25- to 34-year-olds have completed secondary education at rates similar to their counterparts in the United States.
- ▶ Young men in Japan were much more likely to have completed higher education than men in the other highly industrialized countries. Young men in the United States ranked second.
- ▶ Young women in the United States were much more likely to have completed higher education than women or men in other countries (with the exception of men in Japan).

The percentage of the population completing secondary and higher education in the United States and other highly industrialized countries provides an indication of the skill level of the U.S. workforce as compared to its economic competitors. Furthermore, contrasting the educational attainment of the general population to the attainment of younger age cohorts provides a means of comparing past and recent progress in the rate at which individuals complete high school or college.

Percentage of the population in large industrialized countries who have completed secondary and higher education, by age, sex, and country: 1991

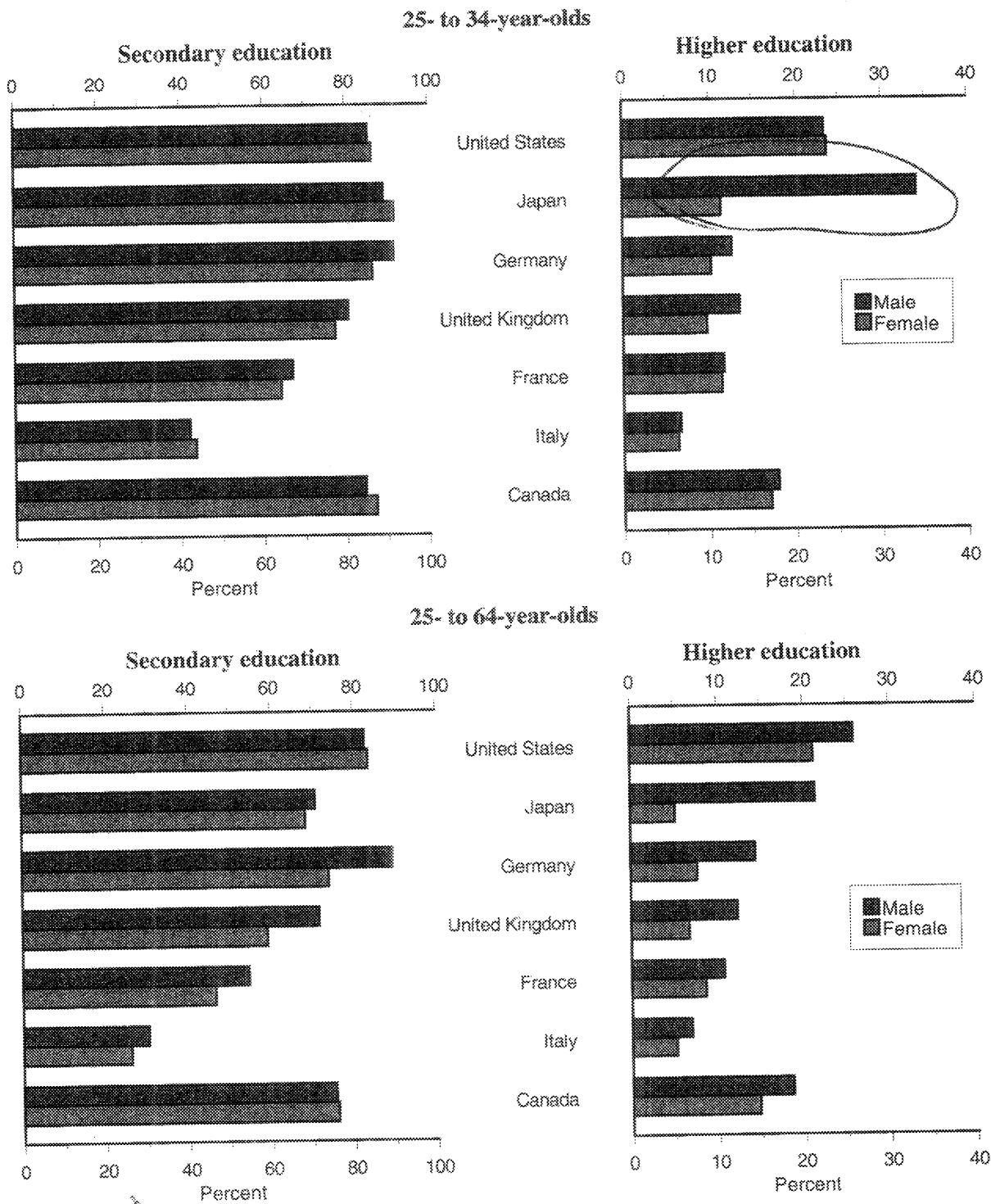
Country	25-64 years old		25-34 years old					
	Both sexes		Both sexes		Male		Female	
	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education
United States	83.3	23.6	86.1	23.7	85.7	23.5	86.5	23.8
Japan*	69.7	13.3	90.6	22.9	89.3	34.2	91.8	11.5
Germany	81.8	11.2	89.3	11.5	91.7	12.7	86.7	10.3
United Kingdom	65.3	9.6	79.2	11.7	80.7	13.6	77.6	9.8
France	50.5	9.7	65.9	11.6	67.3	11.7	64.5	11.5
Italy	28.2	6.1	43.1	6.6	42.3	6.7	43.8	6.4
Canada	75.7	16.7	86.0	17.5	84.6	18.0	87.3	17.1

*1989 data.

NOTE: In the United States, completing secondary education is defined as completing the 12th grade or a GED; completing higher education is defined as completing 4 or more years of college.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project.

Percentage of population completing secondary and higher education,
by age, sex, and country: 1991



NOTE: In the United States, completing secondary education is defined as completing the 12th grade or a GED; completing higher education is defined as completing 4 or more years of college.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project.

Course taking in academic, vocational, and personal-use subjects among public high school graduates

- ▶ Of the 24 course units earned by public high school graduates in 1992, 17 were in academic subjects, 4 in vocational subjects, and 3 in personal-use subjects.
- ▶ Public high school graduates in 1992 earned an average of 2.6 more course units (about 5 semester courses) than their counterparts in 1982, including 3.3 more units in academic subjects and .8 fewer units in vocational subjects.
- ▶ White, black, and Hispanic 1992 public high school graduates earned fewer vocational units than their counterparts in 1982. Hispanics showed the largest decrease, from 5.3 to 3.8 units.
- ▶ Female graduates in 1992 earned one more course unit in academic subjects and about one-half fewer units in vocational and personal-use subjects than males.
- ▶ The course taking of public high school graduates by curriculum area is associated with parental educational attainment. Graduates in 1992 whose parent(s) graduated from college took 3 more course units in academic subjects and 2 fewer course units in vocational subjects than graduates whose parent(s) completed high school only.

Recent reports have called for academic rigor in preparing students for education beyond high school and for cultivating a workforce prepared for the challenges of the 21st century. Changes over time in the number of courses high school students are taking in academic and other curricular areas are an indication of the response to such recommendations.

Course units earned by public high school graduates, by curricular area and selected student characteristics: 1969, 1982, 1987, and 1992

Student characteristic	Total				Academic				Vocational				Personal use			
	1969	1982	1987	1992	1969	1982	1987	1992	1969	1982	1987	1992	1969	1982	1987	1992
Total	20.5	21.3	22.8	23.9	14.9	14.1	15.6	17.4	3.7	4.6	4.4	3.8	1.9	2.6	2.7	2.7
Sex																
Male	20.2	21.2	22.7	23.7	14.9	13.9	15.3	16.9	3.4	4.6	4.5	4.0	1.9	2.7	2.8	2.9
Female	20.7	21.5	22.9	24.1	14.9	14.3	16.0	18.0	3.9	4.6	4.4	3.6	1.9	2.5	2.6	2.5
Race/ethnicity																
White	20.3	21.4	22.9	24.0	15.2	14.4	15.7	17.6	3.4	4.5	4.5	3.7	1.7	2.5	2.6	2.6
Black	20.7	21.0	22.1	23.4	13.5	13.6	15.0	16.7	4.8	4.8	4.5	4.0	2.4	2.6	2.7	2.7
Hispanic	21.8	21.1	22.5	23.8	13.4	12.9	15.1	16.9	5.1	5.3	4.3	3.8	3.2	2.9	3.2	3.1
Asian	22.9	22.1	23.9	24.6	15.6	15.8	17.8	18.5	3.8	3.1	2.9	3.2	3.5	3.1	3.2	3.0
American Indian	—	21.3	23.2	23.8	—	13.3	15.3	16.0	—	5.1	4.7	4.8	—	2.9	3.2	3.0
Parents' highest education level																
Didn't finish high school	—	21.3	—	23.5	—	13.3	—	16.2	—	5.3	—	4.5	—	2.6	—	2.7
High school graduate	—	21.4	—	23.5	—	13.7	—	16.4	—	5.1	—	4.6	—	2.7	—	2.6
Some college	—	21.6	—	24.0	—	14.9	—	17.3	—	4.1	—	3.9	—	2.7	—	2.8
College graduate	—	21.9	—	24.4	—	16.2	—	19.2	—	3.1	—	2.5	—	2.6	—	2.7

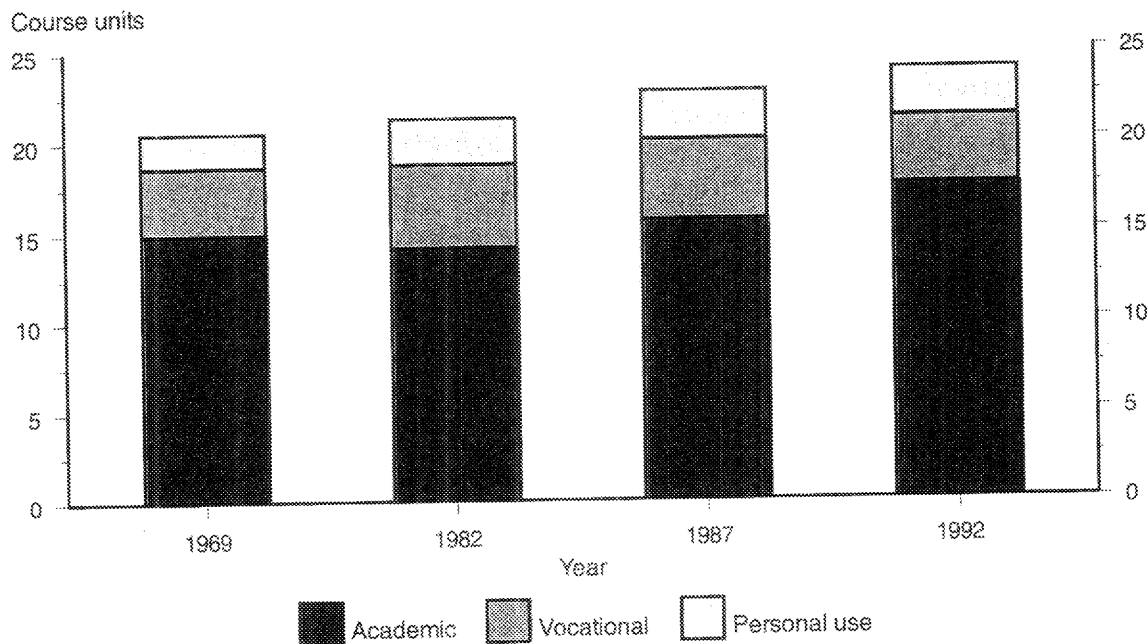
—Not available.

NOTE: Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course. Personal-use subjects include health, religion and military science. For further descriptions of academic, vocational, and personal-use subjects, see the supplemental note to *Indicator 23*.

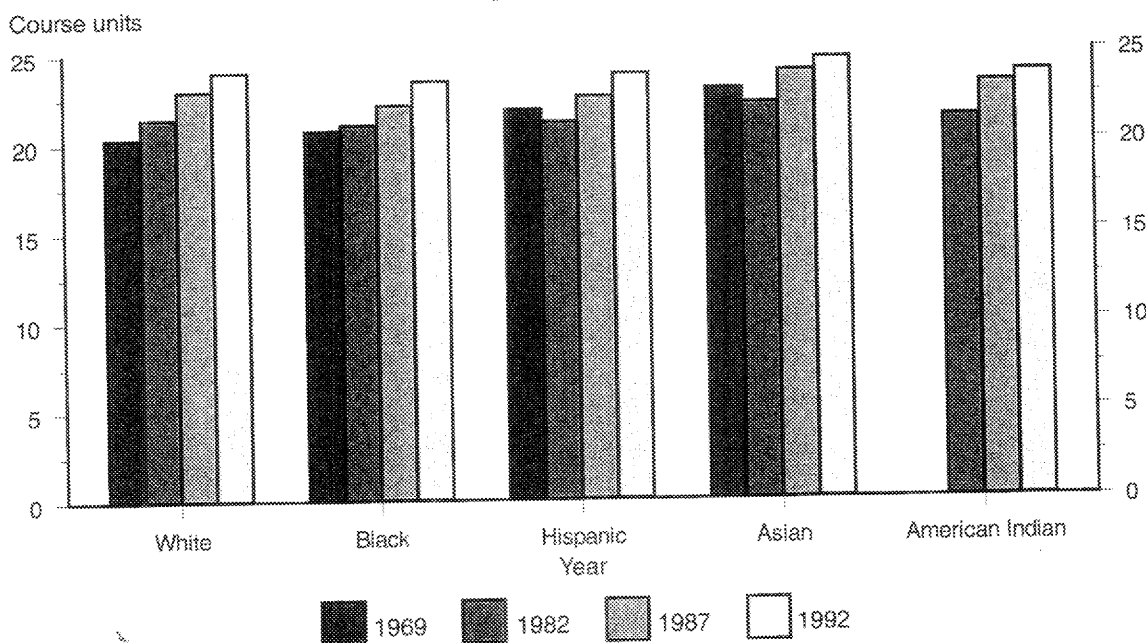
SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction, High School and Beyond Transcript Study, 1987 NAEP High School Transcript Study, National Education Longitudinal Study Transcripts, 1992.

Course units earned by public high school graduates: 1969, 1982, 1987, and 1992

By curriculum area



By race/ethnicity



NOTE: Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course. For descriptions of academic, vocational, and personal-use subjects, see the supplemental note to Indicator 23.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction, High School and Beyond Transcript Study, 1987 NAEP High School Transcript Study, National Education Longitudinal Study Transcripts, 1992.

High school course taking in the core subject areas

- ▶ **Between 1982 and 1992, the percentage of high school graduates earning the recommended units in core courses* increased sharply, from 13 to 47 percent. This increase was broadly based, occurring for both sexes and all racial/ethnic groups.**
- ▶ **For private school graduates the percentage earning the recommended units increased from 17 to 66 percent (49 percentage points) compared to an increase from 12 to 45 percent (33 percentage points) for public school graduates.**
- ▶ **Over the same period, the percentage of graduates completing the recommended credits in core courses increased more for students whose parents had only completed high school (about 36 percentage points) than for students whose parents had completed college (29 percentage points), effectively closing the gap between the two groups.**

In 1983, A Nation at Risk claimed that our society had "lost sight of the basic purpose of schooling, and of high expectations and disciplined effort needed to attain them." As a remedial step, the report recommended that all students seeking a diploma be required to enroll in the "New Basics", a core curriculum composed of 4 units of English, 3 units of science, 3 units of social studies, 3 units of mathematics, and 0.5 units of computer science.

Percentage of high school graduates who earned the recommended* units in core courses, by selected student characteristics: 1982, 1987, 1990, and 1992

Characteristic	1982	1987	1990	1992	Percentage point change			
					1982-87	1987-90	1990-92	1982-92
Total	12.7	28.6	39.9	46.8	15.9	11.3	6.9	34.1
Sex								
Male	13.7	30.1	40.6	46.5	16.5	10.5	5.9	32.8
Female	11.8	27.2	39.2	47.2	15.4	12.0	8.0	35.4
Race/ethnicity								
White	13.8	29.7	40.6	48.5	15.9	10.9	7.9	34.7
Black	10.8	24.4	41.3	43.7	13.6	16.9	2.4	32.9
Hispanic	6.7	17.9	32.7	36.0	11.2	14.8	3.3	29.3
Asian	19.8	48.3	51.2	50.7	28.5	2.9	-0.5	30.9
American Indian	6.0	28.9	26.0	30.6	22.9	-2.9	4.6	24.6
Urbanicity								
Urban	12.9	—	—	50.8	—	—	—	37.9
Suburban	13.2	—	—	47.6	—	—	—	34.4
Rural	11.7	—	—	42.5	—	—	—	30.8
Control of school								
Public	11.5	27.1	38.2	44.8	15.6	11.1	6.6	33.3
Private	17.1	42.4	56.6	65.7	25.3	14.2	9.1	48.6
Parents' highest education level								
Didn't finish high school	10.0	—	—	45.3	—	—	—	35.3
High school graduate	10.7	—	—	47.2	—	—	—	36.5
Some college	14.8	—	—	45.7	—	—	—	30.9
College graduate	19.5	—	—	48.5	—	—	—	29.0

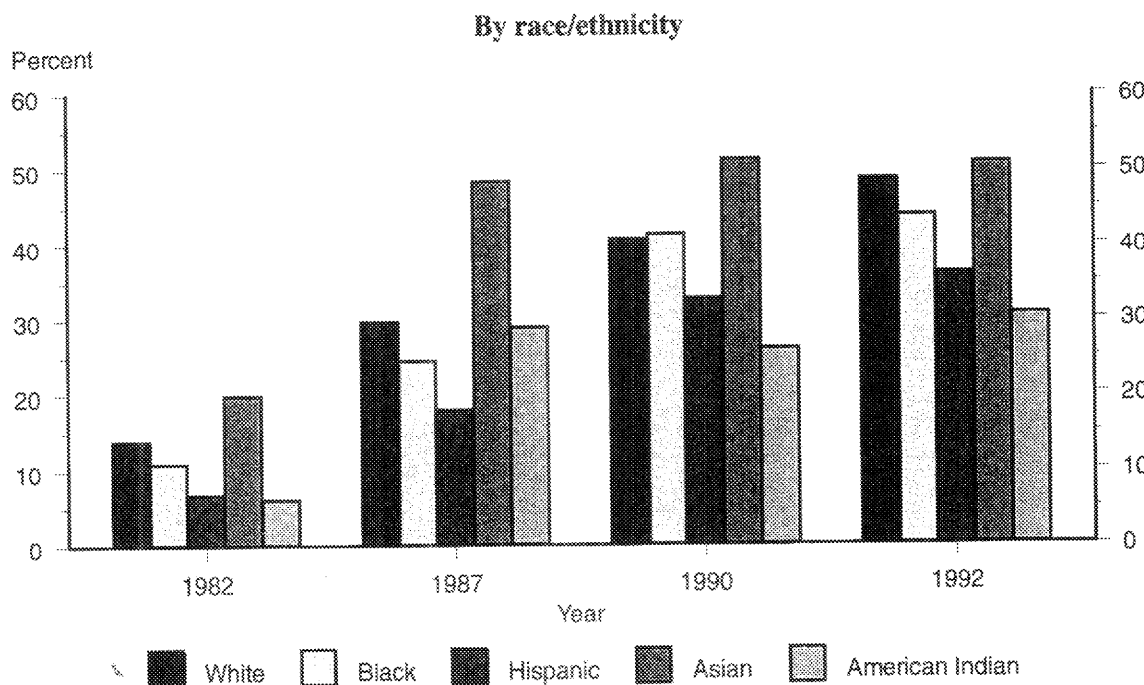
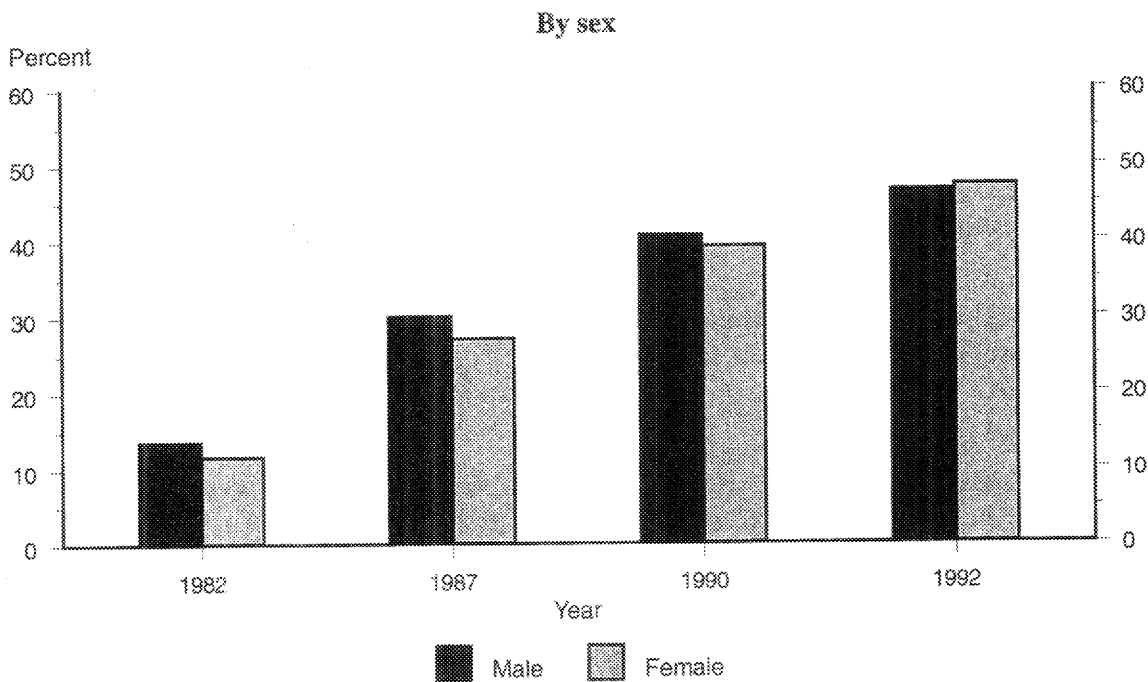
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*The panel's recommendation of 0.5 units of computer science was not included here; however, it is included in supplemental tables 24-1 and 24-2.

NOTE: For a description of the sampling procedures and related issues for the High School and Beyond Transcript Study and the later transcript studies see the supplemental note to *Indicator 24*. Urbanicity breakouts used in the 1987 and 1990 NAEP Transcript Studies are shown in supplemental tables 24-1 and 24-2. Because urbanicity categories are not comparable across data sources, percentage point changes could not be calculated for all years.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, 1987 and 1990 NAEP High School Transcript Studies, National Education Longitudinal Study Transcripts, 1992.

**Percentage of high school graduates who earned the recommended units*
in core courses: 1982, 1987, 1990, and 1992**



*The graph shows the recommended 4 units of English, 3 units of science, 3 units of social studies, 3 units of mathematics, but does not include the recommended 0.5 units year of computer science.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, 1987 and 1990 NAEP High School Transcript Studies, National Education Longitudinal Study Transcripts, 1992.

Mathematics and science course-taking patterns

- ▶ High school graduates in 1992 were more likely to take mathematics courses at the level of algebra I or higher and science courses at the level of biology or higher than their counterparts in 1982.
- ▶ The percentage of high school graduates who took algebra II and geometry and the percentage who took biology and chemistry increased 6 percentage points between 1990 and 1992 (to 50 and 54 percent, respectively.)
- ▶ The percentage of high school graduates who had taken remedial mathematics declined from 33 percent in 1982 to 17 percent in 1992.
- ▶ A larger percentage of graduates, both male and female, earned credit in biology, chemistry, and physics than their 1982 counterparts. Furthermore, similar percentages of males and females earned credit in biology and chemistry in both years. However, males were consistently more likely than females to earn credit in physics (see supplemental tables 25-1).

Courses in mathematics and science can teach students to use higher level thinking skills to solve complex problems. These skills are considered valuable both in educational and marketplace settings. Analysis of course-taking patterns of high school graduates can indicate levels of exposure in these fields for individuals about to advance to higher education or enter the workforce.

Percentage of high school graduates taking selected mathematics and science courses in high school: 1982, 1987, 1990, and 1992

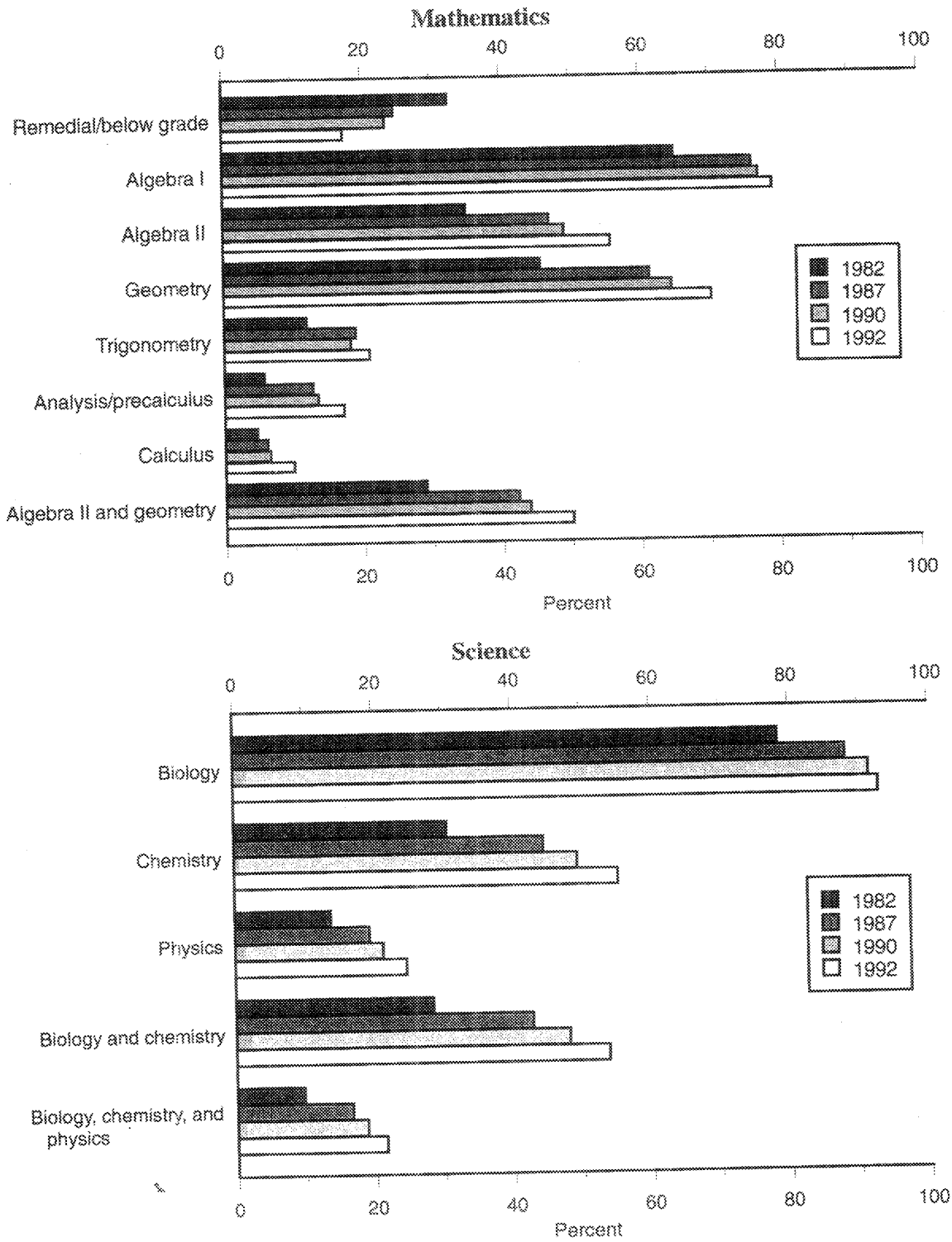
Mathematics and science courses*	1982	1987	1990	1992	Percentage point change			
					1982-87	1987-90	1990-92	1982-92
Mathematics								
Remedial/below grade level math	32.5	24.9	23.6	17.4	-7.6	-1.3	-6.2	-15.1
Algebra I	68.4	76.3	77.3	79.4	7.8	1.0	2.2	11.0
Algebra II	36.9	47.1	49.2	56.1	10.3	2.1	6.8	19.2
Geometry	48.4	61.5	64.7	70.4	13.1	3.2	5.7	22.0
Trigonometry	12.2	19.0	18.4	21.1	6.8	-0.7	2.7	8.9
Analysis/precalculus	5.8	12.8	13.5	17.2	7.0	0.7	3.7	11.4
Calculus	4.3	6.2	6.6	10.1	1.8	0.4	3.5	5.8
Algebra II and geometry	29.1	42.4	44.0	50.1	13.4	1.6	6.1	21.0
Algebra II, geometry, trigonometry, and calculus	0.8	2.4	2.2	2.7	1.6	-0.8	0.5	1.9
Science								
Biology	78.7	88.3	91.6	93.0	9.7	3.3	1.4	14.3
Chemistry	31.6	44.8	49.6	55.5	13.1	4.9	5.9	23.9
Physics	13.5	19.5	21.5	24.7	6.1	2.0	3.3	11.2
Biology and chemistry	28.6	43.0	48.2	53.9	14.4	5.2	5.7	25.3
Biology, chemistry, and physics	9.8	16.8	18.9	21.6	7.0	2.1	2.7	11.8

*The minimum number of units used for inclusion in this indicator was 1.00 for individual courses except for algebra II, trigonometry, and analysis/precalculus where 0.5 was set as the minimum number of credits.

NOTE: Percentages reflect only those courses taken in high school. Because some students take algebra I and other similar courses in the eighth grade, these percentages could underestimate the number of individuals who have ever taken algebra I and other subjects in school. Numbers have been revised from previous year. See supplemental note to Indicator 25 for further explanation.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, 1987 and 1990 NAEP High School Transcript Studies, National Education Longitudinal Study Transcripts, 1992.

Percentage of high school graduates taking selected mathematics and science courses: 1982, 1987, 1990, and 1992



SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, 1987 and 1990 NAEP High School Transcript Studies, National Education Longitudinal Study Transcripts, 1992.

Foreign language study by college-bound graduates

- ▶ The percentage of college-bound high school graduates taking at least 2 years of a foreign language in high school increased 18 percentage points between 1982 and 1992, from 55 to 73 percent. The proportion who took 4 years of a foreign language increased 5 percentage points to 15 percent in 1992.
- ▶ College-bound female graduates were more likely than male graduates to study a foreign language for at least 2 years in high school. Females were more than twice as likely as males in 1992 to take 4 years of a foreign language.
- ▶ In 1992, college-bound graduates from high socioeconomic (SES) families were far more likely to take 2 or more years of a foreign language in high school than graduates from low SES families.
- ▶ The percentage of graduates not aspiring to a bachelor's degree as sophomores who took at least 2 years of a foreign language in high school nearly doubled between 1982 and 1992, from 17 to 33 percent (see supplemental table 26-2).

In 1983, the National Commission on Excellence in Education recommended in A Nation at Risk that college-bound students achieve proficiency in foreign languages and take at least 2 years of a foreign language in high school. The commission based its recommendation on the premise that study of a foreign language introduces students to non-English-speaking cultures, heightens their awareness and comprehension of their native tongue, and serves the Nation's needs in commerce, diplomacy, defense, and education.

Percentage of college-bound high school graduates earning foreign language course units, by sex, race/ethnicity, and SES*: 1982 and 1992

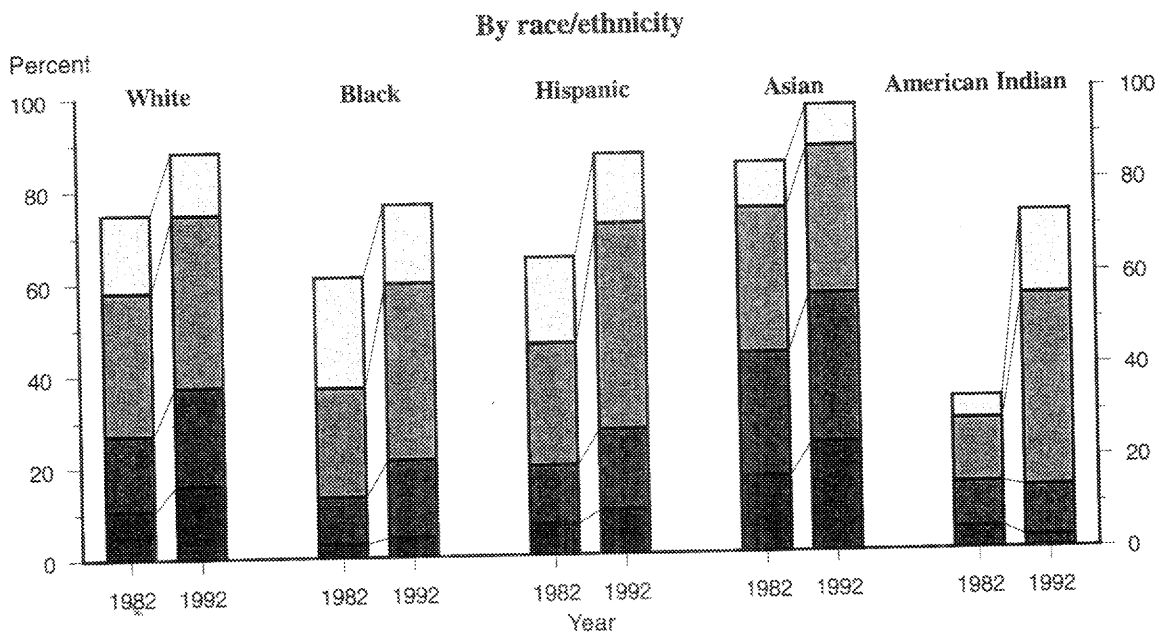
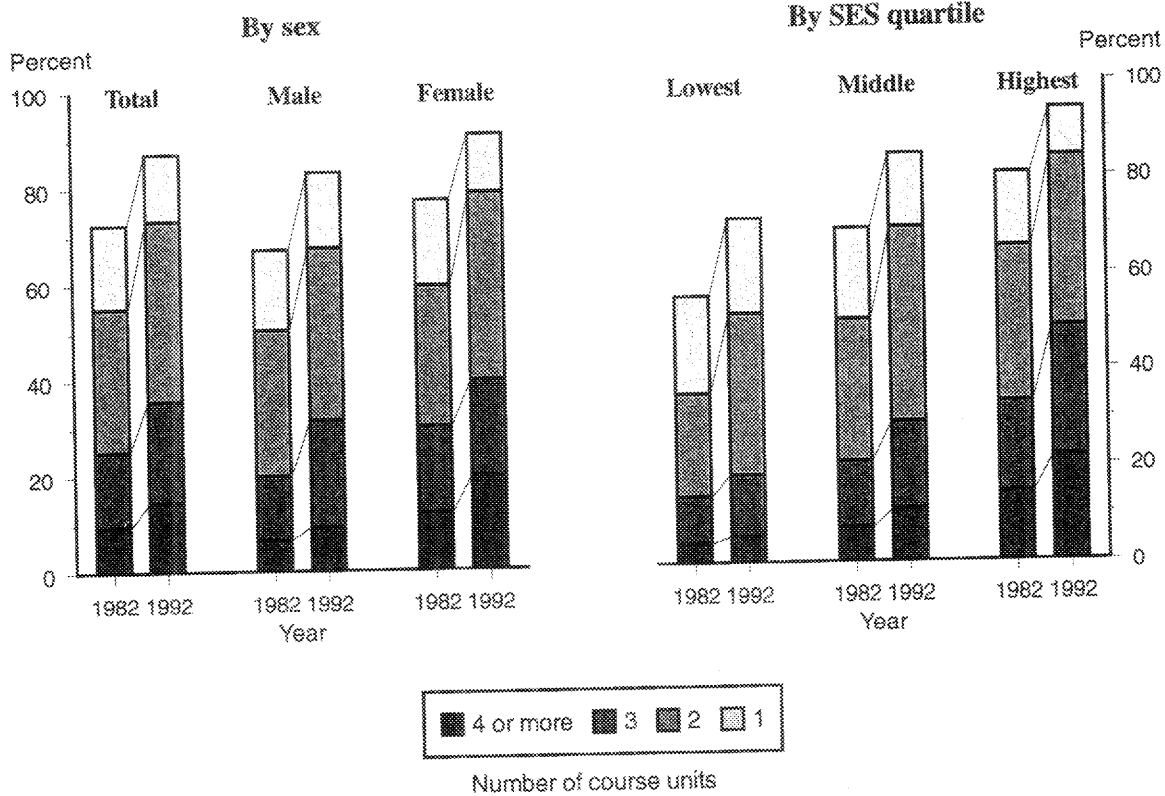
Student characteristics	1982					1992				
	Average number of course units	Percentage earning course units:				Average number of course units	Percentage earning course units:			
		1 or more	2 or more	3 or more	4 or more		1 or more	2 or more	3 or more	4 or more
All graduates	1.7	72.5	55.0	25.2	9.4	2.2	87.1	73.1	35.6	14.5
Sex										
Male	1.5	67.1	50.3	19.9	6.6	2.0	83.0	67.3	31.4	9.1
Female	1.9	77.1	59.2	29.9	11.9	2.4	90.8	78.4	39.3	19.4
Race/ethnicity										
White	1.8	74.8	58.0	26.9	10.5	2.3	88.1	74.5	37.3	15.9
Black	1.2	61.1	37.0	13.3	2.9	1.7	76.4	59.3	21.0	4.1
Hispanic	1.5	64.7	45.9	19.4	6.6	2.0	86.8	71.7	27.1	9.6
Asian	2.3	84.4	74.5	43.3	16.3	2.8	96.6	87.7	56.0	23.6
American Indian	0.8	33.3	28.2	14.4	4.6	1.5	73.2	55.3	13.5	2.5
SES quartile*										
Lowest	1.1	55.6	35.3	13.8	4.1	1.5	71.6	51.9	18.2	5.4
Middle	1.5	69.4	50.4	20.9	7.0	2.0	84.9	69.5	29.0	10.7
Highest	2.0	80.6	65.4	33.1	14.1	2.6	94.1	84.2	48.6	21.8

*SES quartiles provide a relative measure of the socioeconomic status of families. The middle two quartiles were collapsed, creating a three-level SES scale with the values "lowest" (lowest quartile), "middle" (the two middle quartiles), and "highest" (highest quartile). See Glossary for further explanation.

NOTE: College-bound graduates are those graduates who as high school sophomores thought they would finish at least a four or five year college degree. Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, National Education Longitudinal Study Transcripts, 1992.

Percentage of college-bound high school graduates earning foreign language course units: 1982 and 1992



NOTE: College-bound graduates are those graduates who as high school sophomores thought they would finish at least a four or five year college degree.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, National Education Longitudinal Study Transcripts, 1992.

Family background and choice of major

- ▶ In general, the proportion of students majoring in the arts and sciences (humanities, social and behavioral sciences, and natural sciences) increased as parents' education increased.
- ▶ Father's occupational status was related to choice of major. For example, students whose fathers were executives or in marketing and sales were more likely to major in business than the average bachelor's degree student, whereas those whose fathers were professionals were less likely than average to major in this field.
- ▶ Financially dependent students from upper income families were more likely to major in the social and behavioral sciences than dependent students from other income groups.

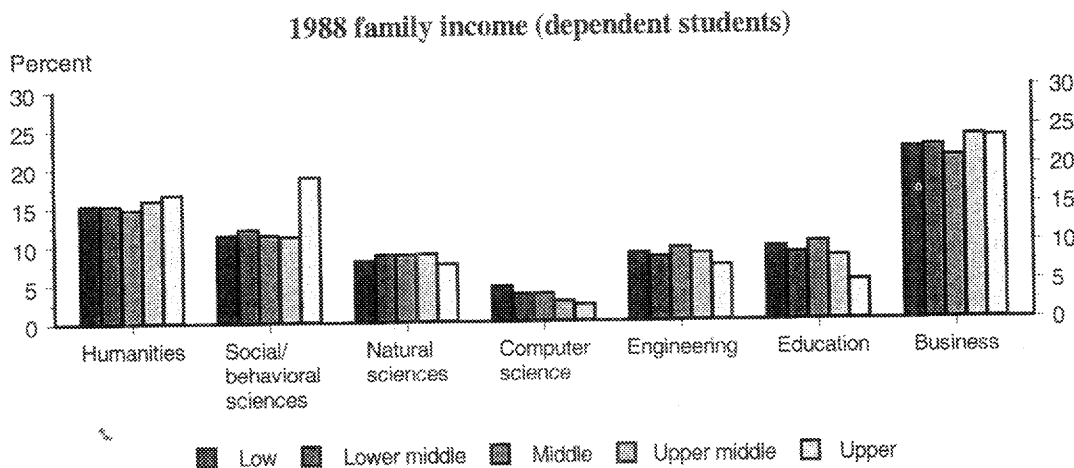
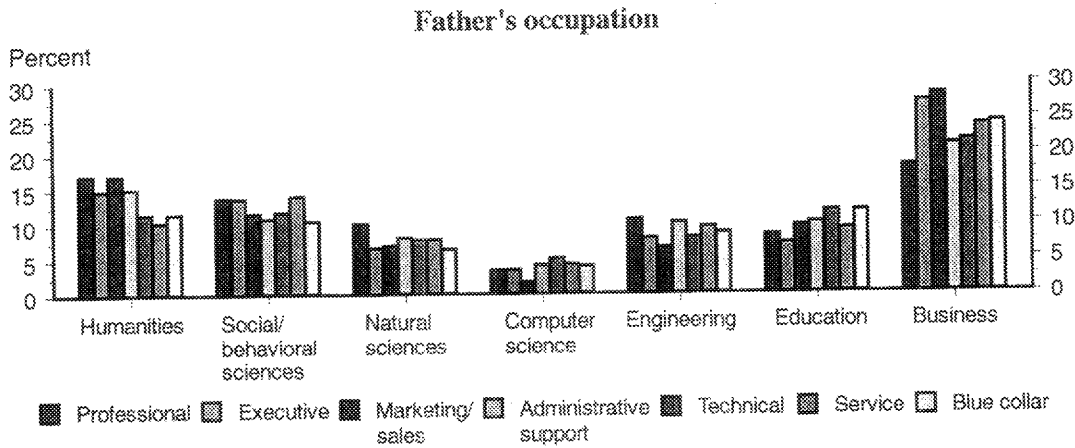
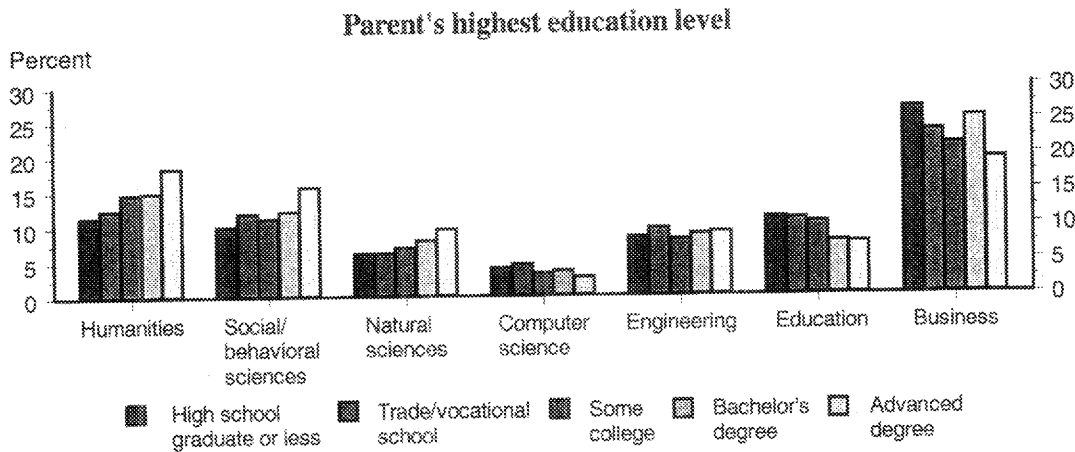
Many economic, social, and cultural factors influence students' decisions about their fields of major. Information about the relationship of family background to choice of major contributes to our knowledge of what kinds of students are attracted to different fields.

Percentage of students in bachelor's degree programs who majored in selected fields, by family background characteristics: Academic year 1989-90

Family background characteristics	Field of major						
	Humanities	Social and behavioral sciences	Natural sciences	Computer science	Engineering	Education	Business
All bachelor's degree students	14.6	11.8	7.3	3.7	8.1	9.3	23.7
Parents' highest education level							
High school graduate or less	11.5	10.1	6.2	4.0	8.4	11.1	26.7
Trade/vocational school	12.5	11.9	6.2	4.6	9.6	10.9	23.5
Some college	14.8	11.1	6.9	3.2	8.0	10.4	21.5
Bachelor's degree	14.9	12.2	7.9	3.6	8.8	7.6	25.4
Advanced degree	18.4	15.7	9.6	2.6	9.1	7.4	19.3
Father's occupation							
Professional	17.0	13.7	10.0	3.5	10.6	8.2	18.0
Executive	14.9	13.6	6.6	3.4	7.9	7.0	27.2
Marketing/sales	17.0	11.6	7.0	1.7	6.5	9.5	28.3
Administrative support	15.1	10.8	8.0	4.1	10.0	10.0	20.9
Technical	11.5	11.8	7.7	5.0	7.9	11.6	21.6
Service	10.4	14.0	7.8	4.2	9.4	9.0	23.7
Blue collar	11.5	10.5	6.4	4.0	8.6	11.7	24.2
1988 family income (dependent students)							
Low	14.8	11.5	8.3	4.7	8.4	9.4	22.6
Lower middle	15.7	11.5	8.3	4.0	7.9	8.3	22.7
Middle	15.4	12.0	8.7	3.2	10.0	10.9	20.2
Upper middle	15.0	10.8	8.6	3.2	8.8	8.7	23.7
Upper	16.5	16.2	8.0	2.2	7.6	5.9	23.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study.

Percentage of students in bachelor's degree programs who majored in selected fields, by family background characteristics: Academic year 1989-90



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study.

Course taking in college, by sex and race/ethnicity

- ▶ Among 1985–86 bachelor's degree recipients, women were much less likely than men to have taken courses in the physical sciences, mathematics, computer science, and engineering, but they were more likely to have taken courses in the life sciences.
- ▶ In the social and behavioral sciences, women were more likely than men to have taken psychology and sociology and less likely to have taken political science and economics.
- ▶ Blacks and Hispanics were less likely than whites and Asians to have taken courses in the physical sciences.
- ▶ Asians were more likely than the average baccalaureate recipient to have taken one or more courses in the physical sciences and engineering, but they were less likely to have taken courses in several of the social and behavioral sciences (psychology, sociology, political science, and history).
- ▶ There were minimal differences by race/ethnicity in the exposure of undergraduates to economics, both in terms of the percent having taken courses and the average credits earned (see supplemental table 28-2).

Variations in the subjects that bachelor's degree recipients study provide insight into the depth and breadth of an undergraduate education. They shed light on such issues as: the scientific literacy of educated Americans; graduates' knowledge of man's behavior, his social systems, and his past; the economics education of voters and consumers; and the exposure of American students to foreign language and culture. Data showing how course-taking behavior varies among students of different sex and race/ethnicity indicate differences in the content of their undergraduate educations.

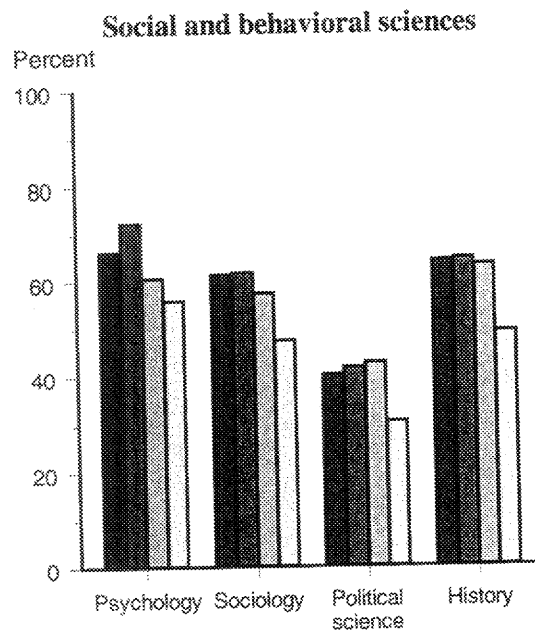
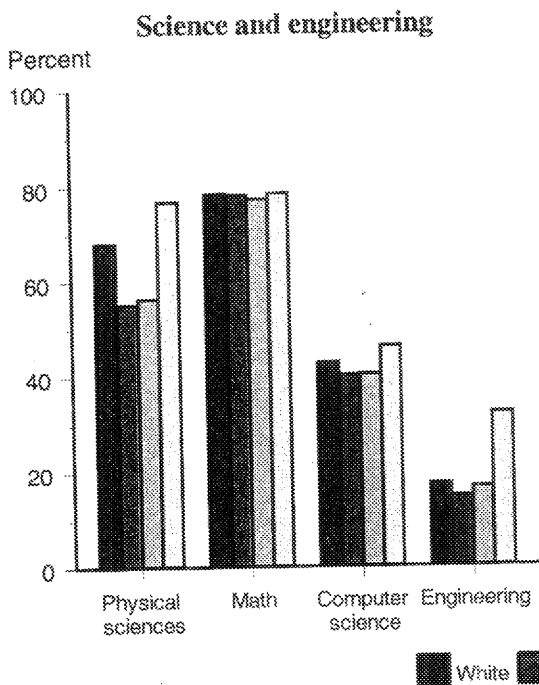
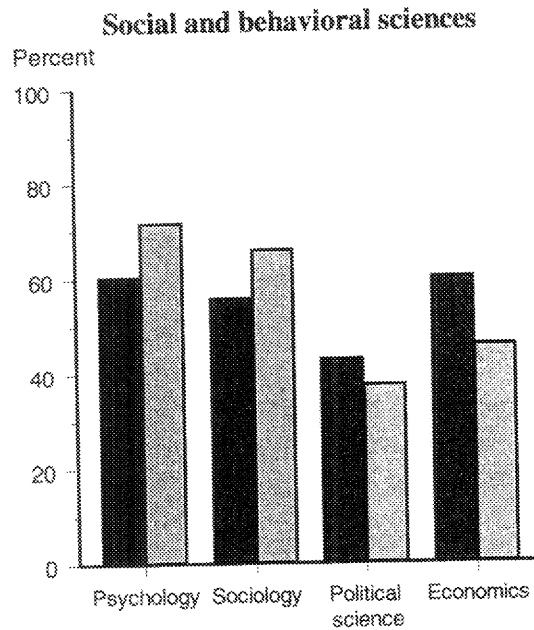
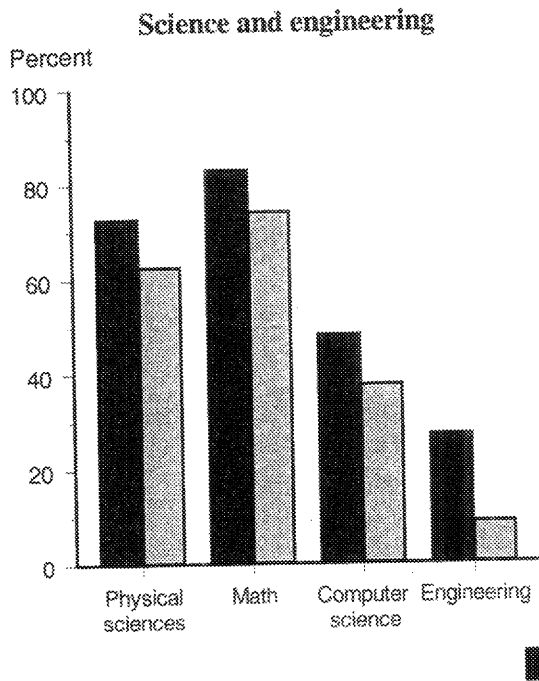
Percentage of 1985–86 bachelor's degree recipients who took one or more courses in selected subjects, by sex and race/ethnicity

Subject	Total	Sex		Race/ethnicity				
		Men	Women	White	Black	Hispanic	Asian	American Indian
Arts	63.1	59.0	67.4	63.6	63.3	59.0	59.1	64.1
English literature/letters	86.8	87.2	86.7	87.1	85.5	89.4	83.9	78.5
Foreign language	36.1	31.9	40.2	35.6	34.4	49.8	39.2	32.4
Philosophy and religion	52.6	53.0	52.5	53.1	53.6	46.6	50.4	57.6
Area and ethnic studies	9.0	6.7	10.2	8.0	13.5	8.2	19.3	6.1
Psychology	65.3	60.3	71.5	66.3	72.3	60.6	55.9	63.6
Economics	52.8	59.9	45.7	52.9	54.1	49.7	48.1	47.6
Geography	14.2	14.6	14.3	14.8	9.7	10.9	17.7	19.3
Political science	40.6	43.1	37.4	40.3	41.8	42.8	30.5	45.0
Sociology/anthropology	61.0	55.6	65.9	61.4	61.8	57.4	47.5	53.5
History	63.2	64.7	62.8	64.2	64.6	63.3	49.2	55.5
Life sciences	52.9	46.6	59.9	53.9	55.7	49.1	43.8	45.5
Physical sciences	66.9	72.4	62.4	68.2	55.3	56.5	76.8	62.8
Mathematics	78.1	82.8	74.0	78.4	78.1	77.3	78.5	76.2
Computer and information sciences	42.1	48.1	37.6	42.9	40.2	40.3	46.3	35.5
Engineering	17.7	27.0	8.6	17.4	14.7	16.5	32.2	18.7
Education	36.3	29.5	43.6	36.8	44.2	36.5	24.1	30.2
Business/management	53.7	58.1	49.6	53.8	60.8	51.4	43.7	56.0

NOTE: This table includes only courses for which the degree-granting institution granted or accepted credits, including transferred credits.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 Survey of Recent College Graduates (Transcript Data File).

Percentage of 1985-86 bachelor's degree recipients who took one or more courses in selected subjects, by sex and race/ethnicity



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 Survey of Recent College Graduates (Transcript Data File).

Field of study at the associate's degree level, by race/ethnicity and sex

- ▶ Among 1991 associate's degree recipients, Hispanic men and women were more likely than those from other racial/ethnic groups to major in the arts and sciences.
- ▶ Among men, blacks were more likely than those in other racial/ethnic groups to specialize in business in 1987 and 1991, and Asians were more likely to specialize in technological fields.
- ▶ Black and Asian women were more likely than other women to major in business in 1987 and 1991, while white women were more likely to major in health-related fields.
- ▶ Differences in the fields studied by white men and men of other race/ethnicity narrowed between 1987 and 1991. In contrast, differences between white and Hispanic women and between white and American Indian women increased over the period.

For many students, the associate's degree is a stepping-stone to the baccalaureate; for others, it is a final degree that provides job-related training. Data on major field of study by race/ethnicity and sex provide insight into how educational objectives differ among men and women from the various racial/ethnic groups.

Associate's degrees conferred in selected fields, by race/ethnicity and sex: Academic years ending 1987 and 1991

Field of study and dissimilarity index	White		Black		Hispanic		Asian		American Indian	
	1987	1991	1987	1991	1987	1991	1987	1991	1987	1991
Men										
Percentage of degrees										
Arts and sciences	28.5	33.6	26.9	34.2	32.7	38.6	25.6	33.4	32.5	34.1
Business	19.0	15.7	24.5	20.5	15.6	15.2	16.0	16.5	15.9	13.2
Health	3.8	4.9	4.3	4.9	4.3	5.2	2.8	4.9	4.1	4.6
Technological	26.0	22.6	23.5	21.7	26.8	21.2	37.2	26.1	18.4	17.6
Trade and industrial	10.2	9.4	9.2	6.9	8.6	8.3	12.7	12.0	13.8	12.4
Community services	6.0	7.0	7.1	6.9	8.6	7.0	2.9	3.0	7.1	9.7
Other technical/professional	6.4	6.9	4.6	5.0	3.4	4.4	2.9	4.1	8.1	8.4
Dissimilarity index*	—	—	7.1	5.5	8.1	5.4	13.6	6.9	10.7	7.8
Women										
Percentage of degrees										
Arts and sciences	29.1	34.3	24.3	29.7	35.3	41.1	31.3	36.2	28.9	36.4
Business	31.1	25.4	37.9	32.4	31.2	28.5	32.5	31.3	31.4	25.2
Health	23.5	24.0	19.9	19.9	15.8	13.2	15.2	15.8	18.2	17.6
Technological	3.6	3.0	4.8	4.5	4.2	3.2	10.0	4.8	3.1	4.0
Trade and industrial	1.5	1.6	1.0	1.0	1.2	1.1	2.6	2.2	1.3	1.3
Community services	4.1	4.2	5.7	5.4	5.3	5.3	2.6	2.1	9.3	9.0
Other technical/professional	7.0	7.6	6.5	7.1	7.0	7.7	5.8	7.6	7.8	6.4
Dissimilarity index*	—	—	9.4	9.6	8.0	11.3	11.0	10.3	6.2	8.0

—Not applicable.

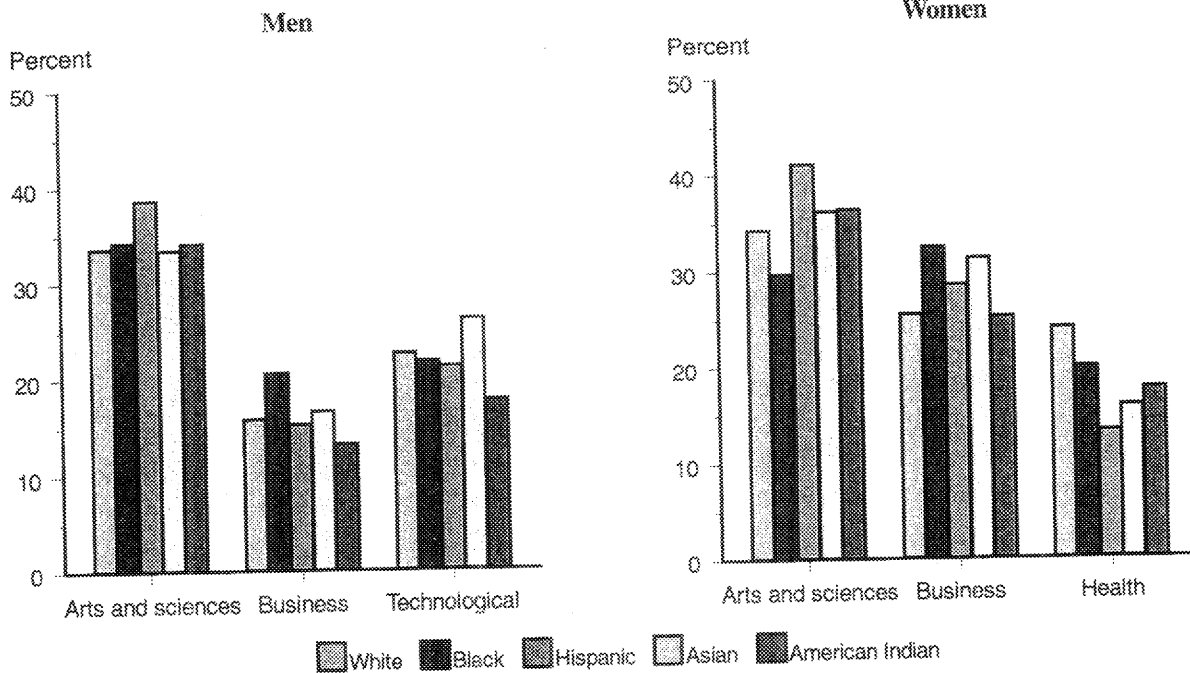
*The dissimilarity index represents the percentage of students in a minority group who would have to change fields in order for the group to have the identical field distribution as white students. It is calculated as the sum of the absolute differences between the percentage of minority and white students majoring in each of the fields divided by 2.

NOTE: See Glossary for definitions of field of study.

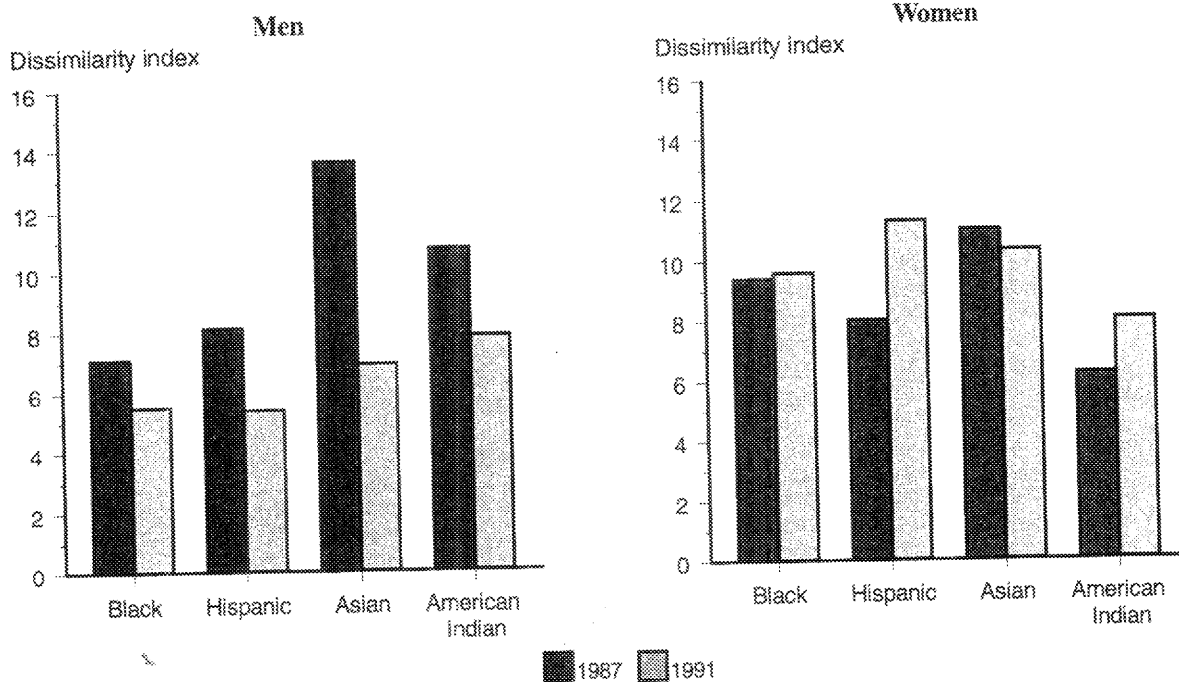
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

**Associate's degrees conferred in selected fields, by sex and race/ethnicity:
Academic years ending 1987 and 1991**

Percentage of degrees: 1991



Dissimilarity index: 1987 and 1991



NOTE: The dissimilarity index represents the percentage of a minority group who would have to change fields in order for the group to have the identical field distribution as white students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HIGIS surveys of degrees conferred.

Field of study at the bachelor's degree level, by race/ethnicity

- ▶ Among 1991 bachelor's degree recipients, Hispanics and blacks were more likely than whites to major in the social and behavioral sciences. These differences were narrower than in 1977, however.
- ▶ Blacks were less likely than whites to major in engineering in 1991, but the gap has been closing since 1977.
- ▶ Black-white differences in the selection of natural science majors narrowed between 1977 and 1991. This was largely due to declining white interest in this field, not to increasing interest among black students.
- ▶ In the field of education, the black concentration ratio changed dramatically between 1977 and 1991. In 1977, black students were 42 percent more likely than white students to major in education, but by 1991, they were 33 percent less likely.
- ▶ Differences in the field of major preferences of black and white students were smaller in 1991 than in 1977, with all of the decrease occurring between 1977 and 1985. The differences have grown since 1987 (see supplemental table 30-2).
- ▶ Asian-white differences in field of major preferences increased between 1977 and 1991, mainly due to growing gaps in science and engineering.

Career opportunities available to college students are affected by the fields that they choose to study. The minority field concentration ratio, a measure of how much white and minority students differ in field of major, provides insight into future occupational and earnings differences. Variations in the size of the ratio over time identify the fields where the white/minority composition has changed.

Minority field concentration ratio at the bachelor's degree level, by field of study and dissimilarity index: Selected academic years ending 1977-91

Field concentration ratio and dissimilarity index	Black				Hispanic				Asian			
	1977	1981	1987	1991	1977	1981	1987	1991	1977	1981	1987	1991
Concentration ratio ¹												
Humanities	0.69	0.74	0.83	0.78	1.17	1.11	1.10	1.06	0.90	0.84	0.82	0.84
Social and behavioral sciences	1.32	1.27	1.06	1.07	1.29	1.29	1.13	1.13	1.02	0.89	0.90	0.97
Natural sciences	0.65	0.74	0.87	0.92	0.82	0.94	0.98	1.00	1.46	1.56	1.91	2.24
Computer and information sciences	0.91	0.83	1.44	1.59	0.73	0.89	1.11	1.26	1.74	2.29	2.17	2.64
Engineering	0.45	0.54	0.71	0.80	0.92	0.87	1.09	1.08	1.70	2.16	2.29	2.70
Education	1.42	1.35	0.81	0.67	1.05	1.12	0.89	0.86	0.42	0.33	0.36	0.20
Business and management	1.03	1.02	1.07	1.12	0.84	0.87	0.97	0.94	1.15	0.97	0.76	1.00
Health sciences	3.84	0.84	1.03	1.17	0.72	0.75	0.75	0.85	1.16	0.99	0.73	0.92
Dissimilarity index ²	12.7	10.8	7.7	9.2	8.7	8.0	5.3	5.1	13.1	16.1	22.9	20.7

¹The minority field concentration ratio is calculated as the percentage of a minority group earning bachelor's degrees who majored in a selected field divided by the percentage of whites earning bachelor's degrees who majored in the same field. For example, the 1991 black to white concentration ratio for education = 7.4/11.1 = 0.67.

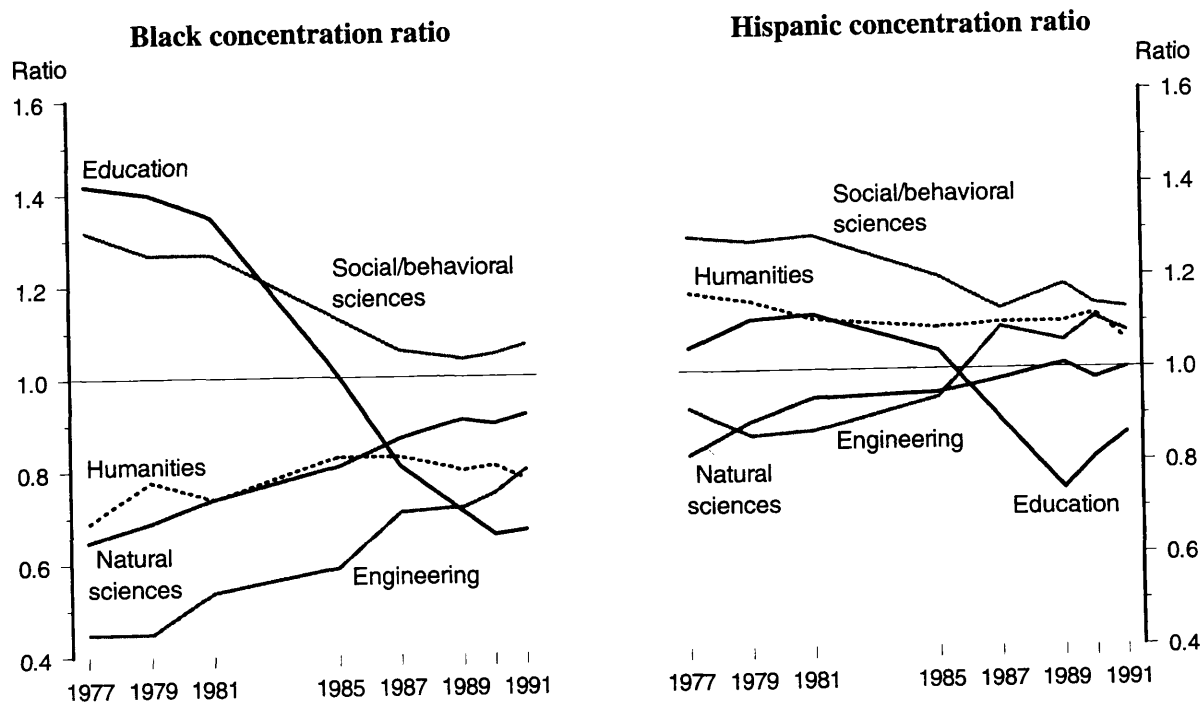
²The dissimilarity index represents the percentage of students in a minority group who would have to change fields in order for the group to have the identical field distribution as white students. It is calculated as the sum of the absolute differences between the percentage of minority and white students majoring in each of the fields divided by 2.

NOTE: See Glossary for definitions of field of study.

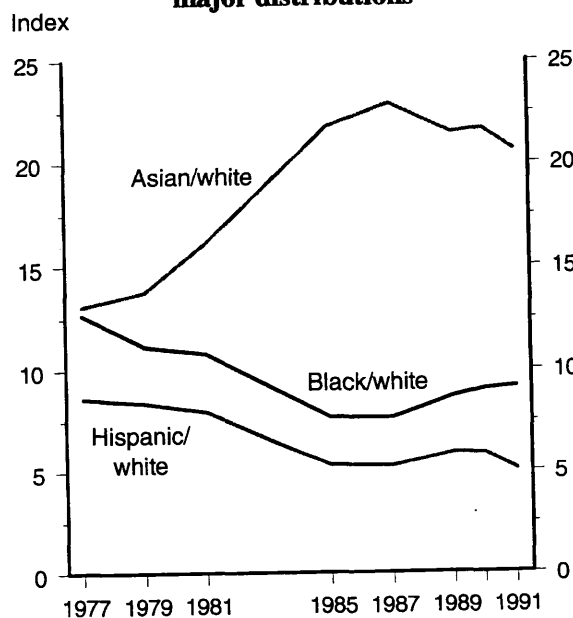
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Bachelor's degrees conferred, by field of study and race/ethnicity: Selected academic years ending 1977-91

Minority field concentration ratios in selected fields



Dissimilarity index for field of major distributions



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Degree attainment, by race/ethnicity and sex

- ▶ Compared to 1981 levels, the number of bachelor's degrees earned in 1991 was up for men and women in all racial/ethnic groups except for black men. The increase was greater for women than for men in each racial/ethnic group.
- ▶ Between 1981 and 1991, the percentage gains in bachelor's degrees made by Hispanic, Asian, and American Indian men and women exceeded those made by whites of the same sex (see supplemental table 31-2).
- ▶ The number of bachelor's degrees earned by Hispanic men and women have risen sharply since 1981, a 50 and 86 percent increase, respectively.
- ▶ Black women earn substantially more bachelor's degrees than black men. The difference between the number of degrees earned by black men and women more than doubled between 1977 and 1991 (see supplemental table 31-1).
- ▶ Following a period of decline, the number of bachelor's degrees earned by black men increased in 1990 and 1991, approaching the level attained a decade earlier.

The ability of colleges and universities to attract and graduate minority students is important to the goal of equal opportunity. Changes in the number of degrees earned by minorities of both sexes, particularly in relation to the number earned by whites, provide a measure of higher education's progress toward this goal.

Index of the number of bachelor's degrees conferred and the number of high school graduates (1981=100), by race/ethnicity and sex: Selected academic years ending 1977-91

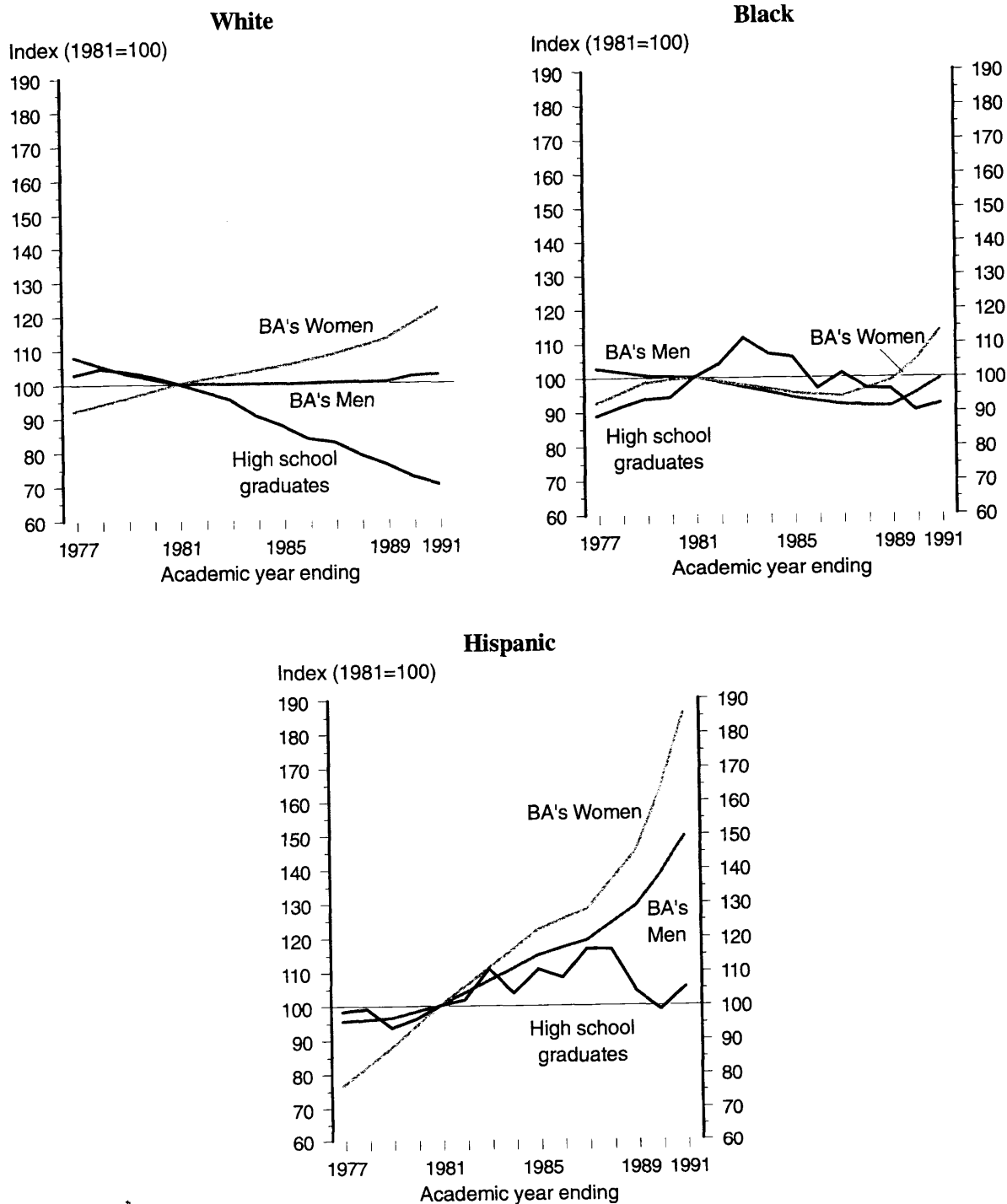
Academic year ending	White			Black			Hispanic		
	Bachelor's degrees		High school graduates*	Bachelor's degrees		High school graduates*	Bachelor's degrees		High school graduates*
	Men	Women		Men	Women		Men	Women	
1977	107.9	92.1	102.8	102.6	92.6	88.8	95.4	76.4	98.4
1979	103.0	95.8	103.7	100.6	98.4	93.7	96.4	87.8	93.5
1981	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1985	99.7	105.0	87.5	93.9	95.3	105.8	114.7	122.2	110.6
1987	100.1	108.5	82.5	91.8	94.2	100.9	119.0	128.2	116.5
1989	100.2	112.8	76.1	91.2	98.7	96.3	129.0	144.8	104.1
1990	101.8	117.4	72.3	94.9	104.5	90.0	138.2	162.4	98.6
1991	102.3	121.8	70.1	99.2	113.4	92.0	149.5	185.6	105.1

*High school graduates are those who completed 4 years of high school and include those who received either a diploma or a GED credential. The index of high school graduates is based on a 3-year moving average of the number of graduates.

NOTE: See supplemental tables 31-1 and 31-2 for data on associate's, master's, doctor's, and first-professional degrees, by race/ethnicity and sex.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred. U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Index of the number of bachelor's degrees conferred and the number of high school graduates (1981=100), by race/ethnicity and sex: Selected academic years ending 1977-91



NOTE: High school graduates are plotted annually and degrees are plotted for 1977, 1979, 1981, 1985, 1987, 1989, 1990, and 1991. High school graduates are those who completed 4 years of high school and include those who received either a diploma or a GED credential. The index of high school graduates is based on a 3-year moving average of the number of graduates.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred. U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.



Economic and Other Outcomes of Education

Education is an investment in human skills. Like all investments, it involves both a cost and a return. The cost to the student of finishing high school is quite low, for it consists mainly of the relatively low wages earned by a 16- to 19-year-old dropout. The cost to the student of attending college is higher, and principally includes tuition, books, fees, and the earnings given up by not working or by working part-time while in college.

In contrast, the returns come in many forms. Some are monetary, others personal, social, cultural, and more broadly economic. Some are directly related to the labor market, others are not. Some accrue to the individual, others to society and the nation in general. Among the returns related to the labor market are better employment opportunities, jobs that are less sensitive to general economic conditions, better opportunities to participate in employer-provided training, and higher earnings. Other returns not related to the labor market and often attributed to education include greater interest and participation in civic affairs (*Indicator 35*), knowledge of healthy behavior (*Indicator 36*), and reduced criminal behavior.

The costs and returns of investing in postsecondary education have changed over time,* which affects the incentive for individuals to participate. Measures presented in this section illuminate changes in the rewards to finishing high school (or conversely, the penalties of not finishing) and changes in the rewards of investing in postsecondary education.

Penalties of Not Graduating From High School

These indicators suggest some general conclusions regarding the labor market penalties of not finishing high school. The immediate difficulty of making the transition from full-time school attendance to full-time work appears much greater for those who leave school before finishing high school. Without prior job experience or specialized training, school leavers may find it difficult to find jobs that they are willing to take. In October 1992, of young people 16- to 24-years-old who had left school during the previous year without finishing high school, only 36 percent were employed (down from 47 percent 2 years before). In contrast, of

those who had graduated from high school in 1992 and did not enroll in college, 63 percent were employed (down from 68 percent 2 years before) (*Indicator 32*). However, nearly every year between 1973 and 1992, white high school dropouts were more likely to be employed than black high school graduates not enrolled in college.

In time, some of the problems of making the transition from school to the workforce are solved. For example, of males who graduated from high school in 1992 and were not enrolled in college the following October, 69 percent were employed (Table 32-1). In March 1992, among male high school graduates without further postsecondary education, the employment rate was 78 and 83 percent among those 20–24 and 25–29 years old, respectively (*Indicator 33*). This suggests that as high school graduates who do not go on to college get older, the percentage employed rises.

In addition to lower employment rates, lower earnings characterize those with less education who do find work during the year. For example, during 1992, the annual earnings penalty of not finishing high school (how much lower these earnings were than the earnings of high school graduates who did not continue on to college) was 27 percent and 35 percent for white and black males 25–34 years old, respectively. The earnings penalty for females was similar (*Indicator 34*).

Rewards of Graduating from College

The ratio of average annual earnings of college graduates to high school graduates provides an indication of the financial returns of attending college. In 1992, for white males 25–34 years old, the earnings premium for having a bachelor's degree was 55 percent. For black males of the same age group, the premium for completing college was even larger—83 percent. Furthermore, the earnings advantage of completing college has increased since 1978 for males and females, both black and white (*Indicator 34*).

While there is a substantial earnings premium for graduating from college, there are great differences in earnings among college graduates

who choose different fields of study (*Indicator 33, Condition 1993*). Computer science and engineering majors earn the highest starting salaries—41 percent above the average across all fields among 1990 graduates. Humanities and education majors earned starting salaries 14 and 12 percent below the average, respectively (*Indicator 33, Condition 1993*).

Rewards of Education for Females

Generally, a higher percentage of males than females were employed in 1993. However, the difference between males and females is smaller at higher levels of education. For example, in March 1993, 70 percent of males, 25 to 29 years old, who had started but not completed high school, were employed compared to 38 percent of females—a difference of 32 percentage points. For those with a bachelor's degree or higher, 90 percent of males were employed compared to 85 percent of females—a difference of only 5 percentage points (*Indicator 33*).

Generally, median earnings of workers are higher for males than females. However, among females, the percentage difference between the median earnings of workers who are high school graduates and workers with a bachelor's degree was larger than among males. That is, the premium for a bachelor's degree is larger (in percentage terms) for females than for males (table 34-1 and 34-2).

Voting

Education plays a vital role in preparing individuals for active participation in the political, economic, and social lives of their communities. Voting rates for groups with differing amounts of education are one indication of the relationship between educational attainment and civic responsibility.

There is a strong positive relationship between voting and educational attainment. As educational attainment increases, so does voting participation. For example, college graduates aged 25–44 were 58 percent more likely and high school dropouts were 46 percent less likely than high school graduates to vote in the 1992 Presidential elections. Also, differences in voting behavior, by education, have generally widened over time among 25- to 44-year-olds (*Indicator*

35). Many factors may influence this relationship. On the one hand, those with more education may feel a greater responsibility to vote than those with less education. On the other hand, those with more education generally have higher earnings and are often less likely to engage in activities that require time rather than money.

Health

Education may affect an individual's health status by increasing knowledge about health behaviors and preventive care. Thus, those with more education may be more likely to engage in healthy behaviors and to visit a doctor regularly. Good health has social and financial consequences not only for the individual but also for society, which bears some of the economic burden of health care provision and lost productivity.

There is a positive relationship between indicators of a person's health and educational attainment. First, persons with more education appear to have better health knowledge. For example, although the awareness that high blood pressure and smoking increased chances of heart disease was high across all populations, knowledge does increase slightly with educational attainment. Second, healthy behavior increases with educational attainment—those with more education were more likely to exercise regularly and less likely to smoke cigarettes on a daily basis (*Indicator 36*). Third, persons with more education appear to be healthier—they were less likely to be in poor health (as assessed by themselves or members of their household). Those with more education were less likely to be limited in their activity due to a chronic condition or told they had high blood pressure (*Indicator 36*), and they were more likely to be covered by either private health insurance or Medicare (*Indicator 35, Condition 1993*).

NOTES:

*See Murphy, Kevin and Finis Welch. "Wage Premiums for College Graduates: Recent Growth and Possible Explanations," *Educational Researcher*, May 1989 for a more detailed presentation of changes between 1964 and 1986 in the relative earnings of workers with different levels of education and experience by sex and race.

Transition from high school to work

- ▶ In 1992, 63 percent of recent high school graduates not enrolled in college were employed compared to 36 percent of recent dropouts. Between 1989 and 1992, a period of economic recession, the percentage employed in both groups fell about 10 percentage points.
- ▶ Nearly every year between 1973 and 1992, white dropouts were more likely to be employed than black high school graduates not enrolled in college.
- ▶ Among recent high school graduates in the labor force, males were equally likely to be unemployed as females. However, males continue to be more likely than females to be in the labor force and to be employed. In addition, the percentage of females in the labor force dropped by over 5 percentage points between 1991 and 1992 (see supplemental table 32-1).

The transition from high school to work can be difficult. Without prior job experience or specialized training, school leavers may find it difficult to find jobs they are willing to take. The employment rate among school leavers, both those who have not finished high school and those who have but have not gone on to college, is an indication of the ease of making the transition.

Employment rate for recent high school graduates not enrolled in college and dropouts, by race/ethnicity: 1973-92

Year	Recent high school graduates not enrolled in college				Recent school dropouts			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1973	70.7	74.9	49.8	(*)	51.5	55.1	43.9	(*)
1974	69.1	72.9	45.9	(*)	48.1	53.9	35.9	(*)
1975	65.1	68.9	36.9	(*)	41.4	46.2	22.0	46.8
1976	68.9	73.2	38.5	(*)	43.5	49.7	20.8	(*)
1977	71.9	76.1	43.3	65.8	50.2	56.6	34.5	(*)
1978	74.0	79.1	45.9	69.2	49.7	54.2	41.1	50.7
1979	72.4	76.4	44.1	69.4	48.8	54.2	27.6	(*)
1980	68.9	74.6	35.0	(*)	43.7	51.2	20.8	47.7
1981	65.9	73.0	31.5	(*)	40.5	51.2	11.5	50.0
1982	60.4	68.5	29.4	43.9	36.8	44.5	16.4	(*)
1983	62.9	69.8	34.9	(*)	43.2	49.4	26.5	(*)
1984	64.0	70.7	44.8	49.0	42.9	51.3	23.8	35.7
1985	62.0	71.0	34.4	(*)	43.5	50.0	29.3	37.6
1986	65.2	71.5	41.0	64.9	46.1	50.5	31.6	46.4
1987	68.9	75.3	46.9	53.8	41.2	48.1	26.1	(*)
1988	71.9	78.2	55.5	57.1	43.5	47.6	17.3	55.4
1989	71.9	77.6	53.5	49.3	47.1	57.6	26.3	(*)
1990	67.5	75.1	44.9	(*)	46.7	56.2	30.5	(*)
1991	59.6	67.1	32.5	(*)	36.9	38.4	24.7	(*)
1992	62.8	71.9	37.2	53.9	36.1	43.2	(*)	28.8

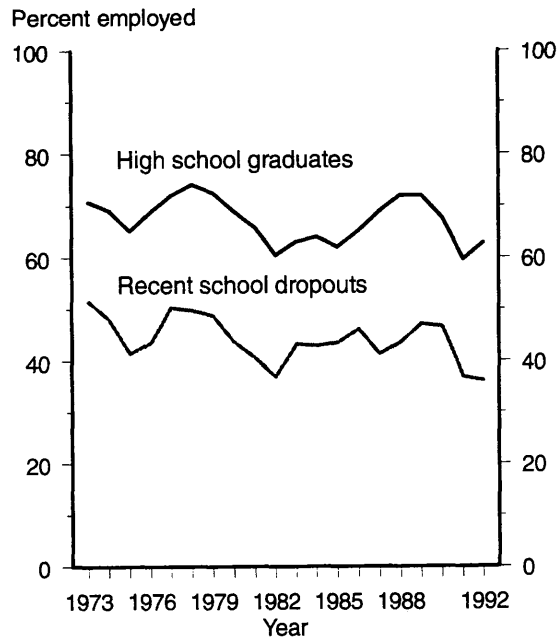
*Too few sample observations for a reliable estimate.

NOTE: Recent high school graduates are individuals who graduated during the survey year. Recent school dropouts are individuals who were not high school graduates, who were in school 12 months earlier, but who were not enrolled during the survey month.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived from the Current Population Survey: 1940-1992*, and tabulations based on the October Current Population Surveys.

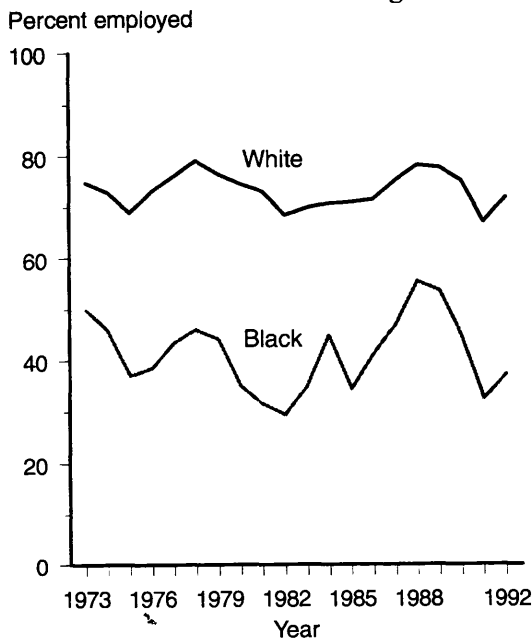
Employment rate for high school students, by graduation status and race/ethnicity: 1973-92

By graduation status

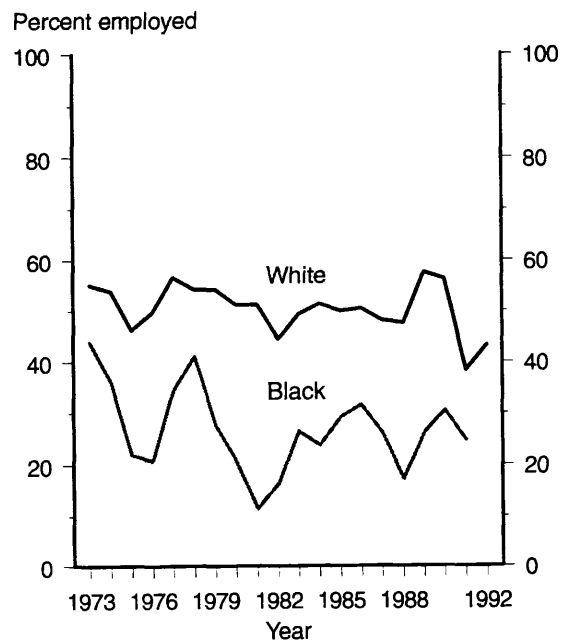


By race/ethnicity

Recent high school graduates not enrolled in college



Recent school dropouts



SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived from the Current Population Survey: 1940-1992*, and tabulations based on the October Current Population Surveys.

Employment of young adults

- ▶ Among males 25- to 29-years-old, employment rates were somewhat lower for high school graduates than for college graduates. For those who had not completed high school the employment rate was substantially lower than for those with higher levels of attainment.
- ▶ Among females 25- to 29-years-old, employment rates increased markedly with each higher level of educational attainment. The difference between those who had not finished high school and those who had was particularly large (38 percent versus 63 percent).
- ▶ Among females age 30 to 64, those who had not finished high school were also much less likely to be employed than those with higher levels of attainment.
- ▶ Among males aged 30 to 59, employment rates for those with a bachelor's degree were somewhat higher than for those with only some college.

The percentage of a population group with jobs is influenced by a variety of factors. Some factors influence the willingness of employers to offer jobs to individuals with different levels of education at the going wage rate, and others influence the willingness of these individuals to take jobs at the going wage rate. The higher the proportion employed, the better are their labor market opportunities relative to other things they could do, and vice versa. To a certain extent, employment rates for older groups is an indication of what younger groups may experience when they become older. However, labor market opportunities were different when these older groups were beginning their work lives than they are for today's young adults.

Percentage of the population* who are employed, by sex, educational attainment, and age: March 1993

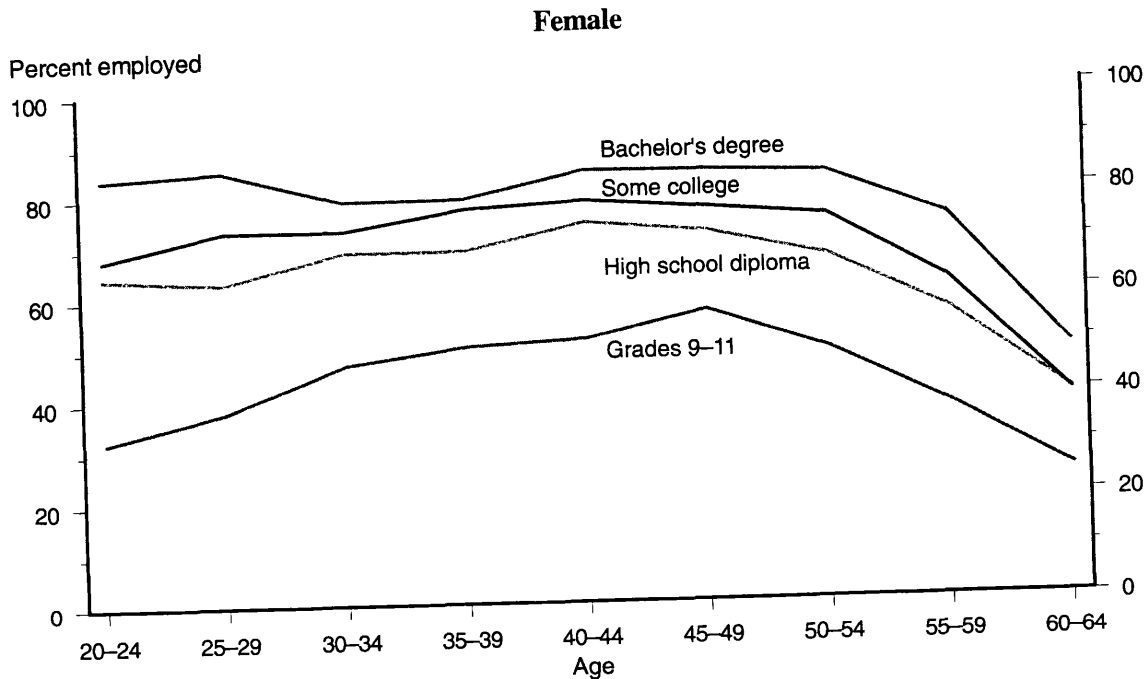
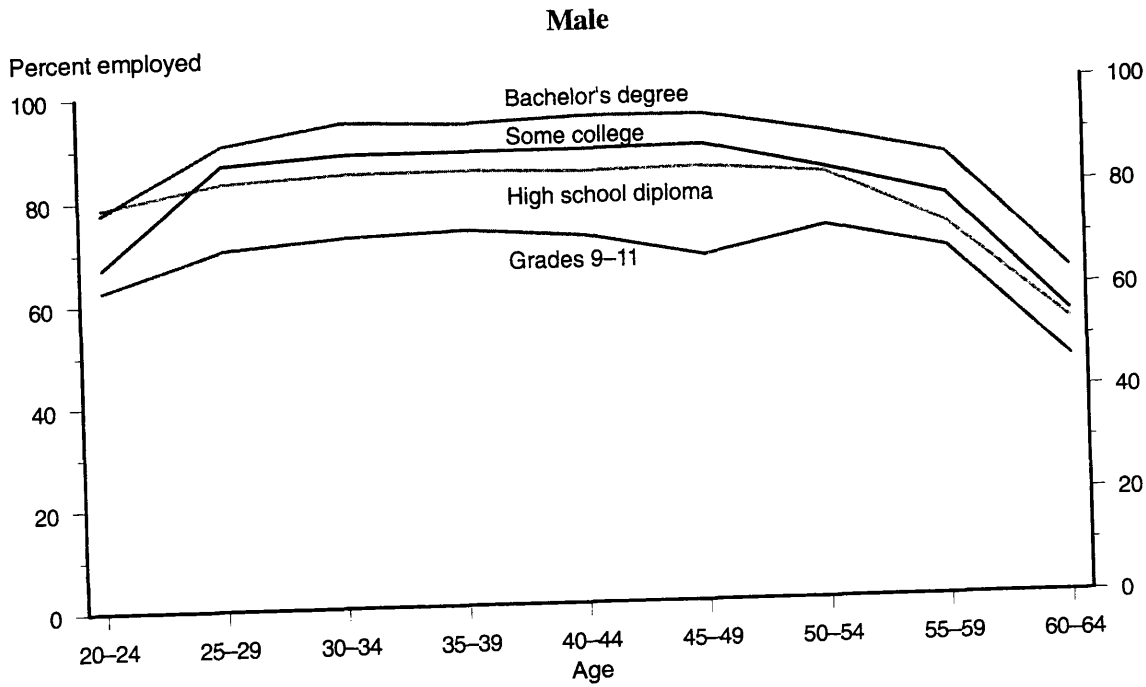
Age	Male					Female				
	Total	Grades 9 to 11	High school diploma	Some college	Bachelor's degree	Total	Grades 9 to 11	High school diploma	Some college	Bachelor's degree
20-24	71.3	62.4	78.4	66.9	77.3	63.6	32.1	64.3	67.8	83.6
25-29	83.9	70.0	82.9	86.3	90.2	67.5	37.7	62.9	73.0	84.8
30-34	85.7	72.0	84.2	88.0	94.1	69.2	46.6	68.7	72.9	78.8
35-39	86.0	72.9	84.3	88.0	93.4	71.0	49.9	68.7	76.8	78.8
40-44	86.8	71.3	83.8	88.0	94.4	74.5	51.0	73.8	78.0	83.9
45-49	85.6	67.0	84.1	88.4	94.3	72.7	56.3	71.8	76.4	83.8
50-54	81.8	72.1	82.4	83.3	90.3	67.8	48.4	66.7	74.6	82.9
55-59	73.4	67.5	72.0	77.6	85.5	54.7	37.3	55.8	61.7	74.1
60-64	52.6	45.7	52.9	54.5	63.0	35.6	24.3	39.3	39.0	48.5

*Non-institutionalized civilians.

NOTE: Many young persons 20-24 years old were enrolled in school or college. Included in the total but not shown separately are those who have attained 8 or fewer years of schooling. Grades 9 to 11 includes those who have attended 12th grade but have not received a diploma; high school diploma includes those who have received an equivalency certificate; some college includes those who have received an associate's degree; bachelor's degree includes those who have received advanced degrees.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey, 1993.

Percentage of the population who were employed, by sex, educational attainment, and age: March 1993



SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey, 1993.

Annual earnings of young adults

- ▶ In 1992, the median annual earnings of whites, both male and female, who had not completed high school were about 75 percent of the earnings of whites who had completed high school. The earnings ratio between black graduates and dropouts was about 67 percent.
- ▶ Since 1970, the earnings advantage of college graduates was generally greater for females than for males; that is, the percentage difference between earnings of college graduates and high school graduates was greater for females than for males.
- ▶ The earnings advantage of completing college increased between 1974 and 1992 for males and females, both white and black.
- ▶ The earnings advantage of having a bachelor's degree was more than double the earnings advantage of having attended only some college in 1992. For example, among white female workers 25–34 years old, the earnings of college graduates were 94 percent greater than those of high school graduates, and the earnings of those with some college were 32 percent greater than those of high school graduates (see supplemental table 34-2).

Wages and salaries are influenced by many factors, including the employer's perception of the productivity and the availability of workers with different levels of education. They are also affected by economic conditions in the industries that typically employ workers with different levels of education. Annual earnings are influenced by the number of weeks worked in a year and the usual hours worked each week. The ratio of annual earnings of high school dropouts or college graduates to those of high school graduates is affected by all these factors; it is a measure of the earnings disadvantage of not finishing high school and the advantage of completing college.

Ratio of median annual earnings of wage and salary workers 25 to 34 years old with 9–11 and 16 or more years of school to those with 12 years of school, by sex and race/ethnicity: Selected years 1970–92

Year	9–11 years of school				16 or more years of school			
	Male		Female		Male		Female	
	White	Black	White	Black	White	Black	White	Black
1970	0.87	0.78	0.60	0.52	1.21	(¹)	1.81	2.08
1972	0.85	0.75	0.56	0.79	1.16	1.43	1.74	2.03
1974	0.85	0.75	0.60	0.62	1.14	1.11	1.77	1.69
1976	0.80	0.80	0.57	0.58	1.16	1.47	1.61	1.59
1978	0.79	0.74	0.56	0.48	1.13	1.46	1.58	1.39
1980	0.77	0.76	0.61	0.72	1.16	1.35	1.50	1.64
1982	0.72	0.77	0.64	0.69	1.30	1.51	1.63	1.65
1984	0.62	0.65	0.57	0.53	1.30	1.64	1.61	1.69
1986	0.69	0.87	0.62	0.78	1.43	1.69	1.75	1.96
1987	0.74	0.86	0.72	0.55	1.43	1.49	1.74	1.92
1988	0.73	0.56	0.51	0.62	1.42	1.37	1.78	1.93
1989	0.74	0.61	0.64	0.50	1.44	1.41	1.89	2.05
1990	0.73	0.72	0.56	0.44	1.42	1.66	1.89	2.09
1991	0.70	0.68	0.62	0.56	1.46	1.53	1.88	1.97
1992 ²	0.73	0.65	0.77	0.68	1.55	1.83	1.94	2.13

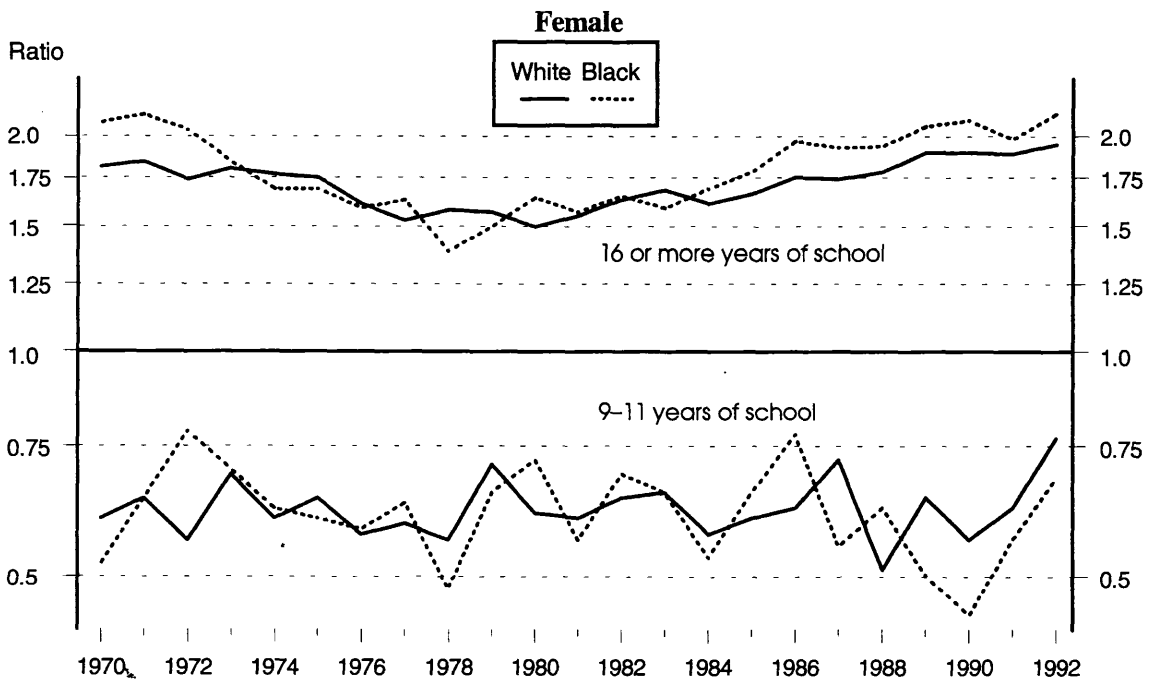
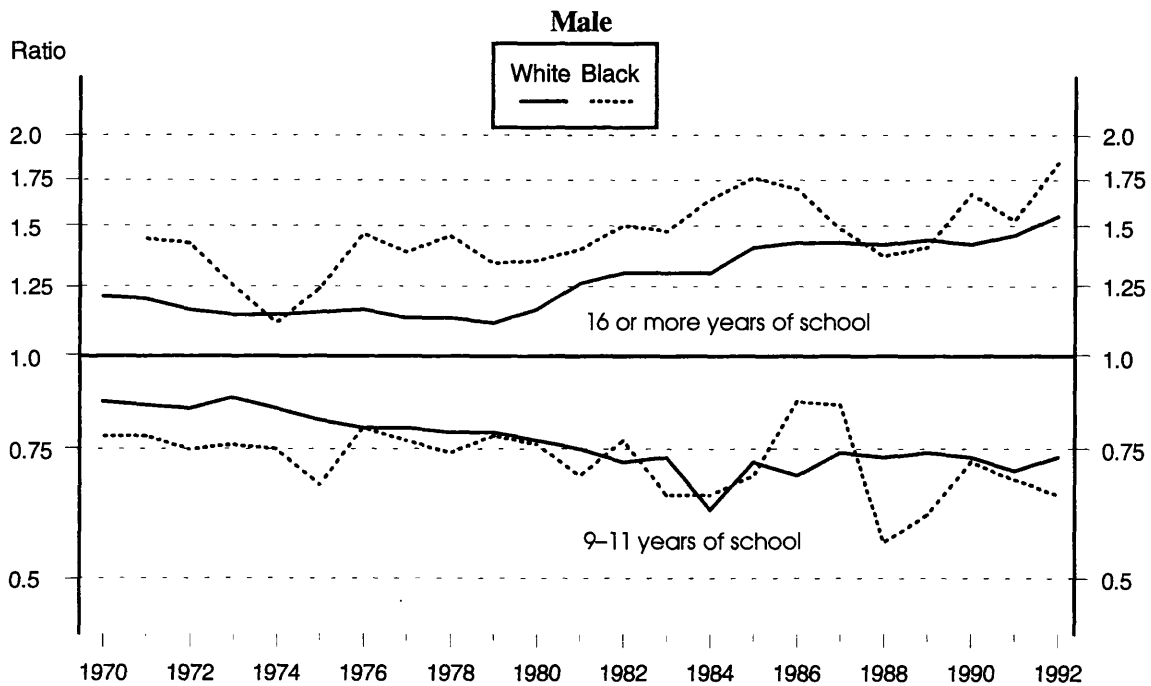
¹Too few sample observations for a reliable estimate.

²Beginning in 1992, the Current Population Survey changed the questions used to obtain the educational attainment of respondents. See the supplemental note to *Indicator 21* for further discussion.

NOTE: This ratio is most usefully compared to 1.0. For example, the ratio of 1.55 in 1992 for white males with 16 or more years of school means that they earned 55 percent more than white males with 12 years of school. The ratio of .65 in 1992 for black males with 9–11 years of school means that they earned 35 percent less than black males with 12 years of school.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Ratio of median annual earnings of wage and salary workers 25 to 34 years old with 9-11 and 16 or more years of school to those with 12 years of school, by sex and race/ethnicity: 1970-92



NOTE: One (1.0) on the scale represents earnings equal to those with 12 years of school; 2.0 represents double their earnings. 0.5 represents half their earnings. The scale on the graph makes the distance between 1.0 and 2.0, or doubling, the same as between 1.0 and 0.5 or halving.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Voting behavior, by educational attainment

- ▶ There is a strong positive relationship between voting behavior and educational attainment. As educational attainment increases, so does voting participation.
- ▶ College graduates aged 25–44 were 58 percent more likely and high school dropouts of the same age were 46 percent less likely than high school graduates to vote in the 1992 Presidential elections.
- ▶ Differences in voting behavior, by education, have generally widened over time among 25- to 44-year-olds.
- ▶ Following a decline between 1964 and 1984, voting rates in Presidential elections increased between 1988 and 1992 for all educational attainment groups in the 25- to 44-year-old population, except for high school dropouts.

Education plays a vital role in preparing individuals for active participation in the political, economic, and social lives of their communities. Voting rates for groups with differing amounts of education are one indication of the relationship between educational attainment and exercising civic responsibilities.

Voting rates and ratios of voting rates for the population 25 to 44 years old, by type of election and educational attainment: Selected years 1964–92

Type of election and year	Total ¹	1–3 years of high school	4 years of high school	1–3 years of college	4 or more years of college
Voting rates					
Congressional elections					
1974	42.2	24.7	41.9	49.7	59.3
1982	40.4	19.2	35.6	46.7	56.8
1990	40.7	17.8	34.4	47.9	57.4
Presidential elections					
1964	69.0	60.5	75.5	82.9	86.2
1976	58.7	38.5	57.8	67.4	78.5
1984	54.5	29.0	49.1	62.1	74.7
1988	54.0	26.3	47.4	61.7	75.0
1992 ²	58.3	27.0	49.8	66.9	78.5
Ratio of voting rates to those of high school graduates					
Congressional elections					
1974	1.01	0.59	1.00	1.19	1.41
1982	1.14	0.54	1.00	1.31	1.59
1990	1.18	0.52	1.00	1.39	1.67
Presidential elections					
1964	.91	0.80	1.00	1.10	1.14
1976	1.02	0.67	1.00	1.17	1.36
1984	1.11	0.59	1.00	1.27	1.52
1988	1.14	0.56	1.00	1.30	1.58
1992 ²	1.17	0.54	1.00	1.34	1.58

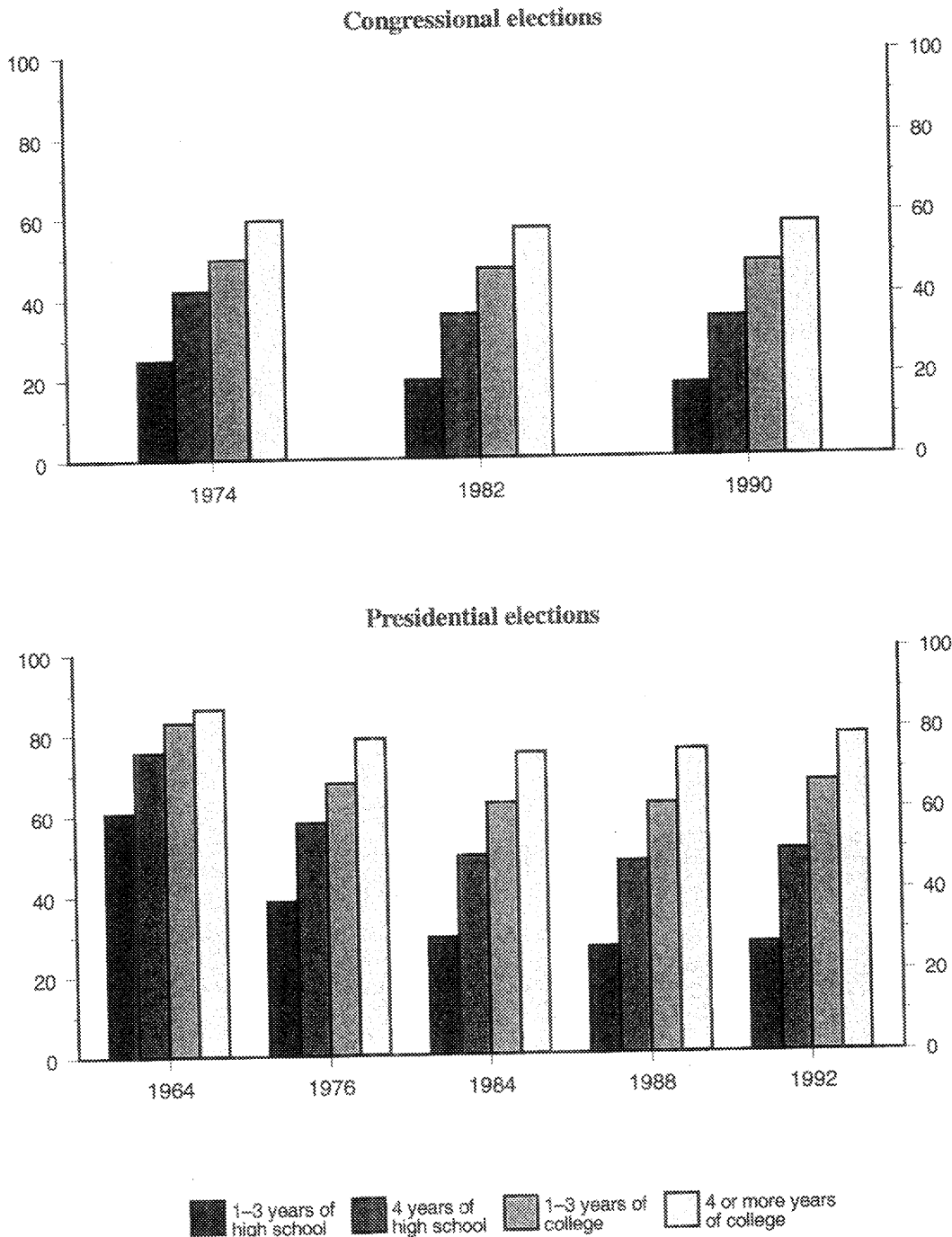
¹Includes those with less than 9 years of education

²Beginning in 1992, the Current Population Survey changed the questions used to obtain the educational attainment of respondents. See the supplemental note to *Indicator 21* for further discussion.

NOTE: To minimize the impact of age on voting trends, this indicator is confined to individuals aged 25–44. The voting rate is calculated as the number of voters aged 25–44 divided by the total number of individuals, both non-U.S. and U.S. citizens, in the age group.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Voting and Registration in the Election of November...", Series P-20, Nos. 143, 293, 322, 383, 440, 453, and 466.

Voting rates for the population 25 to 44 years old, by type of election and educational attainment: Selected years 1964-92



NOTE: Beginning in 1992, the Current Population Survey changed the questions used to obtain the educational attainment of respondents. See the supplemental note to *Indicator 27* for more details. For example, "4 or more years of college" now refers to those who have earned a bachelor's or advanced degree.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Voting and Registration in the Election of November..." Series P-20, Nos. 143, 293, 322, 383, 440, 453, and 466.

Health-related behavior of adults, by level of education

- ▶ Knowledge of healthy behaviors was high across all levels of education, although those with more education generally showed slightly more awareness regarding heart disease than those with less education.
- ▶ Education had a greater effect on the practice of healthy behaviors than on the awareness of healthy behaviors. For example, the difference in awareness of healthy behaviors between those who did not complete high school and those who graduated college was about 3 percent, while the difference in exercising was a much greater 26 percent.
- ▶ People who did not attend college and those who were aged 45–64 were most likely to report that they had been told more than once that they had high blood pressure (see supplemental table 36-3).
- ▶ Between 1985 and 1990, the percentage of people 18 years of age and over who smoked cigarettes daily decreased across all education levels. In addition, the more education people had, the less likely they were to smoke cigarettes daily.

Education may affect an individual's health status by increasing knowledge about healthy behaviors and preventative care. Thus, those with more education may be more likely to engage in healthy behaviors and to visit a doctor regularly. Good health has social and financial consequences not only for the individual but also for society, which bears some of the economic burden of health care provisions and lost productivity.

Percentage of persons 18 years of age and over who answered positively to a variety of health-related questions, by year and level of education: 1985 and 1990

Question	1985					1990				
	All education levels	1-3 years high school	4 years high school	1-3 years college	4 or more years college	All education levels	1-3 years high school	4 years high school	1-3 years college	4 or more years college
Aware high blood pressure increases chances of heart disease	97.3	95.6	97.2	98.3	98.8	95.9	94.1	95.8	96.5	97.3
Exercise or play sports regularly	40.0	28.3	37.7	50.1	55.8	40.7	29.7	37.0	48.5	55.8
Told more than once that they had high blood pressure	17.1	21.4	15.5	13.2	12.4	16.3	21.5	15.7	12.8	12.4
Aware cigarettes increase chances of heart disease	96.0	93.7	96.3	97.2	98.5	96.2	94.3	96.3	96.9	98.1
Smoke cigarettes daily	30.1	42.0	33.5	27.3	18.4	25.5	37.4	29.6	23.0	13.5

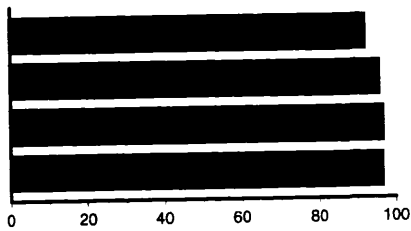
SOURCE: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, National Health Interview Survey, 1985 and 1990.

Percentage of persons who answered positively to a variety of health-related questions, by age and level of education: 1990

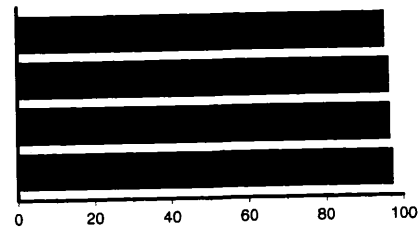
25- to 29-year-olds

45- to 64-year-olds

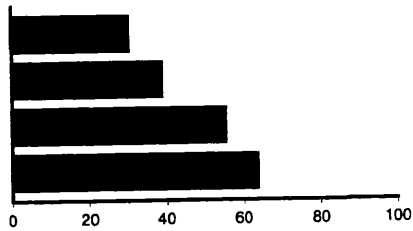
Aware high blood pressure increases chances of heart disease



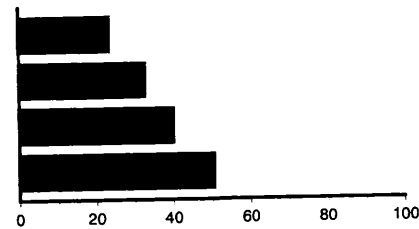
1-3 years high school
4 years high school
1-3 years college
4 or more years college



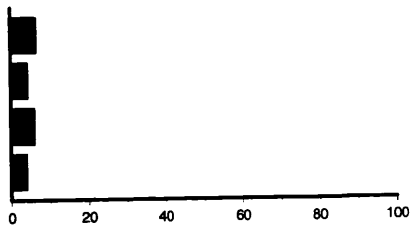
Exercise or play sports regularly



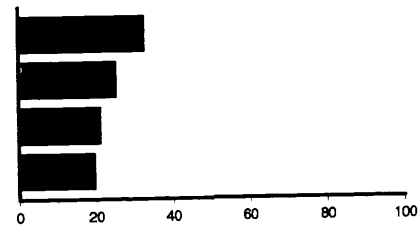
1-3 years high school
4 years high school
1-3 years college
4 or more years college



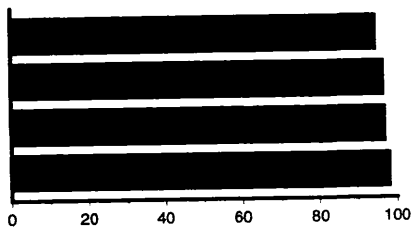
Told more than once that they had high blood pressure



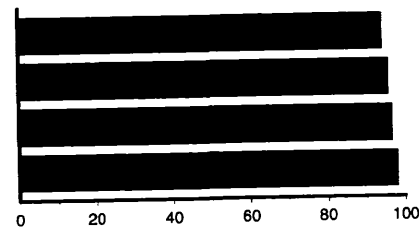
1-3 years high school
4 years high school
1-3 years college
4 or more years college



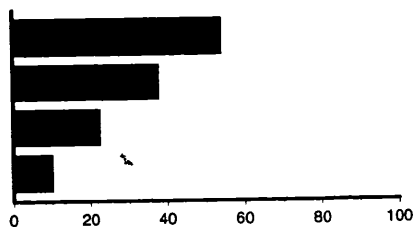
Aware cigarettes increase chances of heart disease



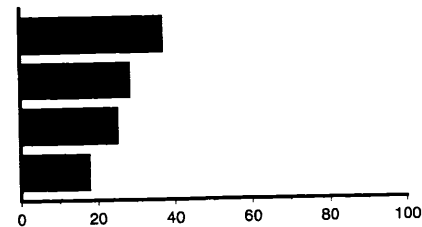
1-3 years high school
4 years high school
1-3 years college
4 or more years college



Smoke cigarettes daily



1-3 years high school
4 years high school
1-3 years college
4 or more years college



SOURCE: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, National Health Interview Survey, 1985 and 1990.



*Size, Growth, and Output of
Educational Institutions*

The education system must adapt to demographic changes in the population, as well as respond to changing conditions in the society and economy. In turn, these changes in the education system influence major support industries, future entries to the labor force, and future economic activity. The indicators in this section provide some evidence of changes in the size, growth, and output of educational institutions.

Enrollment

In 1992, over 62 million people in the United States, almost 1 in 4, were enrolled in elementary and secondary schools, colleges, and universities. This included about 35 million students in kindergarten through grade 8, 13 million in grades 9 through 12, 6 million in 2-year colleges, and 9 million in 4-year colleges and universities (*Indicator 38* and table 39-1).

Most students are enrolled in public educational institutions but a considerable number are enrolled in private institutions. The percentage of students enrolled in private schools is high for preprimary children (62 percent), but falls for older children (12 percent in grades K through 8, and 9 percent in grades 9 through 12, *Indicators 37* and *38*). In postsecondary education, the split between public and private institutions depends strongly on the type of institution—only 4 percent of enrollment at 2-year colleges but 33 percent of enrollment at 4-year colleges and universities is in private institutions (*Indicator 39*). Institutions with less-than-2-year programs are predominately private and for-profit.¹

The amount of time spent in school changed substantially between 1970 and 1992 for kindergarten and for higher education. The percentage of kindergarten who attend full-day has more than tripled since 1970. Forty-four percent of students attended kindergarten full-day in 1992 as compared to only 13 percent in 1970 (*Indicator 37*). Part-time undergraduates in colleges and universities were more prevalent in recent years (an average of 26 percent between 1987 and 1990) than they were two decades earlier (an average of 17 percent between 1967 and 1970) (*Condition of Education 1992*, table 46-5, 1992). However, almost all of the increase in the percentage of undergraduates attending part

time occurred between 1970 and 1977 and has remained fairly stable since then.

Growth of Enrollment

After the end of World War II, the number of births per year reached a peak of 4.3 million in 1957. The baby boom period between 1946 and 1964 was followed by a period of declining births which reached a low of 3.1 million in 1973. Since then the number of births has gradually risen, reaching 4.2 million in 1990.² These trends are reflected, with lags, in the growth and decline of enrollments. Between 1970 and 1984 total public school enrollment fell about 15 percent; from 1984 to 1993, it rose about 11 percent (*Indicator 38*).

Changes in the number of births are first apparent in the elementary schools, and later in secondary schools. Enrollment in public schools in kindergarten through grade 8 declined throughout the 1970s, reaching a low point in 1984, and since has been rising (*Indicator 38*). Enrollment in public schools in grades 9 through 12 increased in the early 1970s, reaching a peak in 1976, and declined through 1990. It increased through 1993 and is projected to continue increasing past the end of the century.

In higher education, the level of enrollment is less tied to the number of births than it is in elementary and secondary schools where enrollment is nearly universal. Total enrollment in higher education rose throughout the 1970s, as would be expected, in parallel with the rising number of high school graduates. In the first half of the 1980s it remained stable with a small drop in 1984. Enrollment has risen each year since 1985 despite a decline in the number of high school graduates aged 20 to 24 (*Indicator 39*). Two factors account for the continued growth in enrollment: increasing enrollment rates among new high school graduates (*Indicator 9*); and the increasing number of older students as the large baby boom cohorts age.

Total enrollment in 2-year and 4-year colleges and universities increased about 17 percent between 1982 and 1992, with a 5 percent increase between 1990 and 1992 (*Indicator 39*). The distribution of total enrollment between public and private institutions has changed little

over the last two decades. Public institutions continue to enroll nearly eight out of every 10 students. Within the public sector, enrollment in 2-year institutions grew faster than 4-year institutions in the late 1980s and early 1990s. As a result, 2-year institutions increased their share of public enrollment from 35 to 38 percent between 1985 and 1992.

Diplomas and Degrees

Whereas enrollment indicates the size of the educational system, completions are a measure of the quantity of education the system is producing. Each diploma or degree awarded is an indication that the education system has made more knowledge and skill available to the economy and society. Public and private high schools and GED programs awarded 3 million diplomas and equivalency credentials in 1991 (table 40-1).

At the undergraduate level, the two most common credentials are the associate's and bachelor's degrees. The number of associate's degrees, many of which are in occupationally specific fields, increased moderately during the 1980s after a period of rapid growth during the 1970s. In 1991, about 482,000 associate's degrees were awarded—20 percent more than in 1980 and 6 percent more than in 1985. The number of bachelor's degrees awarded also grew throughout the 1980s. In 1991, 1.09 million bachelor's degrees were awarded—18 percent more than in 1980 (table 40-1).

At the graduate level, master's degrees were the most numerous type of degree. In 1991, there were 337,000 awarded, in contrast to 72,000 first-professional degrees and 39,000 doctor's degrees. The distribution of type of degrees changed somewhat during the last half of the 1980s. Following years of negative or little growth, the number of doctor's degrees rose 19 percent between 1985 and 1991. Conversely, after a long period of growth, the number of first-professional degrees fell between 1985 and 1988 and has been stable since then (table 40-1). The number of master's degrees was 13 percent larger in 1991 than in 1980—the number first declined 5 percent between 1980 and 1984, and then increased each year after 1984.

The fields in which degrees were awarded have shifted several times over the past two decades. Since the mid-1980s, there has been a reversal of some of the earlier trends. In particular, the number of degrees conferred in the humanities, social and behavioral sciences, mathematics, computer science, business, and education have increased while the number conferred in physical science, life science, health science, and engineering have decreased (*Indicator 41*).

NOTES:

1. U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study, 1990 and 1987.

2. U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1993*, table 91.

Selected characteristics of preprimary enrollment

- ▶ In 1992, private schools enrolled 62 percent of pre-k students (down from 67 percent in 1988). In contrast, private schools enrolled only 15 percent of kindergarten students.
- ▶ The percentage of children who attend full-day kindergarten has more than tripled since 1970. The percentage of children in pre-k who attend full-day has remained the same and is less than that of children in kindergarten.
- ▶ In pre-k, minority enrollment remained about one-fifth of total enrollment between 1972 and 1992. Over the same period, minority enrollment in kindergarten rose from 22 to 30 percent. Increases in Hispanic enrollment accounted for five percentage points of the eight percentage point rise (see supplemental table 37-1).
- ▶ In pre-k, the percentage of enrollment from low income families increased from about 8 percent in 1970 to 14 percent in 1992. In comparison, the percentage of kindergarten enrollment from low income families was the same in 1970, 8 percent, but increased more, to 21 percent in 1992.

Because enrollment at the preprimary level is often optional, different enrollment patterns emerge from those at the elementary-secondary level. Students in preprimary education may enroll either on a full- or part-day basis, in public or private institutions. Changes in the characteristics of preprimary students may indicate changes in the nature of preprimary education.

Selected characteristics of preprimary students, by level: 1970-92

Year	Pre-k				Kindergarten			
	Percent private	Percent full-day	Percent minority ¹	Percent low income ²	Percent private	Percent full-day	Percent minority ¹	Percent low income ²
1970	69.6	26.6	—	7.8	16.8	13.4	—	7.6
1971	70.3	27.7	—	9.0	17.6	13.6	—	10.5
1972	68.7	31.6	19.0	10.3	15.9	17.9	21.8	10.0
1973	69.8	29.2	20.6	9.5	16.0	19.6	19.2	10.3
1974	73.7	33.2	19.0	—	16.2	19.4	21.0	—
1975	67.2	33.9	20.6	11.7	16.0	22.0	20.6	10.5
1976	68.8	30.3	19.3	10.2	15.1	22.9	22.8	13.2
1977	65.3	32.9	19.9	12.2	16.5	27.7	22.3	13.2
1978	67.8	34.6	21.5	11.1	16.6	27.5	22.6	12.6
1979	66.0	33.5	—	11.7	14.3	29.7	—	14.6
1980	68.1	34.3	21.9	11.3	15.3	30.1	23.7	14.7
1981	67.8	29.3	20.2	12.5	17.2	30.5	24.6	14.8
1982	66.1	29.1	17.9	12.5	16.8	32.4	25.3	17.2
1983	65.6	29.5	18.4	12.7	19.5	32.8	24.0	16.7
1984	67.7	33.9	19.4	10.6	15.2	36.2	24.5	18.9
1985	65.7	34.1	20.1	10.7	15.6	38.3	25.7	18.5
1986	67.3	35.2	19.3	11.8	16.0	39.7	27.7	20.5
1987	67.2	33.4	19.4	11.1	14.8	37.1	28.0	20.1
1988	67.1	31.3	16.6	12.1	13.6	38.0	26.5	17.6
1989	66.2	33.8	18.7	12.1	14.9	40.1	25.7	17.6
1990	64.5	34.2	20.3	14.0	14.4	43.6	28.3	18.4
1991	62.7	35.1	19.3	14.5	15.0	42.8	29.4	20.5
1992	62.1	31.2	20.0	14.2	15.1	43.7	29.6	21.1

—Not available.

¹Includes only blacks and Hispanics.

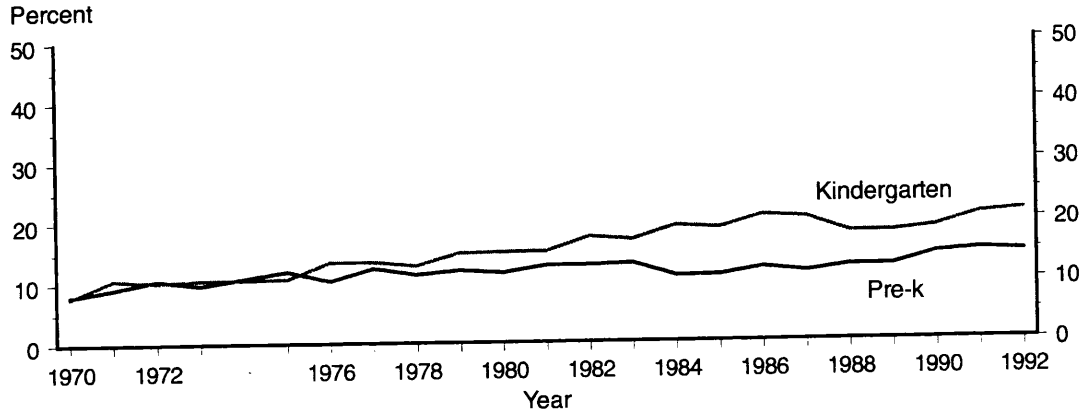
²Low income is the bottom 20 percent of all family incomes.

NOTE: Pre-k and kindergarten enrollment does not include those below 3 years of age.

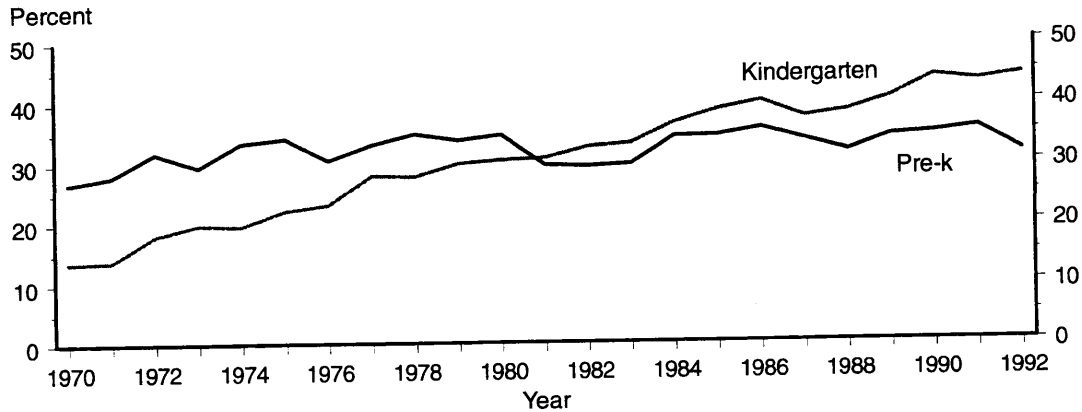
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of preprimary students who are from low income families, attend full-day, and are minority, by level: 1970-92

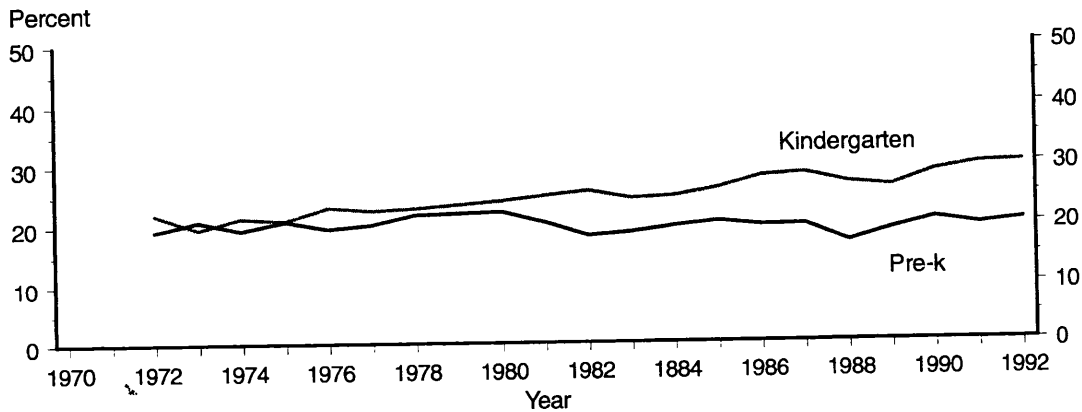
Low income families



Full-day



Minority



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Elementary and secondary school enrollment

- ▶ From 1984 to 1993, total public school enrollment rose 11 percent, after falling 15 percent between 1970 and 1984.
- ▶ From 1970 to 1984, total private school enrollment rose 6 percent, then fell 4 percent from 1984 to 1991.
- ▶ Total public school enrollment is projected to rise from 44.3 million in 1994 to 49.5 million in 2004, an increase of 12 percent. During the same time period, total private school enrollment is expected to rise from 5.6 million to 6.2 million, an increase of 11 percent.
- ▶ Between 1970 and 1992, the South's and West's share of total public enrollment increased, and the Northeast's and the Midwest's declined.

School enrollment is one measure of the size of the education system and of the demand for teachers, buildings, and other resources. Past trends and projected future changes in the composition of enrollment across levels of education and regions of the country, as well as between public and private schools, provide an indication of the types of teachers and other resources required. Elementary and secondary school enrollment is determined primarily by demographics, such as birth rates and immigration.

Elementary and secondary school enrollment, by control and level of school with projections: 1970-2004

Fall of year/ period	Public schools			Private schools		
	Grades K-12 ¹	Grades K-8 ¹	Grades 9-12	Grades K-12 ¹	Grades K-8 ¹	Grades 9-12
	(In thousands)					
1970	45,894	32,558	13,336	5,363	4,052	1,311
1984	39,208	26,905	12,304	² 5,700	² 4,300	² 1,400
1993 ³	43,353	31,374	11,979	5,471	4,280	1,191
	Projected			Projected		
1994	44,254	31,837	12,417	5,565	4,333	1,232
2004	49,506	34,923	14,583	6,200	4,753	1,446
	Percentage change			Percentage change		
1970-84	-14.6	-17.4	-7.7	² 6.3	² 6.1	² 6.8
1984-93	10.6	16.6	-2.6	³ -4.0	³ -0.5	³ -14.9
	Projected percentage change			Projected percentage change		
1994-2004	11.9	9.7	17.4	11.4	9.7	17.4

¹Includes most kindergarten and some nursery school students.

²Estimated.

³Estimates based on preliminary data.

Percentage distribution of public elementary and secondary school enrollment, by region: Selected years, fall 1970-92

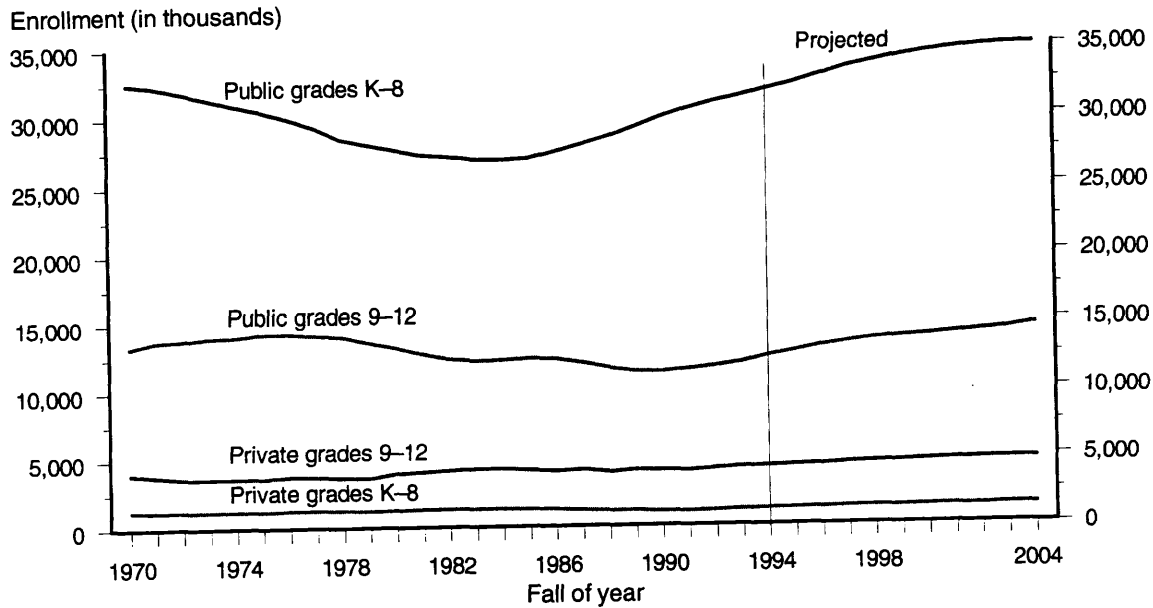
Fall of year	Northeast	Midwest	South	West
1970	21.5	28.2	32.2	18.2
1975	21.6	27.4	32.7	18.3
1980	20.1	26.2	34.6	19.2
1985	18.6	25.0	35.8	20.6
1992	17.6	24.1	35.8	22.5

NOTE: For this indicator, regions of the country are defined differently than in the Glossary. See the note to supplemental table 38-2 for these definitions. Enrollment includes a relatively small number of prekindergarten students.

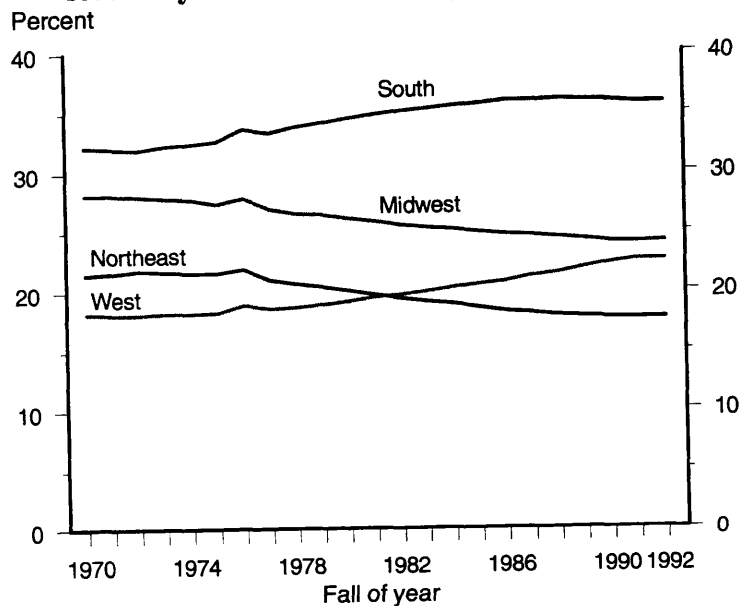
SOURCE: U.S. Department of Education, National Center for Education Statistics, *Historical Trends: State Education Facts, 1992: Common Core of Data, various years; Digest of Education Statistics, 1993, table 3; Projections of Education Statistics to 2004, 1993, table 1. Public School Student, Staff, and Graduate Counts, by State: School year 1992-93, table 1.*

Elementary and secondary school enrollment, by control and level of school and region

Elementary and secondary enrollment, by control and level of school: 1970-2004



Percentage distribution of public elementary and secondary school enrollment, by region: 1970-92



SOURCE: U.S. Department of Education, National Center for Education Statistics, *Historical Trends: State Education Facts, 1992*; Common Core of Data, various years; *Digest of Education Statistics, 1993*, table 3; *Projections of Education Statistics to 2004*, 1993, table 1, *Public School Student, Staff, and Graduate Counts, by State: School year 1992-93*, table 1.

College and university enrollment, by type and control of institution

- ▶ Despite a decline in the number of high school graduates aged 20–24, enrollment in private 4-year institutions increased each year between 1985 and 1992. Enrollment in public 4-year institutions increased every year during the period as well, except for a slight decline between 1991 and 1992.
- ▶ Enrollment in public 2-year institutions fell between 1982 and 1985. Since 1985, however, it has increased annually, with the largest growth occurring between 1990 and 1991.
- ▶ The distribution of total enrollment between public and private institutions has changed little over the last two decades. Public institutions continue to enroll nearly 8 of every 10 students.
- ▶ Within the public sector, enrollment in 2-year institutions grew faster than in 4-year institutions in the late 1980s and early 1990s. As a result, 2-year institutions increased their share of public enrollment from 35 to 38 percent between 1985 and 1992.

Colleges and universities offering 2- and 4-year programs under public and private control address somewhat different student needs. Fluctuations in enrollments may indicate, among other things, changes in student interest in the various kinds of services offered, changes in the cost of attendance, and changes in the availability of student financial aid.

Total enrollment in higher education, by type and control of institution: Fall 1972–92

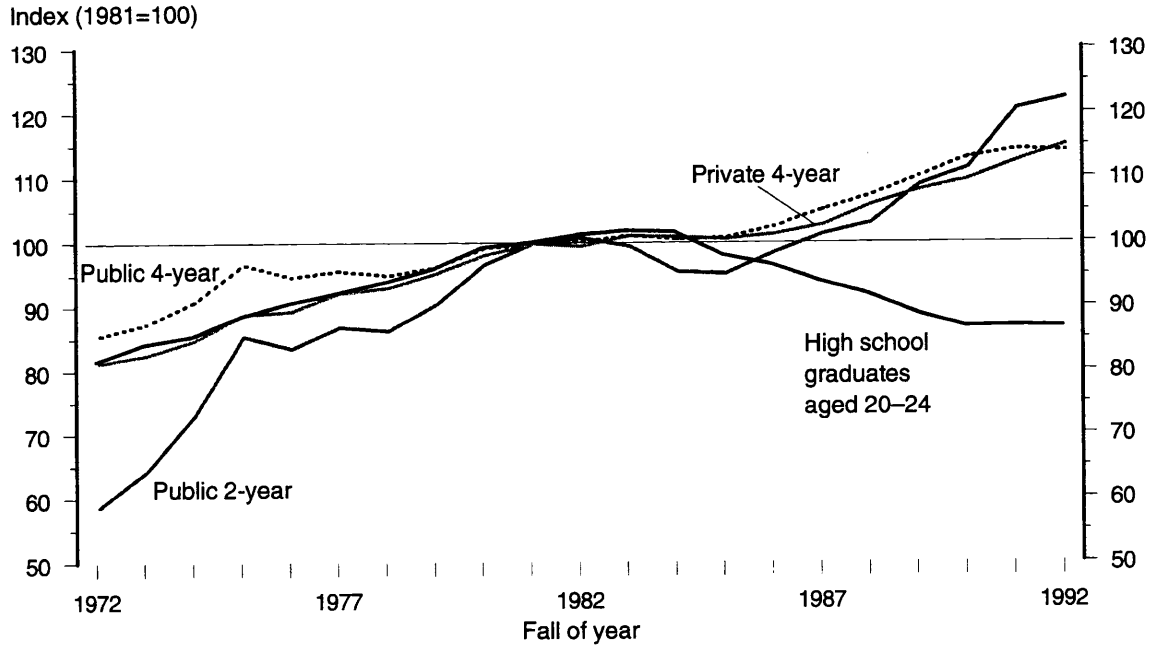
Fall of year	Index of enrollment (1981=100)				Index of high school graduates aged 20–24 (1981=100)	Percentage of enrollment		
	All institutions	Public, 4-year	Public, 2-year	Private, 4-year		Public, 4-year	Public, 2-year	Private, 4-year
1972	74.5	85.7	58.9	81.5	81.6	48.1	28.7	22.0
1973	77.6	87.7	64.5	82.8	84.2	47.2	30.1	21.5
1974	82.6	91.0	73.3	85.0	85.4	46.0	32.1	20.7
1975	90.4	96.7	85.6	89.1	88.5	44.7	34.3	19.8
1976	89.0	94.9	83.7	89.5	90.6	44.5	34.1	20.2
1977	91.2	95.7	87.1	92.3	92.1	43.8	34.6	20.4
1978	91.0	95.1	86.5	93.2	93.9	43.6	34.4	20.6
1979	93.5	96.4	90.5	95.3	95.9	43.0	35.1	20.5
1980	97.8	99.3	96.6	98.1	99.2	42.4	35.8	20.2
1981	100.0	100.0	100.0	100.0	100.0	41.8	36.2	20.1
1982	100.4	100.2	100.9	99.5	101.1	41.7	36.4	19.9
1983	100.8	101.1	99.5	101.2	101.7	41.9	35.8	20.2
1984	99.0	100.6	95.5	101.0	101.6	42.5	35.0	20.5
1985	99.0	100.8	95.3	100.7	97.9	42.5	34.9	20.5
1986	101.1	102.6	98.5	101.4	96.5	42.4	35.3	20.2
1987	103.2	105.1	101.3	102.8	93.8	42.5	35.6	20.0
1988	105.5	107.3	103.0	105.8	91.9	42.5	35.4	20.2
1989	109.4	110.2	109.0	108.2	88.8	42.1	36.1	19.9
1990	111.7	113.2	111.5	109.7	86.8	42.3	36.2	19.8
1991	116.1	114.3	120.6	112.6	86.8	41.1	37.6	19.5
1992	117.1	114.2	122.4	115.1	86.7	40.7	37.9	19.8

NOTE: Data for 2-year private institutions are not shown separately, but are included in the total.

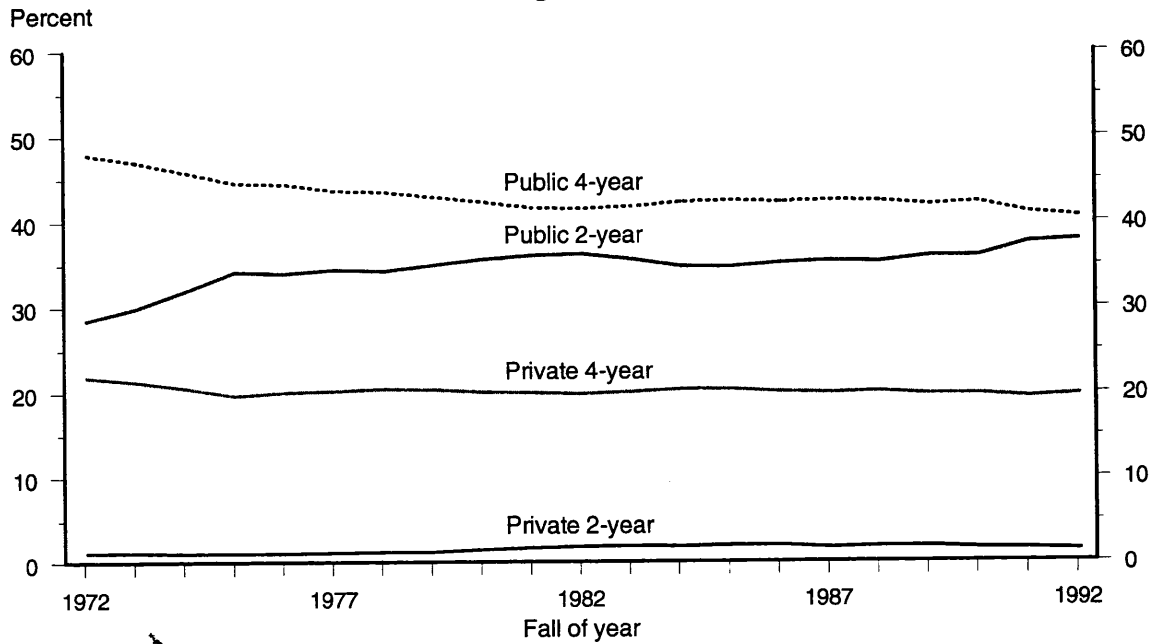
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years. U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

**Total enrollment in higher education, by type and control of institution:
Fall 1972-92**

Index of enrollment and high school graduates



Percentage of enrollment



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years. U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Degrees conferred, by level

- ▶ The number of bachelor's degrees grew throughout the 1980s and the early 1990s despite a decline in the number of individuals completing high school.
- ▶ The number of master's degrees fell between 1977 and 1984 but increased each year after that, reaching its highest level to date in 1991.
- ▶ Following years of decline or little growth, the number of doctor's degrees conferred rose 19 percent between 1985 and 1991.
- ▶ After years of continuous growth, the number of first-professional degrees declined and then leveled off during the 1985–91 period.

Trends in the number of degrees conferred, by degree levels, provide clues to changes in the productivity of the nation's higher education system, the allocation of resources within the system, and the level of trained individuals within society. Viewed in relation to the eligible population—for example, the number of high school graduates—the data show whether degrees conferred have lagged behind or exceeded growth in that population.

Index of number of degrees conferred, by degree level and number of high school completions (1981=100): Academic years ending 1971–91

Academic year ending	Associate's degrees	Bachelor's degrees	Master's degrees	Doctor's degrees	First-professional degrees ¹	High school completions ²
1971	60.7	89.8	77.9	97.4	52.7	—
1972	70.2	94.9	85.1	101.2	60.3	—
1973	75.9	98.6	89.1	105.5	69.5	—
1974	82.6	101.1	93.7	102.6	74.8	96.0
1975	86.5	98.7	98.9	103.4	77.7	99.0
1976	94.0	99.0	105.4	103.4	87.1	99.2
1977	97.6	98.3	107.2	100.8	89.4	99.4
1978	99.0	98.5	105.4	97.5	92.5	100.0
1979	96.7	98.5	101.8	99.3	95.7	101.0
1980	96.3	99.4	100.8	99.0	97.5	100.4
1981	100.0	100.0	100.0	100.0	100.0	100.0
1982	104.4	101.9	99.9	99.2	100.1	99.2
1983	109.6	103.7	98.0	99.4	101.6	95.6
1984	108.7	104.2	96.1	100.8	103.4	91.0
1985	109.2	104.7	96.8	100.0	104.3	88.1
1986	107.1	105.6	97.6	102.1	102.7	87.5
1987	105.0	106.0	97.9	103.5	101.1	89.4
1988	104.6	106.2	101.0	105.7	97.9	91.5
1989	104.9	108.9	105.0	108.4	98.5	89.5
1990	109.2	112.2	109.5	116.0	98.6	86.0
1991	115.7	117.0	114.0	119.2	100.0	84.6

—Not available.

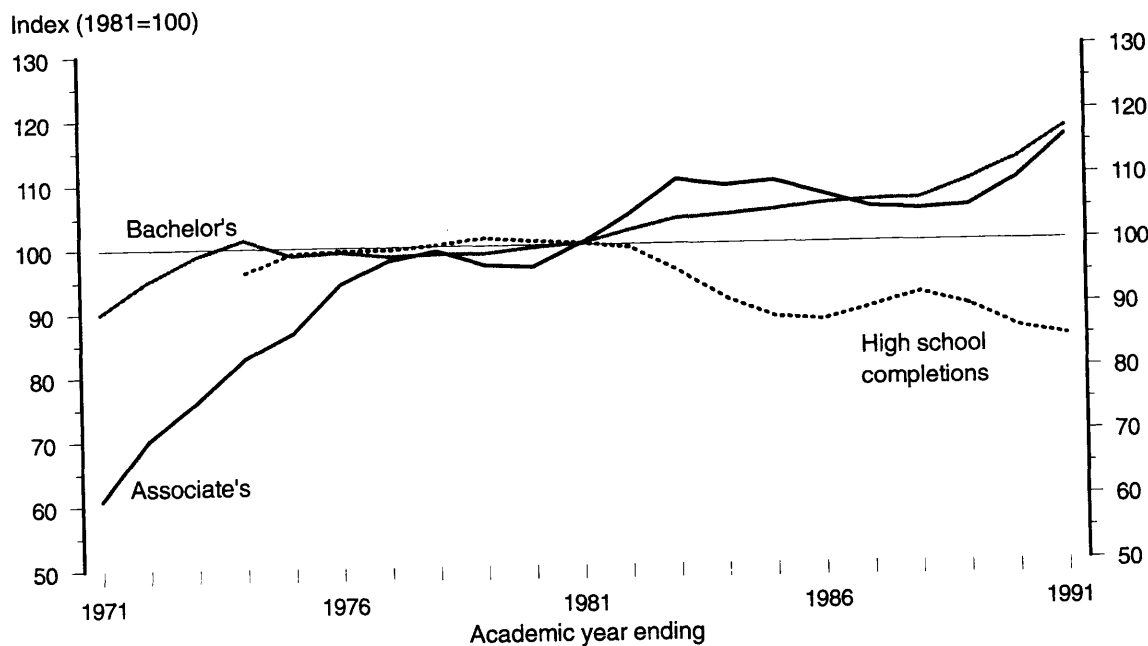
¹Includes degrees in law, medicine, dentistry, and theology. See Glossary for a full definition.

²High school completions include high school diplomas and GED credentials.

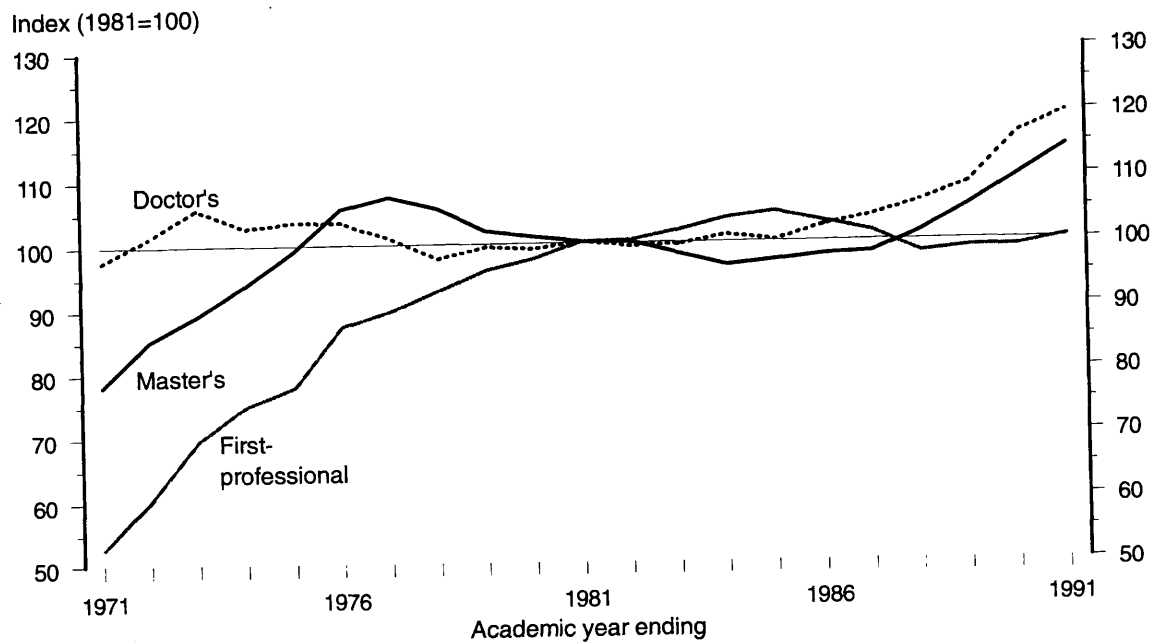
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred and Common Core of Data. American Council on Education, annual GED surveys.

Index of number of degrees conferred, by degree level, and number of high school completions (1981=100): Academic years ending 1971-91

Associate's and bachelor's degrees



Advanced degrees



NOTE: High school completions include diplomas and GED credentials.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred and Common Core of Data. American Council on Education, annual GED surveys.

Bachelor's degrees conferred, by field of study

- ▶ After declining for several years, the number of degrees conferred in the humanities and the social and behavioral sciences has grown since the mid-1980s.
- ▶ The number of degrees earned in engineering declined 20 percent between 1985 and 1991.
- ▶ Education degrees grew faster than bachelor's degrees as a whole between 1987 and 1991. However, they made up a substantially smaller proportion of all baccalaureates in 1991 (10 percent) than in 1971 (21 percent) because of sharp declines in the field between the early 1970s and mid-1980s.
- ▶ Business degrees grew as a percentage of all bachelor's degrees between 1973 and 1988, when they reached a peak of 24.5 percent. Since then, their share of total degrees has fallen.

Changing opportunities within the job market affect the fields in which students choose to major. In turn, student choices of major affect the demand for courses and faculty, as well as the supply of new graduates in different fields. Trends in the number and proportion of bachelor's degrees conferred in different fields help to identify these changing conditions.

Bachelor's degrees conferred, by field of study: Selected academic years ending 1971–91

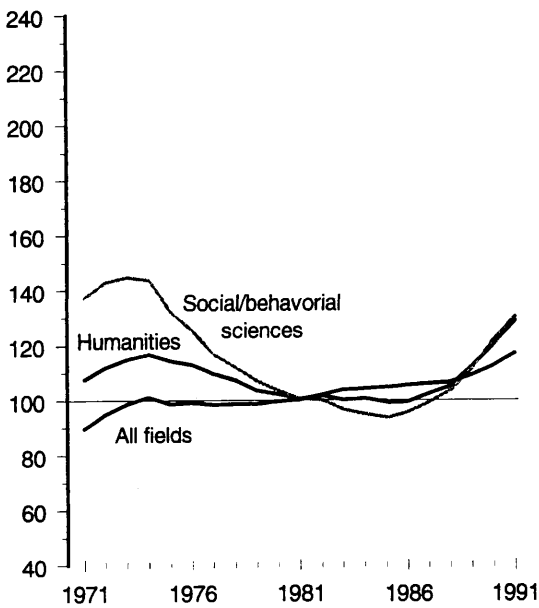
Field of study	1971	1976	1981	1986	1991
	Index of the number of degrees (1981=100)				
All fields	89.8	99.0	100.0	105.6	117.0
Humanities	107.1	112.4	100.0	98.8	128.3
Social/behavioral sciences	136.8	124.8	100.0	95.1	129.9
Life sciences	82.7	125.6	100.0	89.1	91.5
Physical sciences	89.4	89.6	100.0	90.7	68.2
Mathematics	223.9	144.3	100.0	147.2	132.3
Computer and information sciences	15.8	37.4	100.0	277.0	165.9
Engineering	70.9	60.7	100.0	120.6	97.4
Engineering technologies	44.0	67.8	100.0	167.5	147.1
Education	163.1	142.9	100.0	80.5	102.5
Business and management	57.6	71.4	100.0	119.5	125.4
Health sciences	39.8	84.5	100.0	101.9	93.6
Other technical/professional	43.2	86.4	100.0	97.0	108.9
	Percentage of total degrees				
All fields	100.0	100.0	100.0	100.0	100.0
Humanities	17.1	16.3	14.3	13.4	15.7
Social/behavioral sciences	23.0	19.0	15.1	13.6	16.8
Life sciences	4.3	5.9	4.6	3.9	3.6
Physical sciences	2.5	2.3	2.6	2.2	1.5
Mathematics	3.0	1.7	1.2	1.7	1.3
Computer and information sciences	0.3	0.6	1.6	4.2	2.3
Engineering	5.3	4.1	6.8	7.7	5.6
Engineering technologies	0.6	0.9	1.3	2.0	1.6
Education	21.0	16.7	11.6	8.8	10.1
Business and management	13.7	15.4	21.3	24.1	22.8
Health sciences	3.0	5.8	6.8	6.5	5.4
Other technical/professional	6.2	11.3	12.9	11.8	12.0

NOTE: See Glossary for definitions of field of study.

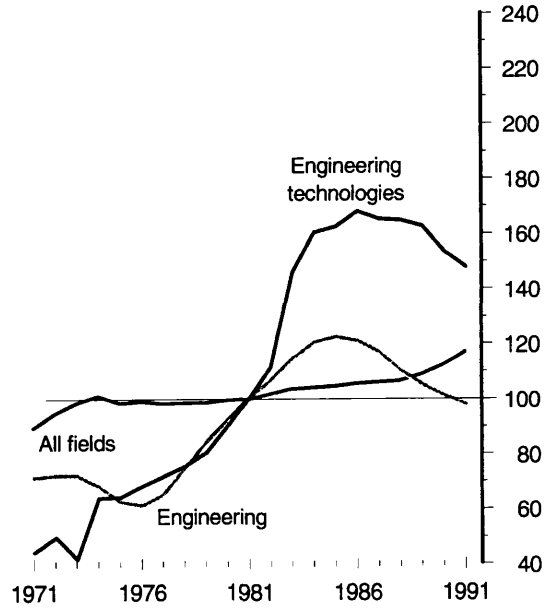
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

**Index of the number of bachelor's degrees conferred, by selected fields of study:
Academic years ending 1971-91**

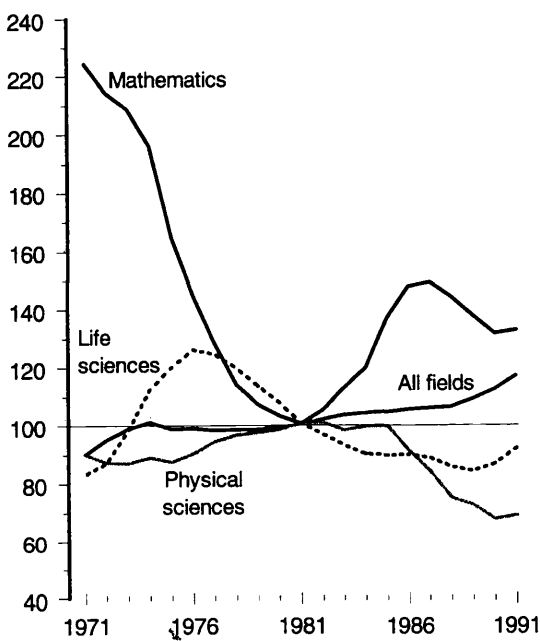
Humanities and social/behavioral sciences



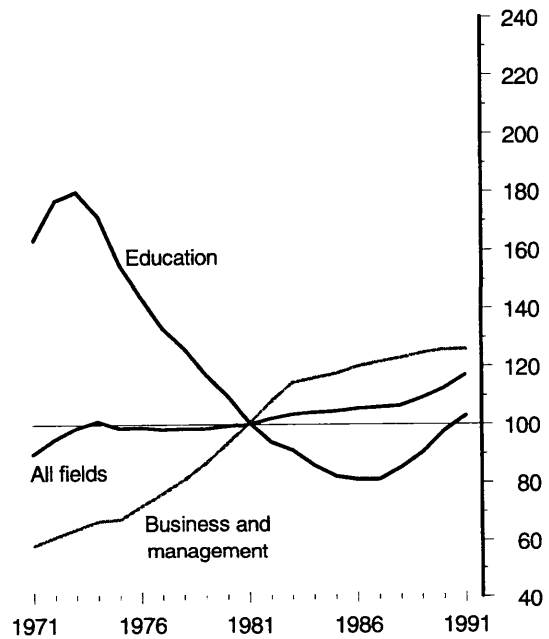
Engineering and engineering technologies



Natural sciences



Education and business



NOTE: See Glossary for definitions of fields of study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.



*Climate, Classrooms, and Diversity in
Educational Institutions*

The quality of a student's education is reflected not only in the subject areas taught in school, but in the learning environment schools provide and in the importance attached to education outside of school. The features of schools and students that bear on the learning environment are too numerous to be adequately covered by a few indicators, and national data on many aspects of interest about this environment are lacking. Therefore, the indicators in this section must be viewed only as a small sampling of the indicators necessary to fully describe the learning environment of students.

Diversity of Students

The demographic characteristics of American families necessarily describe the characteristics of elementary and secondary school students and the special needs they bring with them to school. One out of five children under the age of 18 lives in a family with income below the poverty level (*Indicator 47*). These children are likely to be concentrated in some schools and largely absent in others. Forty-six percent of black and 39 percent of Hispanic children live in poverty. Since more than half the children in public schools in the central cities of metropolitan areas are black or Hispanic (*Indicator 42*), central city public schools tend to have higher percentages of children living in poverty than public schools in suburban or nonmetropolitan areas.

In 1992, Hispanic children ranged from 4 percent of children in public schools in nonmetropolitan areas to 21 percent of children in public schools in the central cities. Black children ranged from 7 percent of students in private schools to 33 percent of children in public schools in central cities (*Indicator 42*). Racial and ethnic diversity in the schools also brings cultural diversity. Hispanic and Asian children are more likely to speak a language other than English at home. In 1990, a higher percentage of children aged 5-17 spoke a language other than English at home and had difficulty speaking English than children of the same age ten years before (*Indicator 46*).

Higher education institutions are less diverse than public elementary and secondary schools because minorities, with the exception of Asians, are less likely than whites to enroll in higher

education. Overall, in 1990, 16 percent of public school children were black, 12 percent were Hispanic, 3 percent were Asian, and 1 percent were American Indian (Table 42-2). In higher education, blacks, Hispanics, Asians, and American Indians accounted for 9, 6, 4, and 1 percent of students, respectively, in 1990 (*Indicator 50*).

Students attending different types of higher education institutions often come from different backgrounds and vary in age, marital status, and financial independence. Students attending a private for-profit college are more likely to have parents who were high school graduates or less or to be from relatively low income families than those in public or private nonprofit institutions. Conversely, students attending a private, non-profit, Ph.D.-granting college or university are more likely to have parents who are college graduates or to come from a family with a relatively high income. In addition, 2-year public institutions and private for-profit institutions have higher proportions of older and financially independent students than other types of institutions (*Indicator 51*).

Classrooms

Students with disabilities bring unique needs to the classroom. These disabilities are of varying severity and include learning disabilities, speech impairments, mental retardation, serious emotional disturbances, and visual or hearing impairments. The Individuals with Disabilities Education Act (IDEA) mandates that all children have available to them a free and appropriate education designed to meet their unique needs. This education can either be in the form of instruction in a separate classroom or mainstreaming into a regular classroom. In 1992, students with disabilities receiving service in federal programs equalled nearly 12 percent of all students enrolled in grades K-12, up from 9 percent in 1977 (*Indicator 45*). This increase is due in part to the increase in the number of students identified as learning disabled. Students with disabilities were equally as likely to be placed in a separate classroom in 1991 as they were in 1986. Only 69 percent of all students with disabilities were served in a regular classroom with other students.

At the postsecondary level, the quality of a student's education can be enhanced by the amount of classroom-level contact the student has with the faculty. Courses in colleges and universities are taught by faculty of wide-ranging ranks and in classes of varying sizes. At research universities in 1988, the majority of an undergraduate's classroom contact with faculty was with senior faculty (full and associate professors). However, senior faculty taught larger classes than faculty of lower rank. Generally, students in lower division courses had about the same exposure to senior faculty as students in upper division courses, but in significantly larger classes (*Indicator 51, Condition 1993*).

Climate

The learning climate both reflects and influences the behavior of students and is affected by events within and outside of the school. The degree to which students come to class prepared to learn impacts the learning environment. Additionally, exposure to drugs and alcohol both within and outside of the school environment may affect learning. Outside the classroom, the extent to which parents are involved in their children's education can influence the likelihood that their children will be successful in school. Finally, time spent on outside employment may impact a student's education.

The effectiveness of the classroom is largely dependent on the preparedness of the students in the class. Students in public schools are more likely than students in Catholic schools to come to school unprepared—without books or without having done their homework (*Indicator 44*). Completing homework and bringing the appropriate materials to class may be indications of the student's motivation. In addition, as more students come to class prepared, teachers are able to spend more time on instruction and less time on discipline and administrative affairs.

Drugs and alcohol affect the climate of the school by interfering with the learning process. In-school drug and alcohol use has fallen dramatically over the past decade. For example, in 1980, 21 percent of seniors reported having used marijuana at school during the previous

year, compared to only 5 percent in 1992 (*Indicator 48*). Students were more likely to encounter someone trying to sell them drugs at school in public schools and in urban and suburban areas than in private schools or rural areas. Problems may arise when these substances impair a student's ability to think and to learn, and when they negatively affect the school's climate.

Parental involvement can take many forms. Parents can play an active role in their student's life, both by becoming involved in school-related issues and by regulating a student's out-of-school activities. Most eighth grade students reported that they talk with their parents about school-related issues (85 to 91 percent), that their parents check their homework (90 percent), and that their parents limit their social activities (89 percent). Smaller percentages reported that their parents spoke with a teacher or counselor (60 percent) or visited their classes (29 percent). Black students were more likely than whites and Asians to report that their parents had visited the classroom. Asian students were more likely than students from any other racial/ethnic group to report that their parents limited their television viewing (*Indicator 43*).

Students spend more time outside of school than in school, so their use of time outside of school has important consequences for their learning. In 1992, about 30 percent of high school students were employed, and 11 percent reported working 20 or more hours per week (*Indicator 49*). Whites were more likely than their black or Hispanic peers to work while in school. A larger percentage of students held a job while in college (47 percent), although only a quarter worked 20 or more hours a week and only 6 percent worked full-time (table 49-2). In addition, about one out of six full-time students enrolled in bachelor's degree programs performed community service during the 1989-90 academic year, with 4 out of 10 doing work related to their future careers (*Indicator 52*). While a job or related activity could take time away from a student's studies, it may also provide the student with an education that cannot be achieved inside a classroom.

Racial and ethnic distribution of elementary and secondary students

- ▶ Since 1970, almost one out of every three students in central city public schools has been black. In 1992, almost 10 percent of the students in metropolitan-area public schools outside of central cities were black, up from 6 percent in 1970.
- ▶ In 1992, two out of every 10 students in central city public schools were Hispanic, up from 1 in 10 in 1972.
- ▶ Since 1981, black and Hispanic students have comprised the majority of public school students in central cities (see supplemental table 42-1).
- ▶ In 1992, 7 percent of students in private schools were black and 8 percent were Hispanic, up from 5 percent in 1972 in each case.

Changes in the racial/ethnic composition of students may contribute to a greater degree of heterogeneity of language and culture in our nation's schools. While a variety of backgrounds and interests of students can enhance the learning environment, it can also create new or increased challenges for the schools. Many minority students come from poor or non-English language backgrounds and may be at greater risk of not succeeding in school than other children.

Percentage of black and Hispanic students in grades 1 through 12, by control of school and metropolitan status: 1970-92

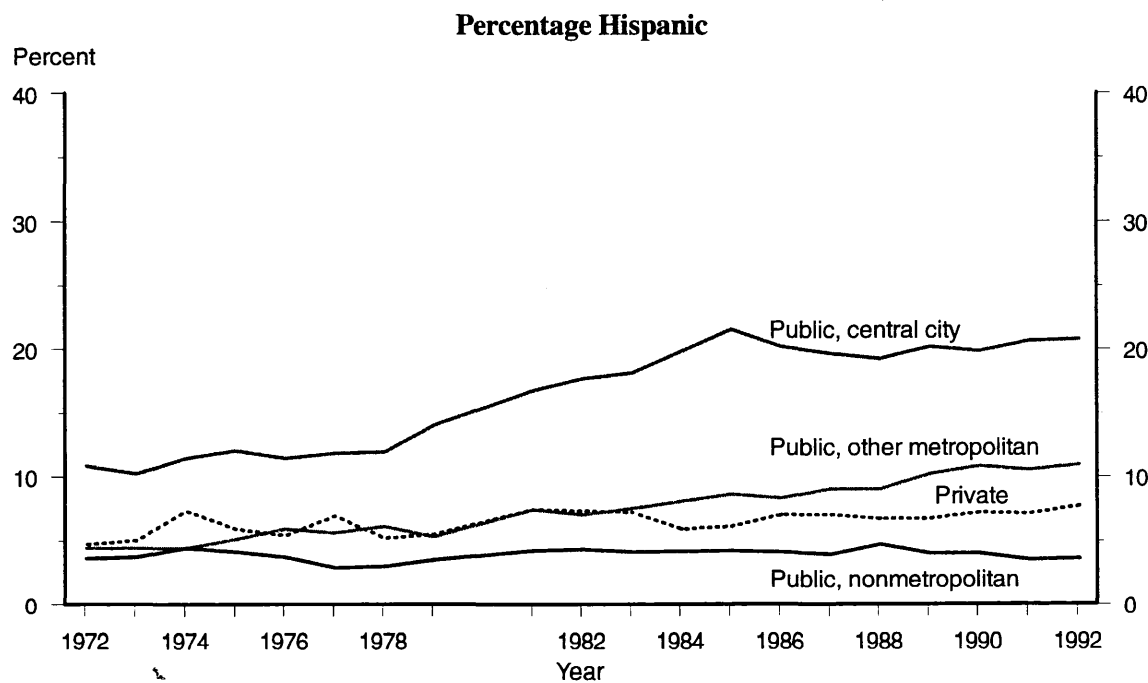
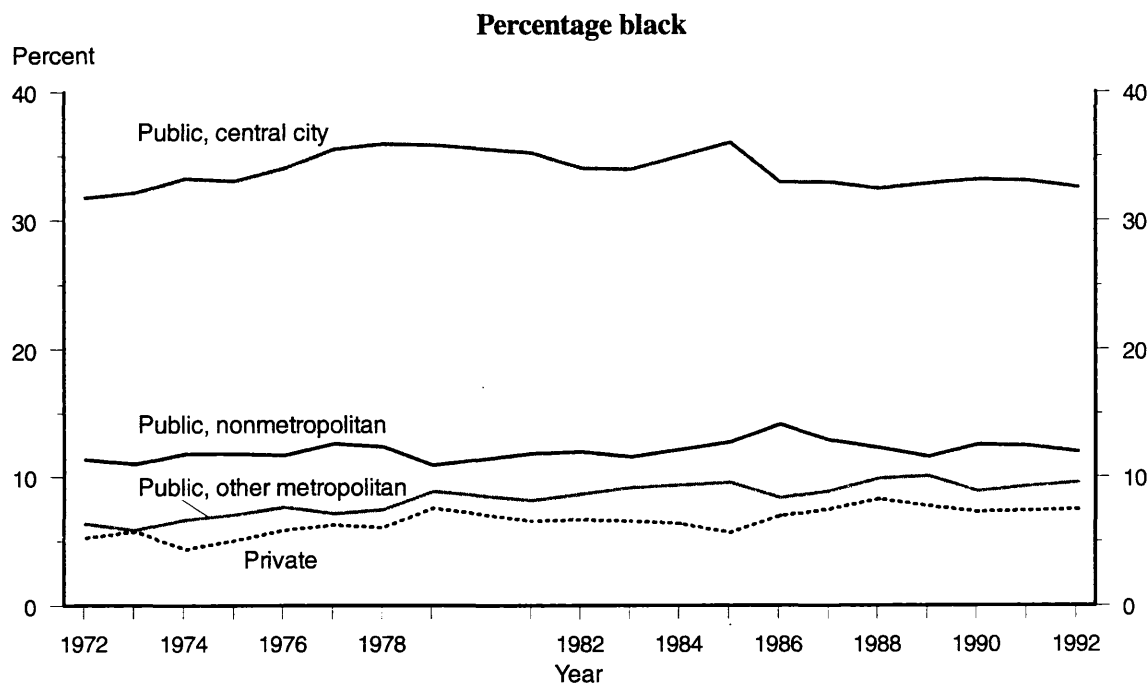
Year	Black					Hispanic				
	Total	Public schools			Private schools	Total	Public schools			Private schools
		Central cities	Other metropolitan	Non-metropolitan			Central cities	Other metropolitan	Non-metropolitan	
1970	14.8	32.5	6.2	12.0	4.7	—	—	—	—	—
1971	15.2	34.4	6.5	11.6	4.6	—	—	—	—	—
1972	14.9	31.7	6.3	11.3	5.2	5.8	10.8	4.4	3.6	4.7
1973	14.8	32.1	5.8	11.0	5.7	5.7	10.2	4.4	3.7	5.0
1974	15.4	33.2	6.6	11.8	4.3	6.2	11.4	4.4	4.4	7.3
1975	15.6	33.0	7.0	11.8	5.0	6.6	12.0	5.1	4.1	5.9
1976	16.0	34.0	7.6	11.7	5.8	6.6	11.4	5.9	3.7	5.4
1977	15.9	35.5	7.1	12.6	6.2	6.2	11.8	5.6	2.9	6.9
1978	16.1	35.9	7.4	12.3	6.0	6.4	11.9	6.1	3.0	5.2
1979	16.1	35.8	8.8	10.9	7.5	6.8	14.0	5.3	3.5	5.5
1980	—	—	—	—	—	—	—	—	—	—
1981	16.2	35.2	8.1	11.8	6.5	8.6	16.7	7.4	4.2	7.4
1982	16.2	34.0	8.6	11.9	6.6	8.7	17.7	7.0	4.3	7.3
1983	16.3	33.9	9.1	11.5	6.5	9.1	18.1	7.5	4.1	7.2
1984	16.1	—	—	—	6.3	8.5	—	—	—	5.9
1985	17.0	36.0	9.5	12.7	5.6	10.1	21.5	8.6	4.2	6.1
1986	16.7	32.9	8.3	14.1	6.9	10.6	20.2	8.3	4.1	7.0
1987	16.7	32.9	8.8	12.8	7.4	10.7	19.6	9.0	3.9	7.0
1988	16.8	32.4	9.8	12.2	8.2	10.8	19.2	9.0	4.7	6.7
1989	16.7	32.8	10.0	11.5	7.7	11.4	20.2	10.2	4.0	6.7
1990	16.5	33.1	8.8	12.5	7.2	11.6	19.8	10.8	4.0	7.2
1991	16.7	33.0	9.2	12.4	7.3	11.7	20.6	10.5	3.5	7.1
1992	16.7	32.5	9.5	11.9	7.4	11.9	20.8	10.9	3.6	7.7

—Not available.

NOTE: Control of school not available in 1980. Residence of students not available in 1984. The definition of metropolitan areas in the U.S. was changed in 1985. A small number of black students (less than 1 percent) are also Hispanic.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, "School Enrollment ...," various years; October Current Population Surveys.

Race and ethnicity of students in grades 1 through 12, by control of school and metropolitan status: 1972-92



SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, "School Enrollment..." various years, October Current Population Surveys.

Parent involvement in education

- ▶ In 1988, more than 80 percent of eighth grade students reported that they had talked with their parents about school life and selecting courses. Six out of ten students reported that their parents had spoken to a teacher or counselor; however, relatively few students reported that their parents had visited their classes.
- ▶ Female students were more likely to report talking with their parents about school life than male students. Male students were more likely to report that their parents have spoken with a teacher or counselor.
- ▶ Asian eighth-graders were less likely to report that their parents had talked to their teachers or counselors than other students. Black students were more likely than whites and Asians to report that their parents had visited their classroom. White students were more likely than others, except Asians, to report that their parents had talked with them about selecting courses.
- ▶ Eighth grade students who attended schools in urban areas were more likely than those who attended schools in suburban or rural areas to report that their parents had spoken with their teachers or counselors and had visited classes, but were less likely to talk about selecting courses.
- ▶ Students with three or more misbehavior incidents were less likely to report that their parents limited their television viewing or going out with friends than students with fewer than three misbehavior incidents (see supplemental table 43-2).

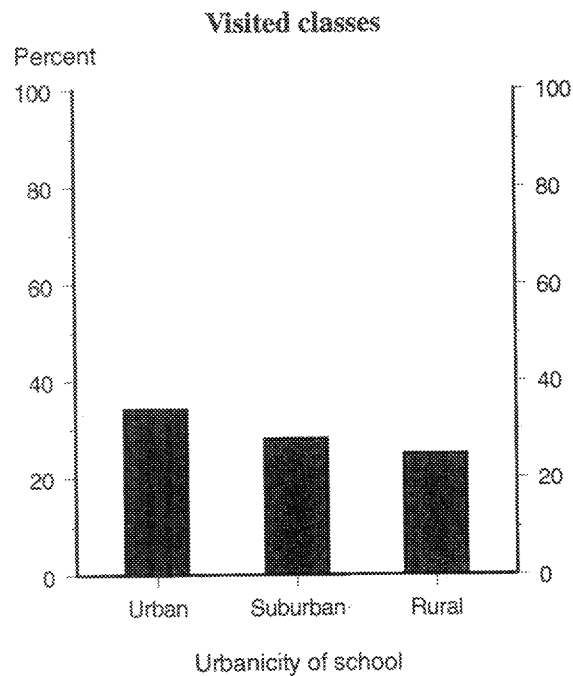
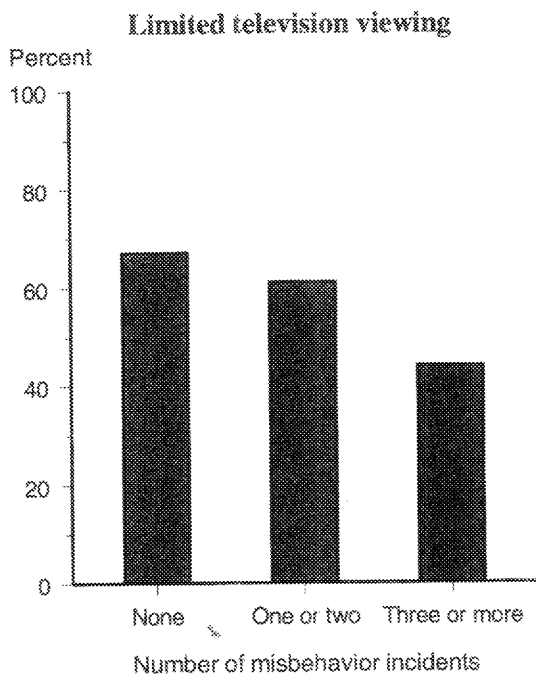
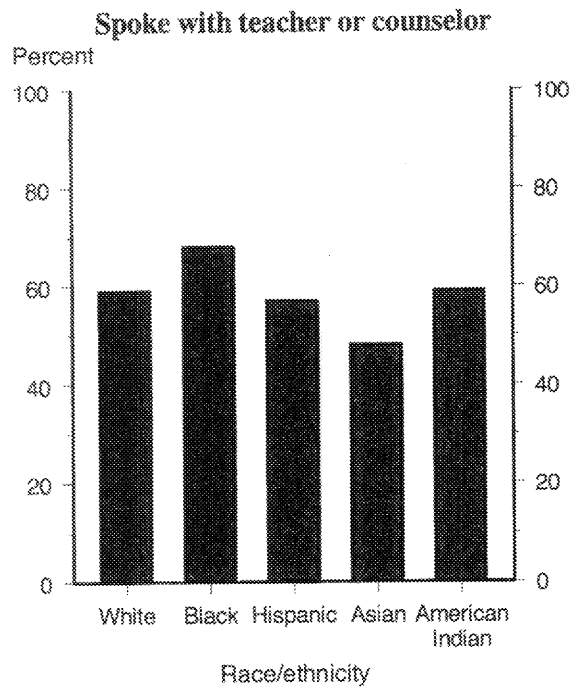
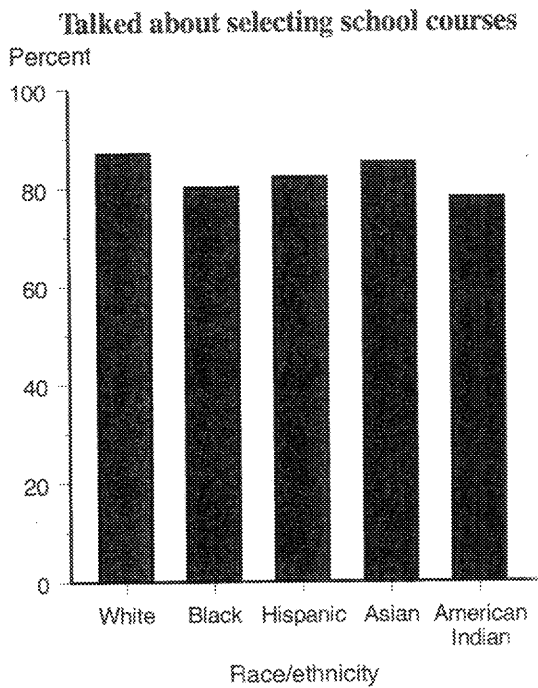
Parents may be able to improve the academic performance of their children by becoming more involved in their school life. Teachers often request more parent involvement in the form of discussing school life with students, helping students with homework, visiting the classroom, and meeting with teachers. From Head Start to efforts to create effective high schools, parent involvement is regarded as an integral system component.

Percentage of eighth grade students who reported various types of parent involvement, by sex, race/ethnicity, and urbanicity of school: School year ending 1988

Type of parent involvement	Sex			Race/ethnicity					Urbanicity		
	Total	Male	Female	White	Black	Hispanic	Asian	American Indian	Urban	Suburban	Rural
Talked about:											
selecting courses	85	82	89	87	80	82	85	78	82	87	85
school activities	91	89	93	92	91	86	90	87	90	91	91
class studies	88	86	91	89	88	84	87	87	88	89	88
Checked homework	90	91	89	90	93	90	90	90	92	90	89
Limited T.V. viewing	65	64	63	63	60	67	77	59	65	64	60
Limited going out with friends	89	88	90	89	86	89	88	82	90	89	88
Spoke with teacher/ counselor	60	64	56	59	68	57	48	59	64	61	54
Visited classes	29	29	28	26	36	34	28	32	34	28	25

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988.

Percentage of eighth grade students who reported various types of parent involvement, by race/ethnicity, misbehavior incidents, and urbanicity of school: 1988



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988.

Student preparedness for class

- ▶ In 1990, a lower percentage of high school sophomores reported that they usually or often come to school without books, paper and pencil, and completed homework, than in 1980.
- ▶ Males were more likely than females to report coming to school without the basic supplies; however, both groups were less likely to come to school unprepared in 1990 than in 1980.
- ▶ Sophomores enrolled in Catholic schools in 1990 were less likely to report coming to school without their homework completed than sophomores enrolled in public schools.
- ▶ Students with poor performance in reading, vocabulary, and mathematics were the most likely to come to school unprepared. Sophomores who scored in the lowest quartile in both 1980 and 1990 were more likely to report that they were unprepared on each of the three measures than students who scored in either the second, third, or highest quartiles.

Students' motivation and willingness to learn help to determine their overall educational experience. In order for students to have a successful educational experience, they must come to class ready to learn, with books, paper, pencil, and completed homework.

Percentage of high school sophomores who reported they usually or often come to school without books, paper, pen or pencil, and/or homework completed, by selected student characteristics: 1980 and 1990

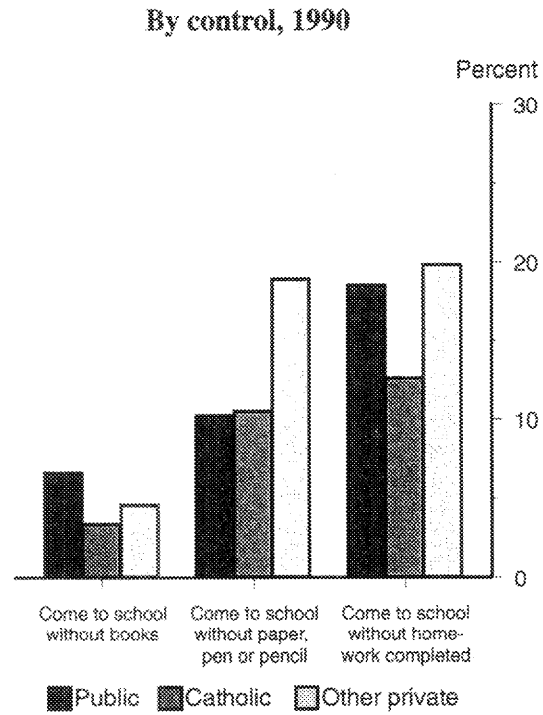
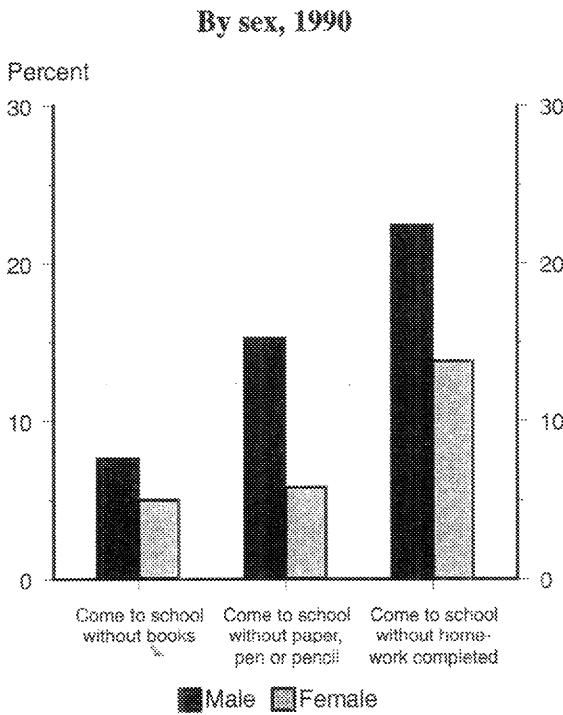
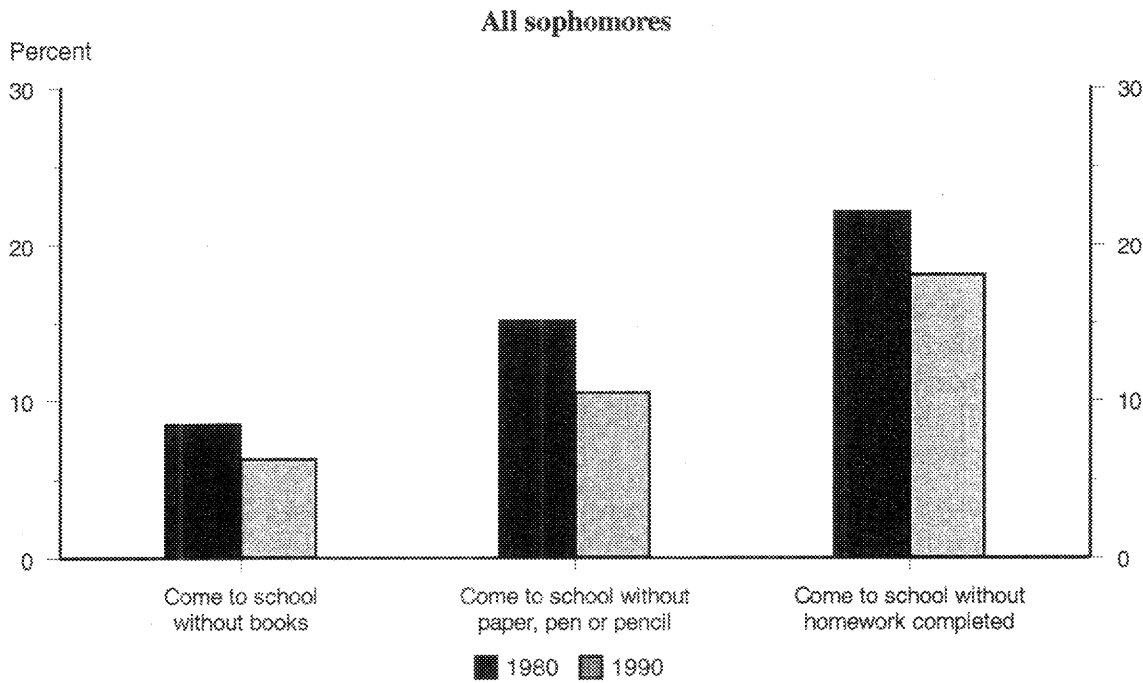
Characteristics	Come to school without books		Come to school without paper, pen or pencil		Come to school without homework completed	
	1980	1990	1980	1990	1980	1990
All sophomores	8.5	6.3	15.1	10.5	22.1	18.1
Sex						
Male	10.4	7.6	19.6	15.2	27.0	22.4
Female	6.0	5.0	10.2	5.8	16.8	13.8
Race/ethnicity						
White	6.7	5.1	13.9	10.2	21.2	18.1
Black	13.7	8.1	17.6	9.6	22.9	16.0
Hispanic	13.8	10.9	20.1	13.5	27.7	20.6
Asian	13.0	9.5	14.6	11.0	17.1	17.6
American Indian	17.5	11.1	25.9	11.8	30.9	21.9
Control of school						
Public	8.9	6.6	15.2	10.2	22.6	18.5
Catholic	4.5	3.4	14.7	10.5	17.2	12.6
Other private	5.4	4.6	13.6	18.9	17.7	19.8
SES quartile ¹						
Lowest	11.3	8.4	16.8	10.7	25.1	19.6
Middle	7.7	6.4	14.2	9.9	21.5	18.4
Highest	5.5	3.5	13.6	10.8	18.4	15.3
Test quartile ²						
Lowest	17.1	12.8	21.9	15.1	28.5	23.8
Second	8.1	6.4	14.3	10.0	22.8	19.3
Third	4.8	3.8	12.1	7.8	19.8	16.2
Highest	3.0	2.5	10.8	8.2	16.2	14.3

¹SES quartiles provide a relative measure of the socioeconomic status of families. The middle two quartiles were collapsed, creating a three-level SES scale with the values "lowest" (lowest quartile), "middle" (the two middle quartiles), and "highest" (highest quartile). See Glossary for further explanation.

²Test quartiles provide a general ability measure of students. The composite test quartile was computed from the average weighted nonmissing responses to standardized test scores for reading, vocabulary, and mathematics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *America's High School Sophomores: A Ten Year Comparison*; High School and Beyond, Base Year Survey (1980); and National Education Longitudinal Study of 1988, First Follow-up Student Survey (1990).

Percentage of high school sophomores who reported they usually or often come to school without books, paper, pen or pencil, and/or homework completed: 1980 and 1990



SOURCE: U.S. Department of Education, National Center for Education Statistics, *America's High School Sophomores: A Ten Year Comparison*; High School and Beyond, Base Year Survey (1980); and National Education Longitudinal Study of 1988, First Follow-up Student Survey (1990).

Education of students with disabilities

- ▶ The number of students participating in federal programs for children with disabilities increased each year between 1977 and 1992, despite a decrease in elementary and secondary enrollment during the late 1970s and mid-1980s.
- ▶ In 1992, students with disabilities receiving services in federal programs equalled nearly 12 percent of all students enrolled in grades K–12.
- ▶ The percentage of disabled students identified as learning disabled rose 19 percentage points (from 22 to 45 percent) between 1977 and 1992, while the proportion identified as mentally retarded or with speech impairments fell 15 percentage points (from 26 to 11 percent and from 35 to 20 percent of the total, respectively).
- ▶ During the 1990–91 school year, 94 percent of students with disabilities were taught in regular school buildings. Of these students, 93 percent of those with speech impairments were taught in regular classrooms and/or resource rooms as compared to 17 percent of deaf-blind students. Fifty-eight percent of mentally retarded students were taught in separate classrooms as compared to 6 percent of students with speech impairments (see supplemental table 45-6).

The Individuals with Disabilities Education Act (IDEA) mandates that all children have available to them a free and appropriate education designed to meet their unique needs. Changes in the number and distribution of students with disabilities affect the level of effort required of educators and policymakers to comply with the current law and help them to forecast the need for resources in the future.

Children from birth to age 21 served by federally supported programs for students with disabilities, by type of disability: Selected school years ending 1977–92

Type of disability	1977	1979	1981	1983	1985	1987	1989	1990	1991	1992
Percentage distribution										
All conditions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Learning disabilities	21.6	29.1	35.2	40.9	42.5	43.8	43.7	44.2	44.6	45.0
Speech impairments	35.3	31.2	28.2	26.6	26.1	26.0	21.5	21.0	20.7	20.0
Mental retardation	26.0	23.2	20.0	17.8	16.1	14.7	12.4	11.8	11.2	11.1
Serious emotional disturbance	7.7	7.7	8.4	8.3	8.6	8.8	8.3	8.2	8.2	8.0
Preschool*	(*)	(*)	(*)	(*)	(*)	(*)	8.7	9.1	9.3	10.0
Number of children served as a percentage of total public K–12 enrollment										
All conditions	8.5	9.3	10.3	10.8	10.9	10.9	11.2	11.3	11.4	11.7
Learning disabilities	1.8	2.7	3.7	4.4	4.6	4.8	4.9	5.0	5.1	5.3
Speech impairments	3.0	2.9	2.9	2.9	2.9	2.8	2.4	2.4	2.4	2.3
Mental retardation	2.2	2.2	2.1	1.9	1.8	1.6	1.4	1.3	1.3	1.3
Serious emotional disturbance	0.6	0.7	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.9
Preschool*	(*)	(*)	(*)	(*)	(*)	(*)	1.0	1.0	1.1	1.2

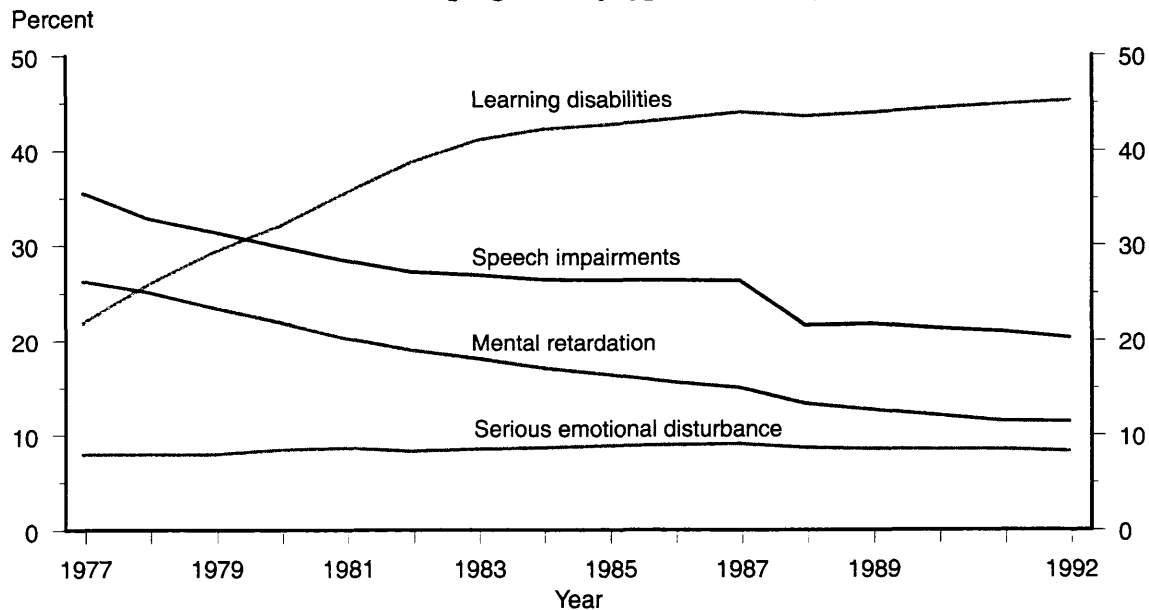
*Prior to the 1987–88 school year, these students were included in the counts by type of disability. Beginning in the 1987–88 school year, states are no longer required to report preschool students (0–5 years) with disabilities by type of disability.

NOTE: Includes students served under Chapter 1 of the Education Consolidation and Improvement Act (ECIA) and Part B of IDEA. Refer to supplemental tables 45-2 and 45-3 for additional disability categories.

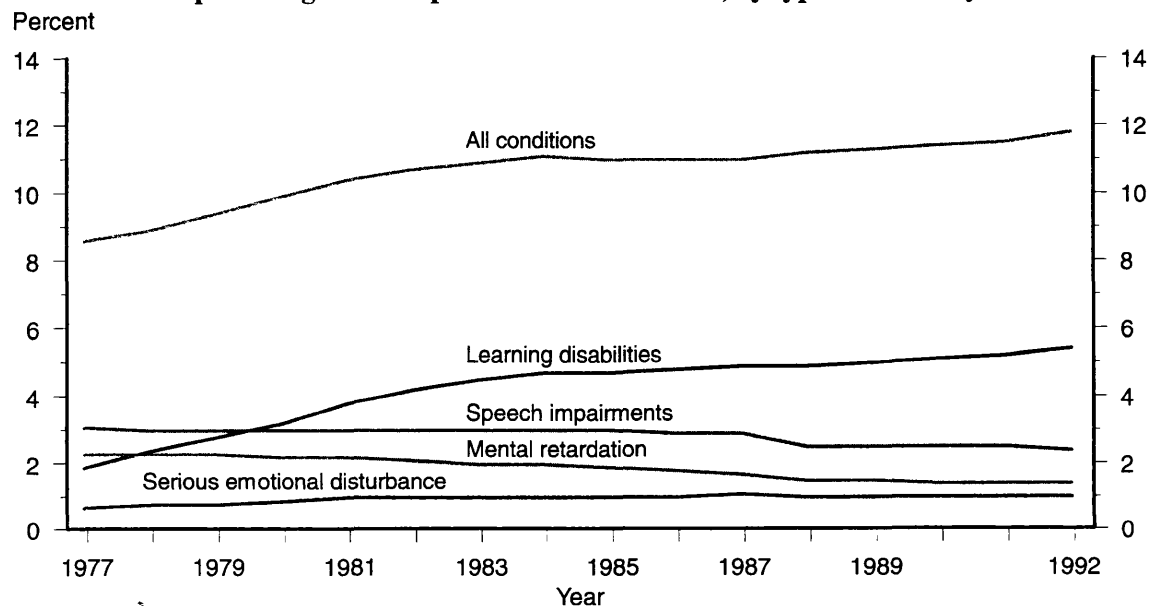
SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, various years.

Children from birth to age 21 served in federally supported programs for students with disabilities: School years ending 1977-92

Percentage distribution of children with disabilities served in federal programs, by type of disability



Number of children with disabilities served in federal programs as a percentage of total public K-12 enrollment, by type of disability



NOTE: Includes students served under Chapter 1 of ECIA and Part B of IDEA. Prior to school year 1987-88, preschool students were included in the counts by type of disability. Beginning in the 1987-88 school year, states are no longer required to report preschool students (0-5 years) with disabilities by type of disability.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, various years.

Children who have difficulty speaking English, by state

- ▶ Fourteen percent of all U.S. children 5- to 17-years-old spoke languages other than English at home in 1990. Over a third of these had difficulty speaking English (see supplemental table 46-2).
- ▶ Between 1980 and 1990, the number of children who had difficulty speaking English increased 27 percent, from 1.9 to 2.4 million.
- ▶ In 1990, 6 out of 10 U.S. children who had difficulty speaking English lived in three large states: California (33 percent), Texas (16 percent), and New York (10 percent). California also had the largest proportion (15 percent) of children who had difficulty speaking English.
- ▶ Ten states had declines over the decade in the number of children who spoke English with difficulty. For example, in Texas the number of children who had difficulty speaking English declined 5.2 percent to 392,000, yet Texas still had the second highest number of such children among the states.

By law, school systems across the United States must provide services for children from non-English language backgrounds, many of whom have difficulty speaking English. Changes in the number and percentage of students who have difficulty speaking English can affect how education resources are allocated within states.

Ten states with the highest percentage of children 5- to 17-years-old who speak a language other than English at home and who speak English with difficulty¹: 1980 and 1990

State ²	Number		Percent of all 5- to 17-year-olds		Percentage distribution		Percentage change in number between 1980 and 1990
	1980	1990	1980	1990	1980	1990	
United States	1,883,395	2,388,243	4.0	5.3	100.0	100.0	26.8
California	493,641	796,905	10.5	14.9	26.2	33.4	61.4
Texas	413,393	391,881	13.2	11.3	21.9	16.4	-5.2
New Mexico	48,471	33,779	16.0	10.5	2.6	1.4	-30.3
Arizona	60,213	61,069	10.4	8.9	3.2	2.6	1.4
New York	233,945	247,948	6.6	8.2	12.4	10.4	6.0
New Jersey	71,703	76,273	4.7	6.0	3.8	3.2	6.4
Hawaii	14,432	11,253	7.3	5.7	0.8	0.5	-22.0
Rhode Island	6,860	8,928	3.7	5.6	0.4	0.4	30.1
Florida	66,466	113,441	3.7	5.6	3.5	4.7	70.7
Massachusetts	37,626	50,444	3.3	5.4	2.0	2.1	34.1

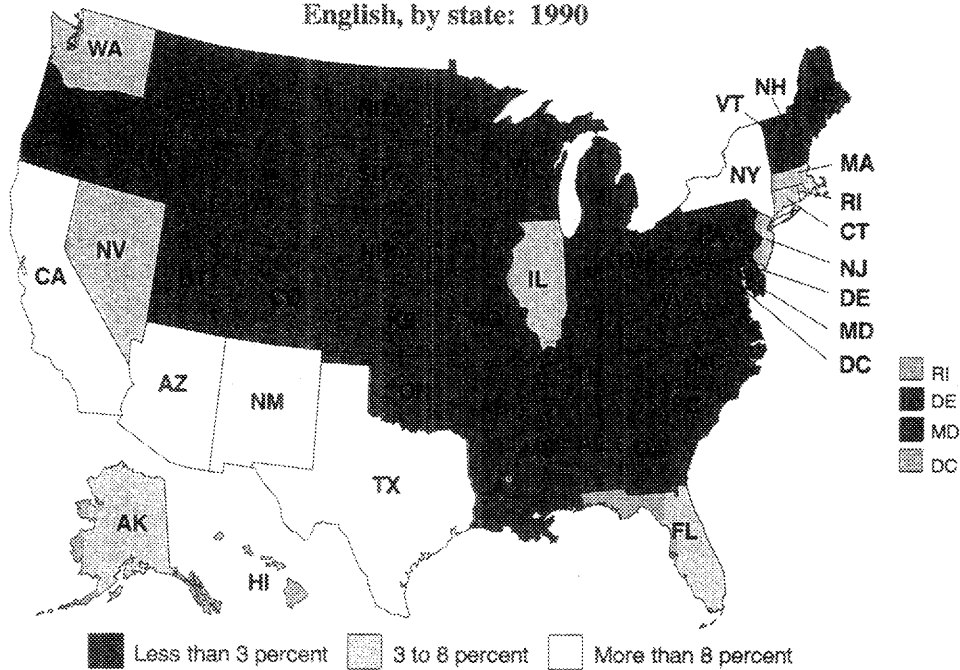
¹English proficiency is determined using responses to the question asked about those who spoke a language other than English at home: "How well does this person speak English?" Possible responses were "Very well," "Well," "Not well," and "Not at all." Persons who responded less than "Very well" were included in the category "Speak English with difficulty."

²See tables 46-1 and 46-2 for data on all 50 states.

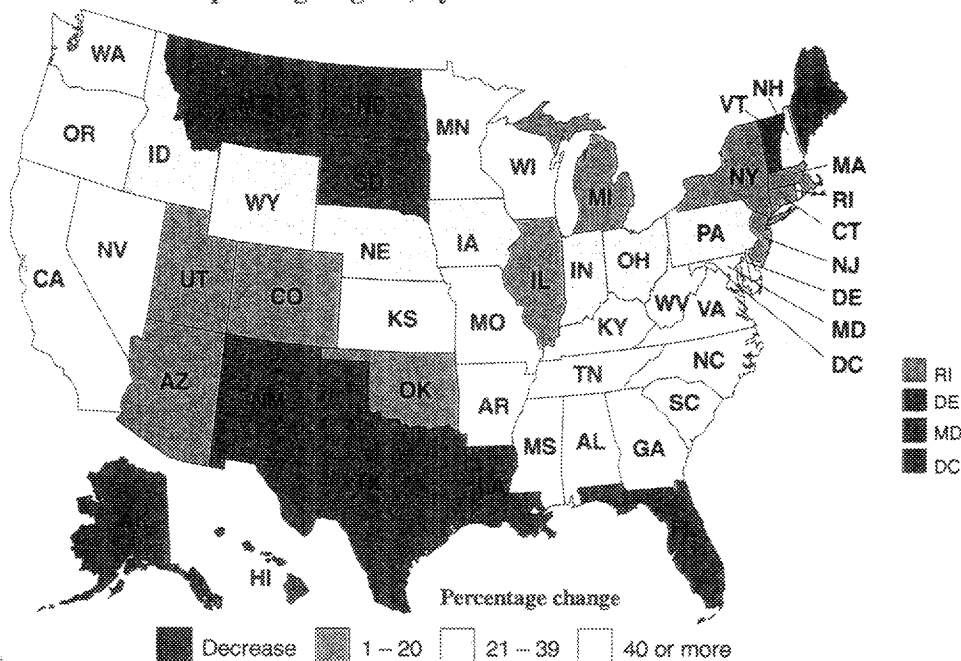
SOURCE: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population, 1990; CPH-L-98, table ED90-4, "Language Use and English Ability, Persons 5 to 17 Years, by State: 1990"; 1980 Census of Population, U.S. Summary, PC80-1-C1, table 236 and individual state volumes, PC80-1-D, table 196.

Children 5- to 17-years-old who have difficulty speaking English

Proportion of children 5- to 17-years-old who have difficulty speaking English, by state: 1990



Percentage change in number of 5- to 17-year-olds who have difficulty speaking English, by state: 1980 to 1990



NOTE: English proficiency is determined using responses to the question asked about those who spoke a language other than English at home: "How well does this person speak English?" Possible responses were "Very well," "Well," "Not well," and "Not at all." Persons who responded less than "very well" were included in the category "Speak English with difficulty."

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population, 1990 CPH-L-98, table ED90-4, "Language Use and English Ability, Persons 5- to 17-years, by State: 1990."

Children in poverty

- ▶ The percentage of all children living in families below the poverty level decreased from 27 percent in 1960 to 15 percent in 1970, but has risen since. The poverty rate for children has fluctuated between 19 and 21 percent since 1981.
- ▶ In 1992, black children were almost three times as likely as whites to live in poverty. The poverty rate for Hispanic children was also much higher than for whites, but lower than for black children.
- ▶ More than half (58 percent) of the children living in poverty in 1992 lived in a female-headed household. This figure represents an 8 percentage point increase from 1983, and a 34 percentage point increase from 1960.
- ▶ The percentage of black children in poverty who lived in female-headed households more than doubled between 1959 and 1992, rising from 30 percent to 82 percent.

The effects of poverty on children's education are well documented. Children from poor families have lower than average achievement and higher than average dropout rates. These children may not come to school ready to learn, and therefore may need additional services.

Children under 18 living in poverty, by race/ethnicity: Selected years 1960–92

Year	Percent of all children living in poverty				Percent of children living in poverty who live with a female householder ¹			
	Total	White	Black	Hispanic ²	Total	White	Black	Hispanic ²
1960 ³	26.5	20.0	65.5	—	23.8	21.0	29.4	—
1965 ⁴	20.7	14.4	47.4	—	31.7	27.0	49.7	—
1970	14.9	10.5	41.5	—	45.8	36.6	60.8	—
1975	16.8	12.5	41.4	34.5	51.4	41.7	70.1	41.0
1980	17.9	13.4	42.1	33.0	52.8	41.3	75.4	47.1
1981	19.5	14.7	44.2	35.4	52.2	42.0	74.3	48.5
1982	21.3	16.5	47.3	38.9	—	—	—	—
1983	21.8	17.0	46.2	37.7	50.0	39.3	74.5	42.5
1984	21.0	16.1	46.2	38.7	52.4	41.8	74.9	47.2
1985	20.1	15.6	43.1	39.6	53.8	43.0	78.4	49.6
1986	19.8	15.3	42.6	37.1	56.6	45.7	80.5	49.5
1987 ⁵	19.7	14.7	44.4	38.9	57.4	47.0	80.2	47.6
1988 ⁵	19.0	14.0	42.8	37.3	59.3	50.0	79.6	49.1
1989 ⁶	19.0	14.1	43.2	35.5	56.7	46.3	78.1	46.4
1990 ⁶	19.9	15.1	44.2	37.7	57.9	46.9	80.3	47.8
1991	21.1	16.1	45.6	39.8	59.0	47.4	83.1	47.0
1992	21.1	16.0	46.3	38.8	57.9	45.4	81.8	43.8

—Not available.

¹No husband present. The householder is the person in whose name the housing unit is owned or rented.

²Hispanics may be of any race.

³Data presented are for 1959 for blacks and 1960 for whites and total.

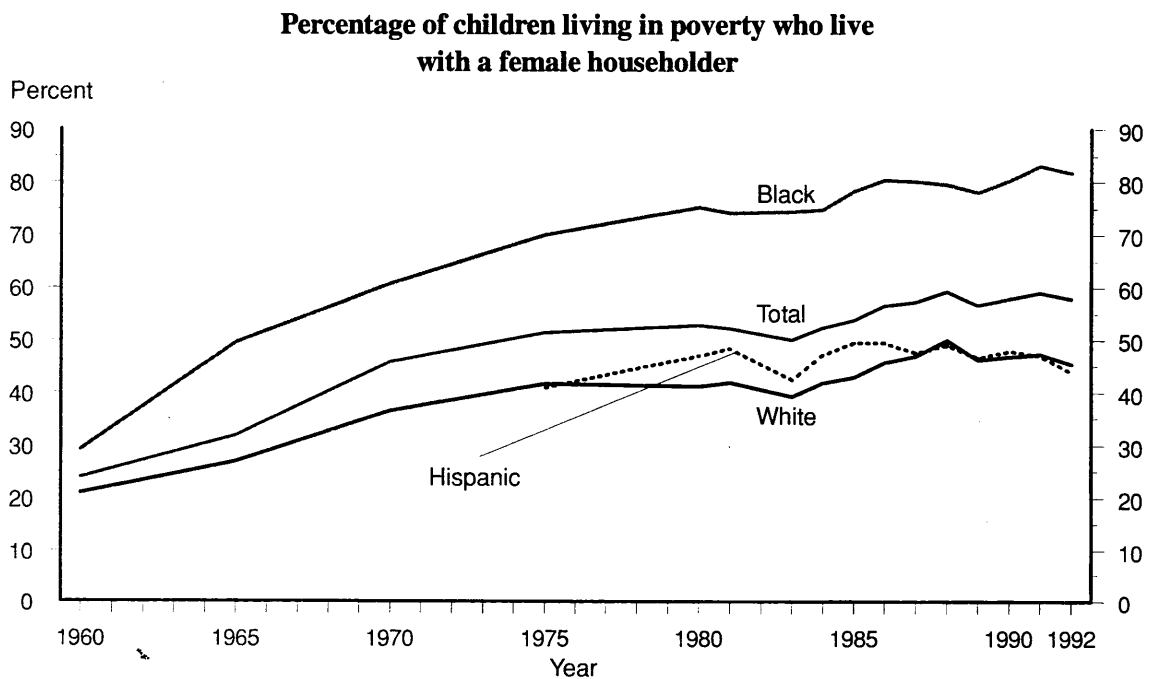
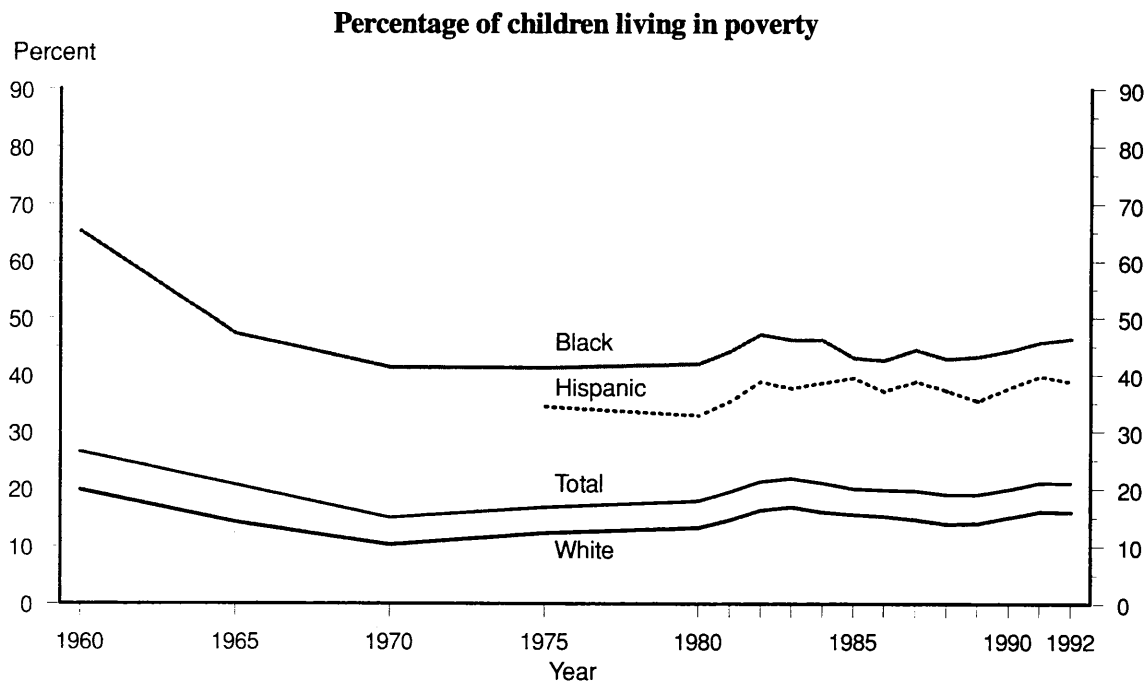
⁴Data presented are for 1967 for blacks and 1965 for whites and total.

⁵Data revised from previously published figures, based on new processing procedure. The 1987 and 1988 figures are also revised to reflect corrections to files after publication of the 1988 advance report, *Money Income and Poverty Status in the United States: 1988*, P-60, No. 166.

⁶Data revised from previously published figures.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, series P-60, "Poverty in the United States:....," various years (based on March Current Population Surveys).

Children under 18 living in poverty, by race/ethnicity: Selected years 1960–92



NOTE: Hispanics may be of any race. Data presented in the year 1960 includes 1959 data for blacks and 1960 data for whites and total. Data presented in the year 1965 includes 1967 data for blacks and 1965 data for whites and total.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, series P-60, "Poverty in the United States:...", various years (based on March Current Population Surveys).

Drug and alcohol use in school

- ▶ In-school drug and alcohol use by high school seniors fell dramatically during the 1980s. For example, in 1980, 21 percent of seniors reported having used marijuana at school during the previous year, compared to only five percent in 1992.
- ▶ Eight percent of 12th-graders and four percent of 8th-graders reported that they were under the influence of alcohol while at school at least 1 day in the previous month. Similar percentages (seven percent and three percent, respectively) responded that they were under the influence of marijuana or some other illegal drug while at school at least once in the past month (see supplemental table 48-1).
- ▶ Students in public schools were more likely to have had someone offer to sell them drugs at school at all three grade levels than students in any of the private schools.
- ▶ In 1992, 12th-graders in low poverty public high schools were more likely to have had someone offer to sell them drugs in school than 12th-graders in high poverty public high schools (see supplemental table 48-4).

Drugs and alcohol interfere with thinking and can reduce academic achievement. Crimes of violence may accompany or result from substance abuse. It is important that educators and administrators are able to determine the scope of the drug and alcohol problem within schools. The percentage of students reporting that they have been approached at school to buy drugs is an indicator of the extent to which the school environment is directly affected by the drug problem.

Percentage of high school seniors who reported using drugs or alcohol at school in the previous year, by type of drug: 1980-92

Type of drug	1980	1985	1990	1991	1992
Alcohol	14.3	11.2	6.9	6.9	6.7
Marijuana	21.4	13.6	6.1	5.3	4.8
Amphetamines	11.1	8.4	3.1	2.2	2.3
LSD	2.1	1.2	1.4	1.2	1.6
Cocaine	2.6	2.9	1.4	0.5	0.6
Other narcotics	2.4	1.2	0.8	0.5	0.6
Tranquilizers	2.4	1.5	0.9	0.5	0.3

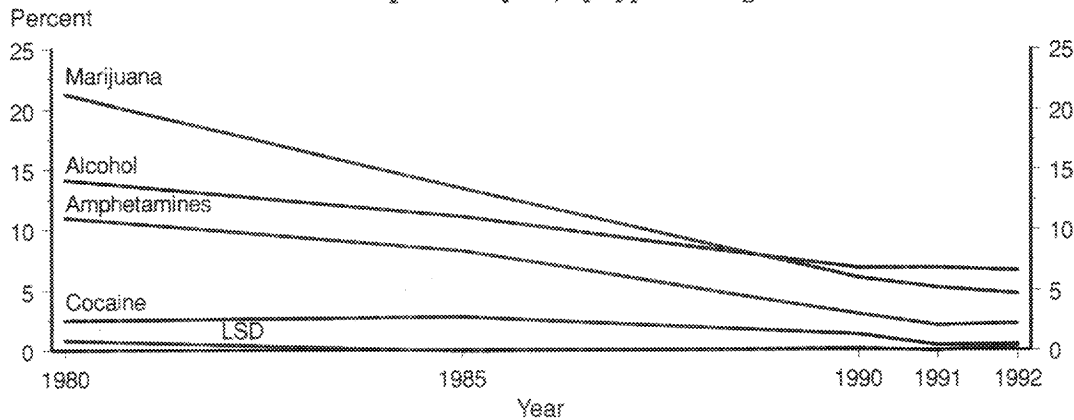
Percentage of students who had someone offer to sell them drugs at school during the first half of the school year, by grade and control of school: Spring 1988, 1990, and 1992

Control of school	8th-graders in 1988		10th-graders in 1990		12th-graders in 1992	
	Once or twice	More than twice	Once or twice	More than twice	Once or twice	More than twice
All students	6.9	3.1	10.1	6.9	9.5	6.5
Public	7.6	3.4	10.5	7.2	9.8	6.9
Catholic	1.6	0.9	9.0	2.7	8.7	4.0
Private, other religious affiliation	1.7	0.9	1.2	1.4	2.6	0.7
Private, no religious affiliation	3.2	1.8	4.5	2.7	4.5	5.8

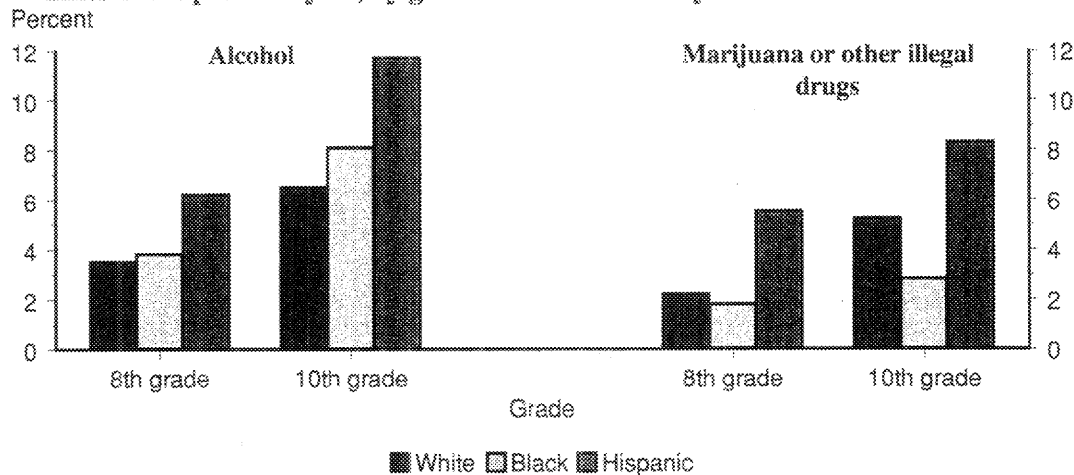
SOURCE: University of Michigan, Survey Research Center, Institute for Social Research, *Monitoring the Future Study*. U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988.

Student drug and alcohol use

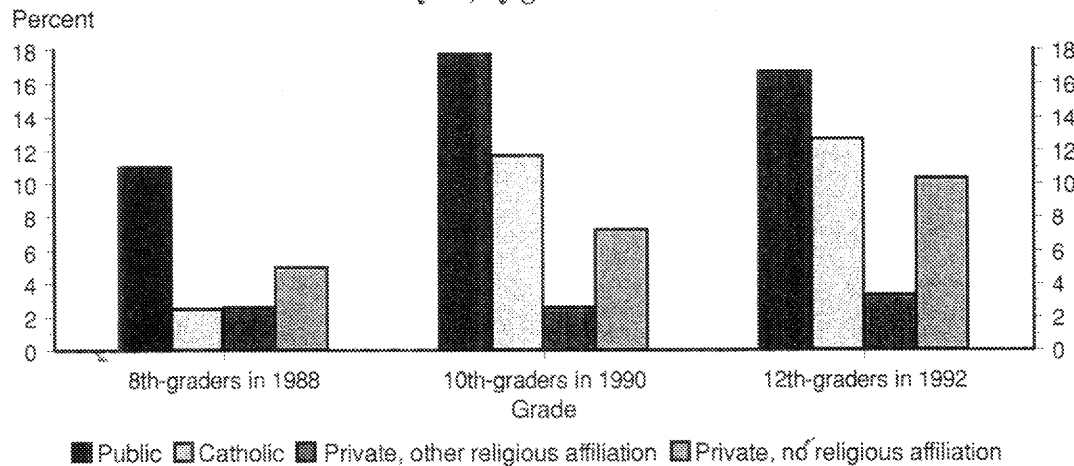
Percentage of high school seniors who reported using drugs or alcohol at school in the previous year, by type of drug: 1980-92



Percentage of students who used alcohol and drugs during the school day one or more times in the previous year, by grade and race/ethnicity: 1991 and 1992 combined



Percentage of students who had someone offer to sell them drugs at school during the first half of the school year, by grade and control of school: 1988-92



SOURCE: University of Michigan, Survey Research Center, Institute for Social Research, *Monitoring the Future Study*. U. S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988.

Working while in school

- ▶ Almost 3 in 10 high school students were working in October 1992. However, many fewer (11 percent) were working 20 or more hours per week.
- ▶ Over the 1973–92 time period, the percentage of high school students who were working varied with general economic conditions, falling during recessions and rising during expansions. The percentage increased between 1983 and 1989, but has fallen since 1989 when the economic slow-down began.
- ▶ Black high school students were less than half as likely as their white counterparts to work while in school. Hispanics were more likely than blacks but less likely than whites to be working.
- ▶ In 1992, 47 percent of full-time college students were employed, and 26 percent were working 20 or more hours per week (supplemental table 49-2).

Although working during the school year leaves less time for students to concentrate on their studies or to participate in extracurricular activities, students may learn things from work experience that are not taught in the classroom. Those who work more while in school may earn more after leaving school. A moderate amount of work—less than 15 hours per week—may be associated with higher completion rates and better grades. A substantial amount of work—20 or more hours per week—may be detrimental to grades and attendance.

Percentage of 16- to 24-year-old high school students who were employed in October, by race/ethnicity and hours worked per week: 1970–92

October	All students			White			Black			Hispanic		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1970	31.5	11.6	2.8	34.0	12.7	2.9	15.6	4.5	2.0	—	—	—
1971	30.4	11.2	2.2	33.5	12.3	2.2	13.9	5.7	2.1	—	—	—
1972	32.5	13.6	2.9	37.2	15.5	3.1	12.0	5.2	2.0	22.3	8.6	2.3
1973	36.1	15.4	3.3	41.0	17.5	3.5	13.8	5.7	1.6	25.7	10.0	3.7
1974	35.2	15.1	3.1	40.0	16.9	3.4	16.3	8.1	1.9	23.3	10.7	2.8
1975	32.9	13.0	2.7	37.9	15.0	3.0	12.9	4.7	1.0	21.2	10.1	3.2
1976	33.4	14.3	2.6	38.9	16.6	2.6	12.7	5.2	2.4	20.1	10.8	2.7
1977	35.8	15.7	3.2	41.7	18.1	3.6	12.5	5.7	1.6	24.8	14.1	4.6
1978	38.2	16.2	2.9	43.9	18.4	3.2	16.1	6.8	1.4	28.0	15.9	3.1
1979	38.0	16.2	2.7	44.4	19.0	2.9	14.1	5.0	1.3	22.0	11.1	3.4
1980	35.1	13.3	2.3	40.7	15.2	2.1	13.7	5.7	1.9	24.5	11.6	4.9
1981	32.5	12.0	2.1	38.8	13.9	2.4	11.0	4.8	1.1	23.0	11.3	2.1
1982	29.5	9.7	1.6	35.9	11.8	2.0	8.9	2.4	0.1	15.0	6.2	1.5
1983	28.7	9.8	1.5	35.1	11.7	1.6	6.8	2.4	0.2	20.4	11.2	3.2
1984	31.0	11.5	1.3	36.4	13.1	1.2	13.4	6.1	0.6	23.2	10.5	3.7
1985	31.3	11.9	1.2	37.7	14.2	1.6	14.5	5.2	0.4	16.9	7.8	0.4
1986	34.1	13.7	1.9	40.3	15.7	2.2	14.5	6.5	0.8	25.8	15.8	1.7
1987	34.6	13.4	1.6	40.9	15.4	1.6	17.6	8.3	1.2	22.4	10.5	2.6
1988	35.1	14.2	1.6	40.6	16.0	1.6	19.3	8.2	1.1	23.2	10.3	2.8
1989	37.6	14.8	1.9	43.3	16.4	1.6	21.1	8.0	1.2	27.9	16.9	5.3
1990	32.1	11.9	2.0	38.0	13.6	1.8	16.7	5.0	1.0	24.6	13.2	4.5
1991	31.1	11.0	1.2	38.5	13.2	1.5	13.1	4.7	0.2	18.7	9.4	1.5
1992	29.6	10.7	1.2	36.1	12.7	1.2	13.7	5.1	0.4	18.9	9.8	2.2

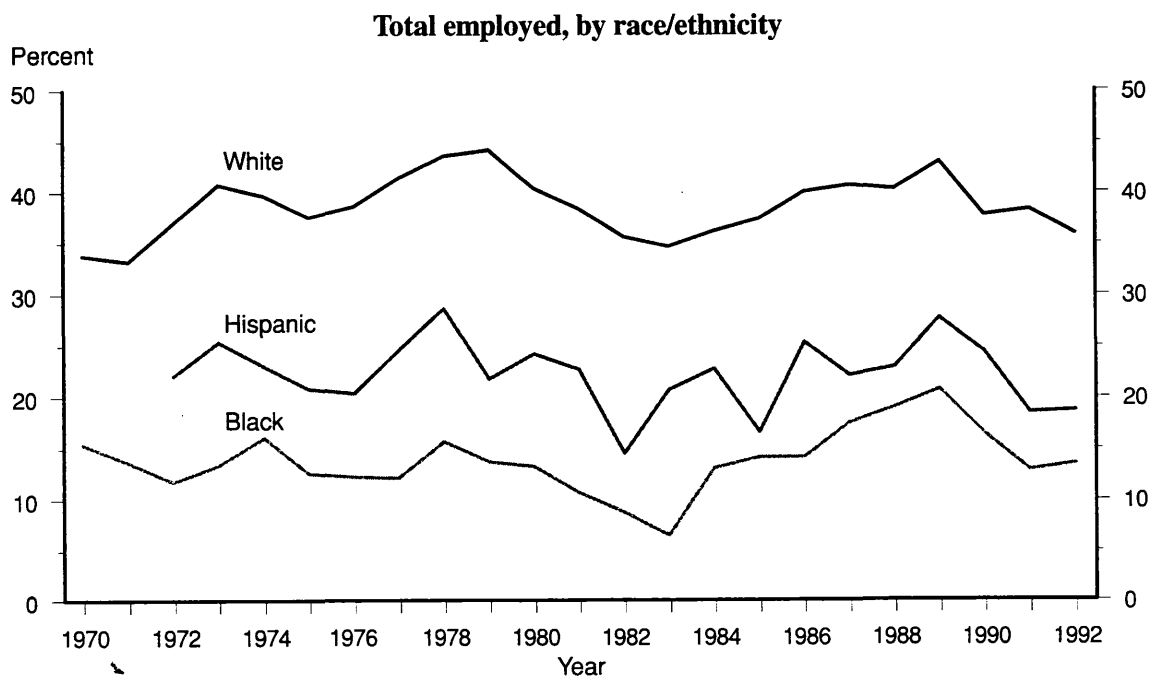
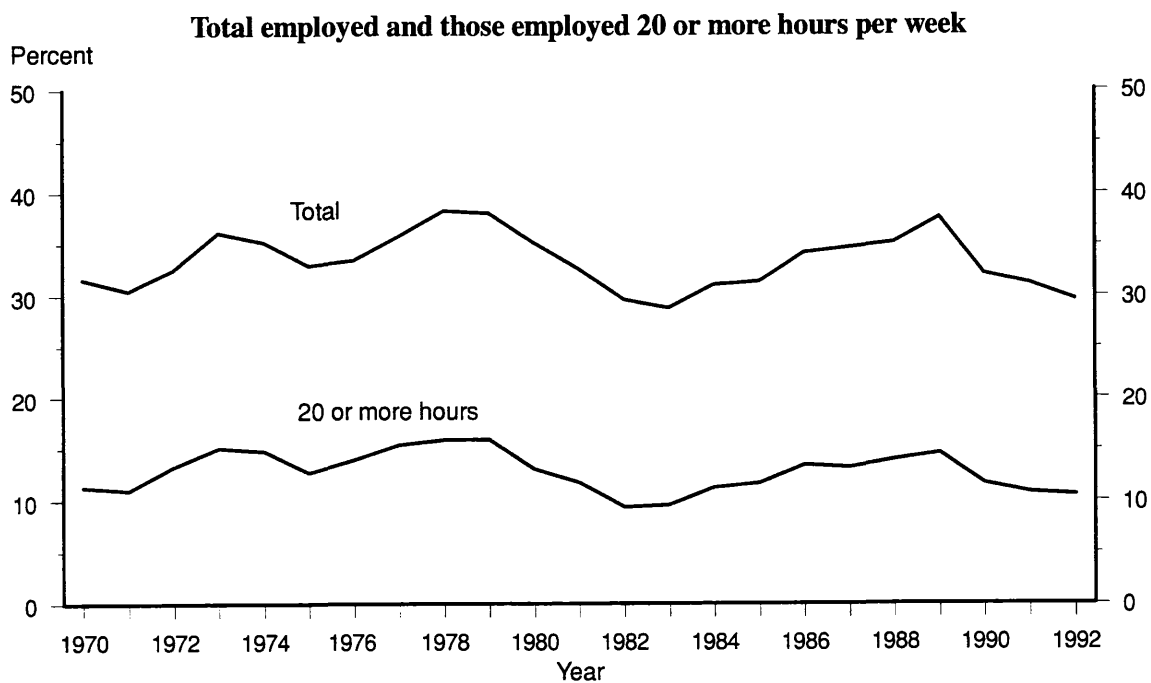
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*Includes those with a job but not at work during the survey week.

NOTE: Numbers have been revised from previously published figures.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, various years.

**Percentage of high school students 16–24 years old
who were employed: 1970–92**



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, various years.

Racial and ethnic distribution of college students

- ▶ The student body at the nation's colleges and universities has become increasingly heterogeneous since the mid-1970s. Minority students increased from 15 percent of all students in 1976 to nearly 22 percent in 1992.
- ▶ Hispanics and Asians increased as a percentage of college students throughout the period from 1976 to 1992.
- ▶ Following a period of decline, the black share of enrollment has risen since 1988 to a slightly higher level than in the mid-1970s.
- ▶ Black students accounted for nearly 10 percent of the total enrollment at colleges and universities in 1992. Hispanics made up 7 percent, Asians 5 percent, and American Indians 1 percent of enrolled students.
- ▶ At 2-year public colleges, the black and Hispanic proportions of students are about equal. At 4-year colleges, however, there are about twice as many blacks as Hispanics.

College and universities seek diversity in their student bodies: variety in the backgrounds and interests of students enhances the learning environment. The racial/ethnic mix of college students is one aspect of student diversity. Variations in the racial/ethnic composition of college enrollment suggest differences in the needs, interests, and backgrounds of the student body.

Percentage of total enrollment in higher education institutions, by race/ethnicity: Fall, selected years 1976-92

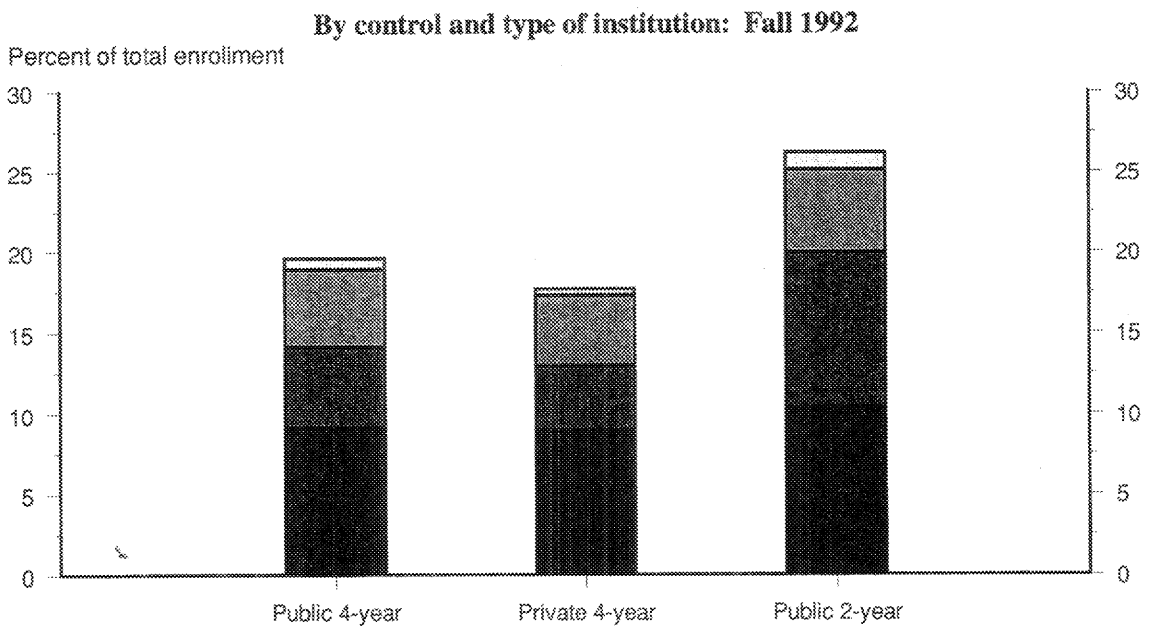
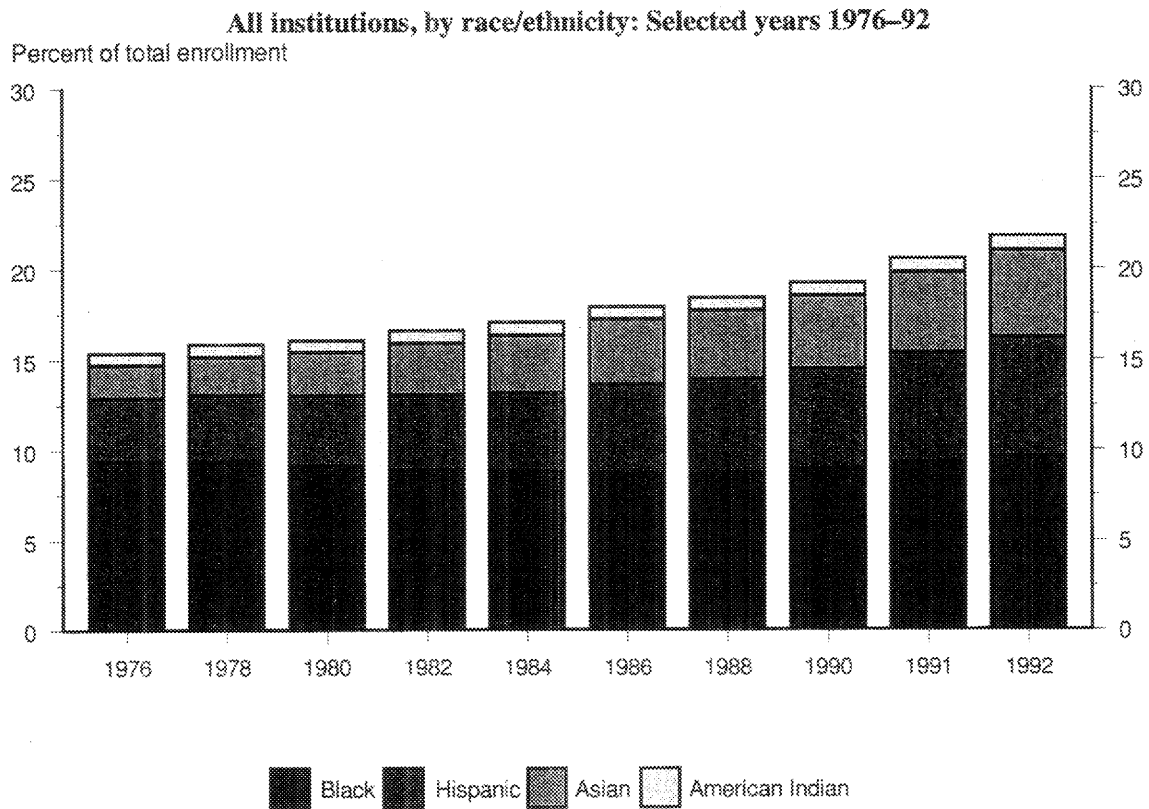
Fall of year and type of institution	White	Minority					Nonresident alien
		Total minority	Black	Hispanic	Asian	American Indian	
All institutions, by fall of year							
1976	82.6	15.4	9.4	3.5	1.8	0.7	2.0
1978	81.9	15.9	9.4	3.7	2.1	0.7	2.3
1980	81.4	16.1	9.2	3.9	2.4	0.7	2.5
1982	80.7	16.6	8.9	4.2	2.8	0.7	2.7
1984	80.2	17.0	8.8	4.4	3.2	0.7	2.7
1986	79.3	17.9	8.7	4.9	3.6	0.7	2.8
1988	78.9	18.4	8.7	5.2	3.8	0.7	2.8
1990	77.9	19.2	8.9	5.5	4.0	0.8	2.9
1991	76.5	20.6	9.3	6.0	4.4	0.8	2.9
1992	75.0	21.8	9.6	6.6	4.8	0.8	3.2
By control and type of institution: Fall 1992							
Public	74.5	22.8	9.7	7.2	5.0	0.9	2.7
Private	76.8	18.4	9.4	4.3	4.3	0.5	4.8
4-year	77.0	19.0	9.0	4.7	4.7	0.6	4.1
Public	76.8	19.6	9.1	5.0	4.8	0.7	3.6
Private	77.2	17.7	8.9	4.0	4.4	0.4	5.1
2-year, public*	72.1	26.2	10.3	9.6	5.2	1.1	1.8

*Ninety-seven percent of 2-year students are enrolled in public institutions.

NOTE: Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years.

Minority enrollment in institutions of higher education: Fall 1976-92



SOURCE: U.S. Department of Education, National Center for Education Statistics. IPEDS/HEGIS surveys of fall enrollment, various years.

Characteristics of undergraduate students enrolled in different types of postsecondary institutions

- ▶ Among undergraduates attending public institutions, those in 2-year schools are older and more likely to be married and financially independent than those in 4-year schools.
- ▶ Public 2-year institutions have a substantially higher proportion of part-time students than other types of institutions.
- ▶ Within both 2-year and 4-year schools, undergraduates in public institutions are much more likely to live off campus than those in private, nonprofit institutions.
- ▶ Among undergraduates in 4-year schools, those in institutions which do not grant Ph.D.s are older and more likely to be married and financially independent than those in Ph.D.-granting institutions.
- ▶ Parental education and the family income of dependent students vary substantially across institutions. They are lowest among undergraduates in private, for-profit institutions and highest among students in private Ph.D.-granting 4-year institutions.

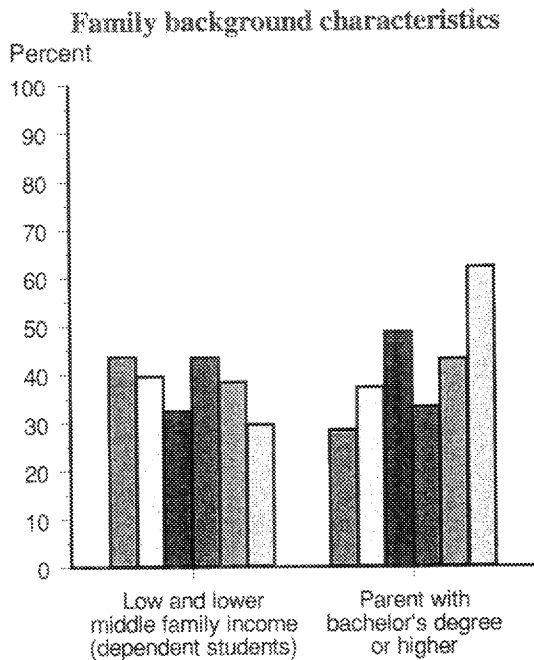
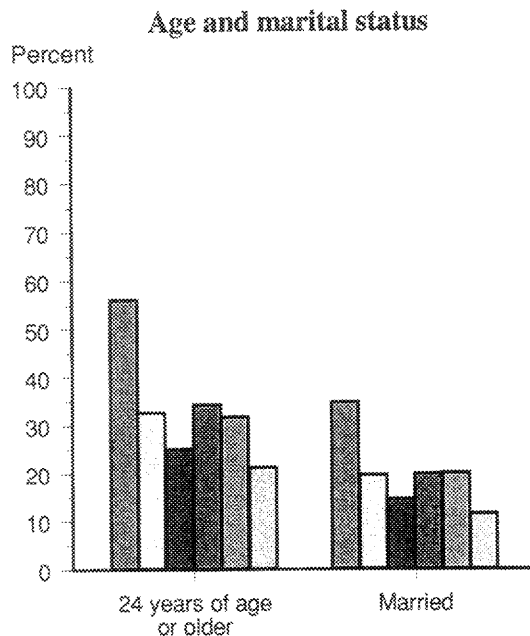
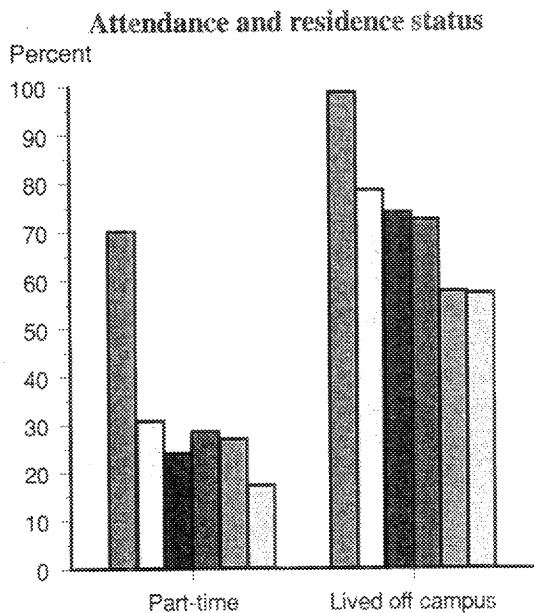
The characteristics of the student body help to shape the atmosphere in which learning occurs. Schools with large numbers of part-time, married, or older students who live off campus provide a different educational environment from those where the students are mainly full-time, nonmarried, of traditional college age, and living on campus.

Percentage of undergraduate students with selected characteristics, by type and control of postsecondary institution: Academic year 1989-90

Characteristic	Public			Private, nonprofit			Private, for-profit
	2-year	4-year		2-year	4-year		
		Non-Ph.D.-granting	Ph.D.-granting		Non-Ph.D.-granting	Ph.D.-granting	
Attended part-time	70.1	30.8	24.1	28.5	26.9	17.2	17.1
Lived off campus	98.7	78.4	73.9	72.4	57.6	57.2	96.8
24 years of age or older	56.2	32.6	25.0	34.2	31.7	21.2	49.2
Married	34.8	19.6	14.5	19.9	20.0	11.4	24.2
Financially independent	65.6	41.0	32.5	45.1	38.1	27.7	71.5
Family income (dependent students)							
Low	19.8	19.3	14.6	21.7	20.9	15.3	35.8
Lower middle	23.8	20.3	17.8	21.7	17.6	14.3	27.7
Middle	19.3	21.5	20.6	22.5	18.5	14.8	17.3
Upper middle	21.3	21.5	23.0	14.2	19.3	19.1	12.5
Upper	15.7	17.4	24.0	19.9	23.6	36.6	6.7
Parents' highest education level							
High school graduate or less	47.9	38.4	29.0	44.3	36.0	22.7	64.1
Bachelor's degree or higher	28.4	37.4	48.7	33.2	43.1	62.2	15.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study.

Percentage of undergraduate students with selected characteristics, by type and control of institution: Academic year 1989-90



Public 2-year Public, 4-year, non-Ph.D.-granting Public, 4-year, Ph.D.-granting Private, non-profit, 2-year Private, non-profit, 4-year, non-Ph.D.-granting Private, non-profit, 4-year, Ph.D.-granting

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study.

Community service performed by students enrolled full-time in bachelor's degree programs

- ▶ **About one out of every six full-time students enrolled in bachelor's degree programs performed community service during the 1989-90 academic year. Those engaged in community service contributed an average of 5 hours per week.**
- ▶ **Four out of 10 full-time students performing community service did work related to their future careers (supplemental table 52-2).**
- ▶ **A higher proportion of full-time students enrolled in private, nonprofit, Ph.D.-granting institutions performed community service in 1989-90 than those enrolled in other types of institutions.**
- ▶ **Women were more likely to engage in community service than men, and older students were more likely to do so than younger students.**
- ▶ **Students majoring in the social and behavioral sciences were more likely than those majoring in the humanities, computer science and engineering, or business to devote time to community service.**

There is considerable interest currently in promoting greater involvement of postsecondary students in community service and in linking national service to the forgiveness of obligations for student financial aid. Community service is seen as valuable because it provides manpower for community projects, prepares students for future active roles in the community, and provides students with experience useful to their future careers. Data on community work performed by full-time bachelor's degree students show who participates and to what extent.

Community service performed by full-time students in bachelor's degree programs, by selected institutional and student characteristics: Academic year 1989-90

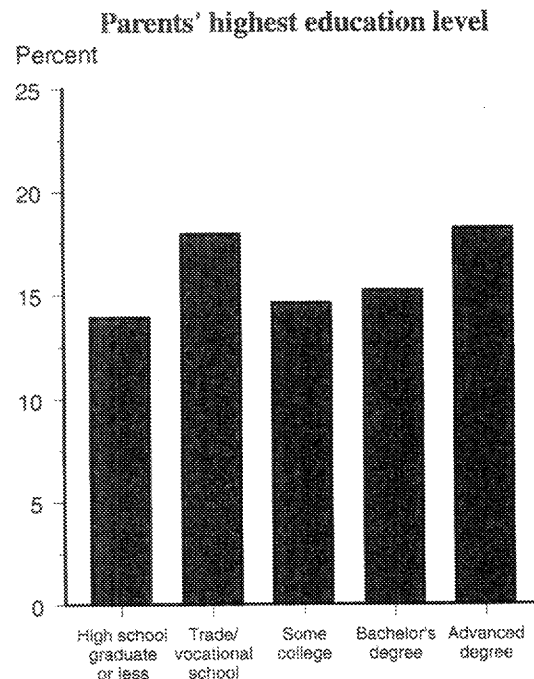
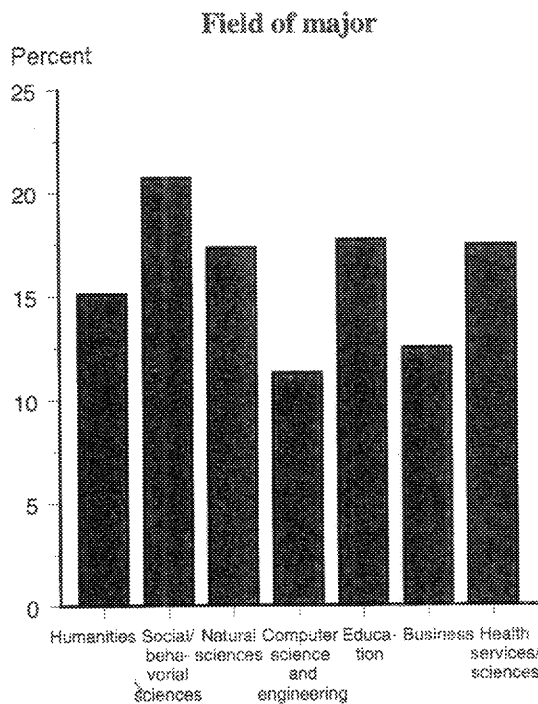
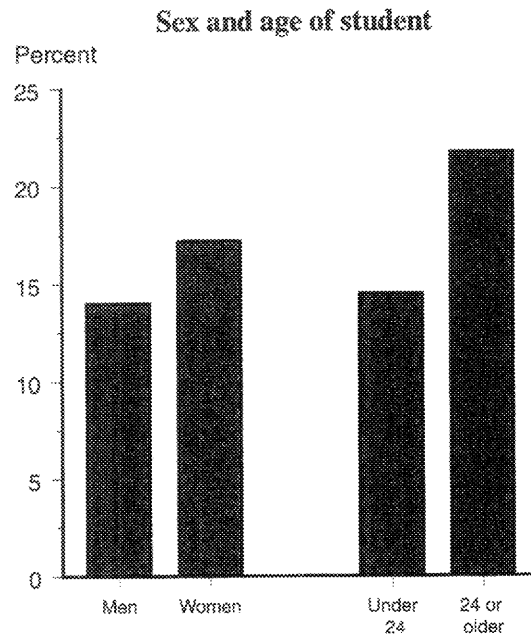
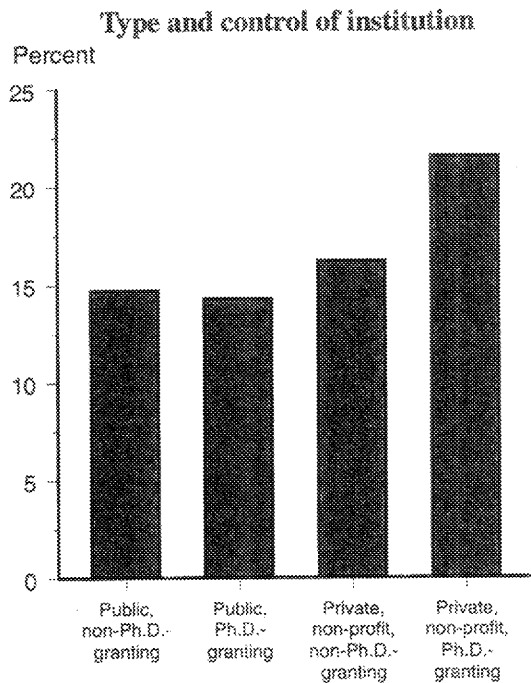
Characteristic	Percent performing community service	Average hours of community service*	Characteristic	Percent performing community service	Average hours of community service*
Total	15.6	5.3			
Type and control of institution			Field of major		
Public	14.5	5.4	Humanities	15.1	6.1
4-year non-Ph.D.-granting	14.7	5.1	Social/behavioral sciences	20.7	5.2
4-year Ph.D.-granting	14.3	5.6	Natural sciences	17.3	5.3
Private, non-profit	18.4	5.3	Computer science and engineering	11.3	4.5
4-year non-Ph.D.-granting	16.2	5.5	Education	17.7	4.8
4-year Ph.D.-granting	21.5	5.0	Business	12.5	4.6
			Health services/sciences	17.4	6.2
Sex			Parents' highest education level		
Men	14.0	5.8	High school graduate or less	13.9	5.5
Women	17.2	5.0	Trade/vocational school	17.9	4.5
Age			Some college	14.6	5.2
Under 24	14.5	5.3	Bachelor's degree	15.2	4.9
24 or older	21.7	5.4	Advanced degree	18.2	5.7

*Calculated only for those performing community service.

NOTE: See supplemental tables 52-1, 2, and 3 for information on associate's degree students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study.

Percentage of students enrolled full-time in bachelor's degree programs who performed community service, by institutional and student characteristics:
Academic year 1989-90



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study.



*Human and Financial Resources of
Educational Institutions*

The 1980s and early 1990s have presented many fiscal challenges to schools, colleges, and universities. More than half of the states face challenges to the constitutionality of their systems of financing public elementary and secondary education. The percentage of limited English proficient and handicapped students are on the rise (*Indicators 46 and 45*). And in postsecondary education, institutions are confronting both a declining number of new high school graduates and reduced support from state appropriations. Furthermore, calls to raise the quality of education have grown as Americans increasingly feel the competitive pressure of the global marketplace and the decline in their economic prosperity.

Financial Resources

The United States invests a substantial amount in education. This investment can be measured in several ways to facilitate comparison over time and across states. Two types of measures are presented below: revenues from public sources for a level of education, divided by the number of students enrolled at that level (whether or not the institution they are enrolled in is publicly controlled); and the effort index, which is the ratio of the first measure to income per capita.

Per student. In 1992, revenues from public sources to support elementary and secondary education were \$5,167 per student. This measure of resources per student varied widely across states from lows of about \$3,100 in Mississippi and \$3,200 in Arkansas to highs of about \$7,200 in New York, \$8,100 in New Jersey, and over \$8,900 in Alaska (table 53-3). Within states, there is additional variation which is the subject of lawsuits challenging the constitutionality of state education financing systems. Public revenues for higher education in 1990 were about \$4,800 per student (table 53-2).

Effort. Part of the variation among states in public support for education may be due to differences in the cost of living and salaries across states. For example, in 1991, personal income per capita was \$14,200 and \$15,700 in Mississippi and Arkansas, respectively and it was \$23,900, \$27,000, and \$23,300 in New York, New Jersey, and Alaska, respectively (table 53-3).

Therefore, an alternative measure of public investment in education expresses the previous measure, public revenues per student, as a percentage of personal income per capita. On this *effort* measure, Mississippi and Arkansas provided per student public spending for elementary and secondary education of 22 percent and 20 percent of personal income per capita, respectively, and New York, New Jersey, and Alaska provided 30, 30, and 38 percent, respectively. Whereas on the per student measure New York and New Jersey spent more than 2 times that of Mississippi and Arkansas, the former states made only 1.5 times more fiscal effort, as measured by revenues per student adjusted for the states' per capita wealth.

Over time. During the post World War II era, revenues from public sources for students in elementary and secondary schools have increased substantially every decade. They increased almost fivefold between 1950 and 1992, rising from \$1,200 to \$5,200 per student (adjusted for inflation) (table 53-1). This trend is likely to have been driven by many factors. For example, the education system has assumed greater responsibility in many areas, such as education of disabled students. In addition, public policy has increased spending on children from poor families and has sought to increase the quality of education of minorities to a level comparable to that of the majority. Furthermore, women are participating in more traditionally male occupations, driving up the cost of education by forcing teacher salaries to be more competitive with other professions as women find alternative careers.

The ability of taxpayers to finance a larger education budget also increased over the decades, although not at the same rate as public revenue per student rose. Between 1950 and 1992, personal income per capita increased about 250 percent, whereas public revenues per student rose almost 500 percent. It could be said that U.S. taxpayers are making more of an effort to finance elementary and secondary public education. This is reflected in the increase in the national effort index (per student revenues for elementary and secondary education from public sources as a percentage of personal income per capita) over the last four decades. Revenues per

student were 14 percent of personal income per capita in 1950 and 26 percent in 1992.

Human Resources

The most important resource used in education is personnel. In 1991, in elementary and secondary education, there were 11 full-time-equivalent (FTE) staff per 100 students. Of these, 6 were classroom teachers and 3 were support staff, such as secretaries and bus drivers. The remaining 2 were principals, assistant principals, school district administrators, librarians, guidance counselors, and teacher aids (*Indicator 57, Condition 1993*).

In the last two decades, as fewer college graduates enter the teaching profession and student enrollments increase, policymakers have become concerned about the source of supply of new teachers. Schools depend on new college graduates, transfers, and reentering teachers to fill positions. Reentrants offer more teaching experience but at higher salaries than first-time teachers. However, first-time teachers have higher rates of attrition. In 1991, 4 out of 10 newly hired public school teachers were teaching for the first time; about a third were transfers from other districts; and a quarter were reentrants. Between 1988 and 1991, the sources of supply of newly hired teachers shifted, as both public and private schools hired a larger proportion of first-time teachers and a smaller proportion of reentrants (*Indicator 58*).

Although it is very difficult to assess the quality of a teacher based on easily measured characteristics, many analysts argue that the education and certification of teachers are very important. In particular, some believe that it is important that teachers take courses outside of education in the subjects that they are likely to teach. Others argue that it is more important to match teachers with the subjects they are most qualified to teach.

Generally, the course-taking patterns for teachers graduating in 1985–86 were not markedly different from the average for all bachelor's degree recipients that year. A smaller percentage of teachers took calculus and economics and a larger percentage took geography and history than graduates as a

whole. Fifty-six percent of science and math teachers took calculus and 43 percent took a foreign language; 52 percent of humanities and social science teachers took a foreign language, but only 24 percent took a course in economics and only 10 percent took calculus (*Indicator 60, Condition 1993*). These differences, however, are not unlike differences between those having other majors. For example, 77 percent of natural science majors took calculus, and 53 percent took a foreign language; 56 percent of humanities majors took a foreign language and 16 percent took calculus (*Indicator 28, Condition 1993*).

But how well do teachers' educations match what they are assigned to teach? Less than 5 percent of full-time teachers in public secondary schools were not certified to teach in their main assignment field in 1990–91 and 1 out of 4 did not major or minor in a field similar to what they spend most of their time teaching. However, of those teachers who had an additional assignment field (28 percent), almost 40 percent were not certified to teach in that field and 55 had neither majored nor minored in that subject area. It would appear then, that although the college curriculum of teachers is similar to that of other college graduates, there is a mismatch between the background and teaching assignments of a significant number of teachers, especially for those who have an additional assignment field (*Indicator 59*).

The cost of staff resources is determined not only by the number of staff employed but also by their salaries. In 1993, the average annual salary of public elementary school teachers was about \$35,300; for secondary school teachers it was \$36,600, the highest levels (adjusted for inflation) during the period 1960–93. Teacher salaries in public schools rose between 1960 and 1972, then fell until 1980, and have been rising since then. Average beginning teacher salaries did not rise as rapidly as average teacher salaries during the 1980s and was \$24,000 in 1993, about the same level as two decades earlier (table 56-1). Teachers in private schools earn much less than their counterparts in public schools. For example, the average base salary for a full-time school teacher for the 1990–91 school year was \$31,300 in public schools and \$19,800 in private schools (tables 56-3 and 56-4).

Index of public effort to fund education

- ▶ In 1992, the national effort index for elementary education was 25.5, up 3 points since 1984. Between 1972 and 1984, the index remained fairly stable after doubling between 1930 and 1972.
- ▶ The state effort index for elementary and secondary education ranged from below 21 in Arkansas and Tennessee to more than 34 in Alaska, Vermont, Wyoming, and West Virginia—a ratio of almost 1.9 to 1. Revenues per pupil ranged more widely from \$3,101 in Mississippi to \$8,909 in Alaska—a ratio of 2.9 to 1 (see supplemental table 53-3).
- ▶ The national effort index for higher education was 23.4 in 1990, about the same as it was in 1984 but down substantially from 34.3 in 1966. However, higher education public revenues per student (in constant dollars) have been relatively stable since 1970, with the exception of a drop in the early 1980s.

The index of public effort is revenue raised for the education of students relative to the income of taxpayers adjusted for the number of students and number of people in the population. The numerator is revenues per student, a measure of average financial resources available for the education of each student. The denominator is personal income per capita, a measure of the taxpayer's average ability to pay. The index can be interpreted as the number of dollars of revenue raised for each student from each 100 dollars of income received by each member in the population.

National index of public revenues per student in relation to per capita personal income, by level: Selected school years ending 1930–92

School year ending	National index		Public education revenue				Per capita personal income*
	Elementary/secondary	Higher education	per student*		as a percentage of GDP		
			Elementary/secondary	Higher education	Elementary/secondary	Higher education	
1930	10.6	22.5	\$623	\$1,322	—	—	\$5,867
1940	14.6	26.1	835	1,493	—	—	5,725
1950	13.9	31.9	1,166	2,679	—	—	8,408
1960	16.2	32.0	1,777	3,508	3.0	0.5	10,958
1966	18.2	34.3	2,372	4,488	3.6	0.8	13,068
1970	20.0	31.8	3,017	4,785	4.2	1.0	15,058
1972	22.3	30.6	3,429	4,701	4.6	1.1	15,376
1974	21.2	29.4	3,584	4,963	4.3	1.1	16,897
1976	22.9	28.5	3,731	4,638	4.5	1.3	16,275
1978	22.2	27.5	3,862	4,782	4.1	1.2	17,359
1980	21.5	26.5	3,871	4,780	3.9	1.2	18,012
1982	21.2	23.5	3,722	4,130	3.6	1.1	17,541
1984	22.5	23.4	3,985	4,159	3.7	1.1	17,749
1986	23.1	24.7	4,409	4,715	3.7	1.1	19,066
1988	23.3	24.2	4,656	4,827	3.7	1.1	19,941
1990	25.0	23.4	5,162	4,829	4.0	1.1	20,671
1992	25.5	—	5,167	—	—	—	20,300

—Not available.

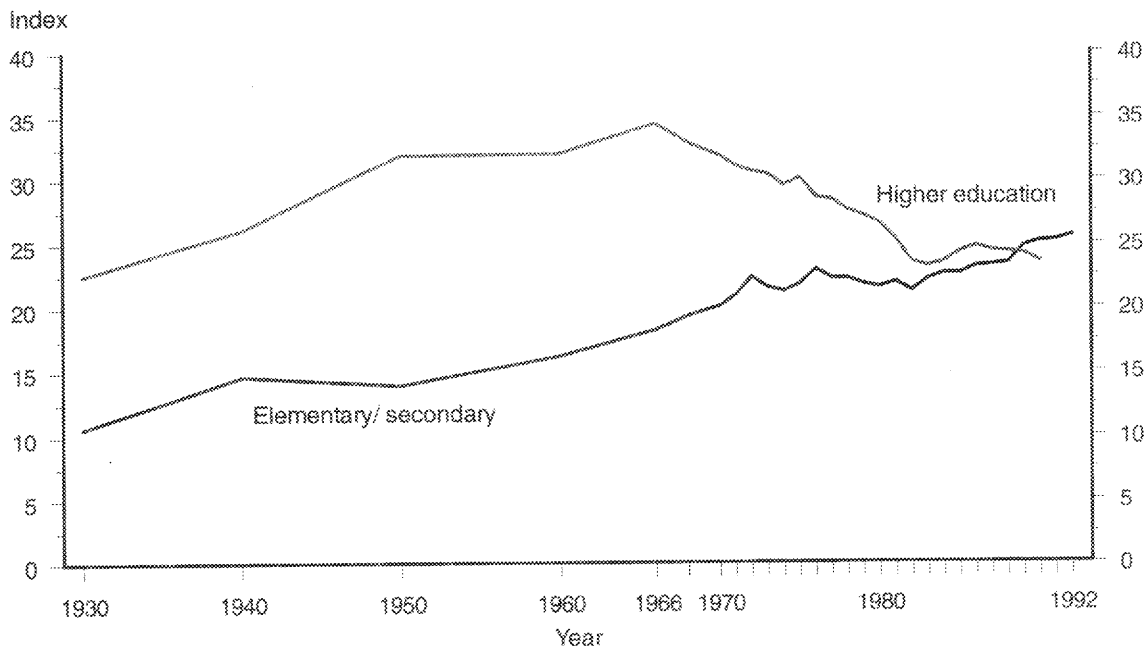
*Constant 1993 dollars.

NOTE: Public funds for education may be used at many types of institutions, both publicly and privately controlled, particularly in higher education and preprimary education. For comparability across levels of education and to facilitate comparisons to other countries, enrollment in both publicly and privately controlled institutions is used. For further information about the calculation of this indicator, see the supplemental note to *Indicator 53* and the notes to the supplemental tables.

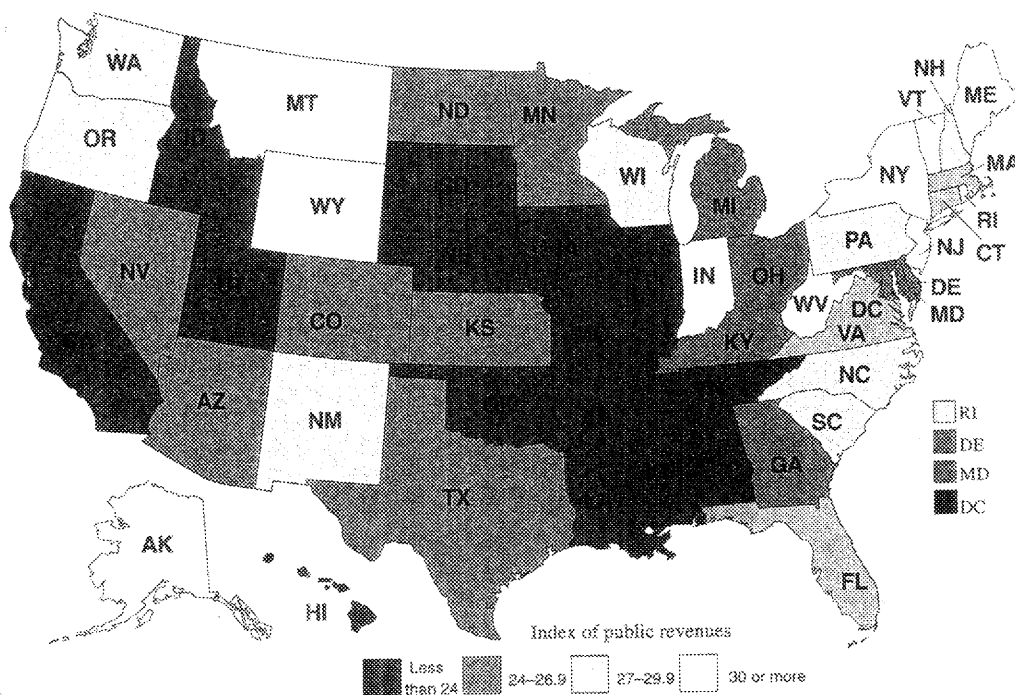
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Survey; Private School Survey; Biennial Survey of Education in the United States; and IPEDS/HEGIS Financial Statistics and Fall Enrollment surveys, various years. U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various years.

Index of public revenues per student in relation to per capita personal income

By level: Selected school years ending 1930-92



Elementary and secondary education, by state: School year 1991-92



SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Survey; Private School Survey; Biennial Survey of Education in the United States; and IPEDS/HEGIS Financial Statistics and Fall Enrollment surveys, various years. U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various years; Bureau of the Census, 1990 Census.

International comparisons of public expenditures for education

- ▶ Generally, among the G-7 countries, only Canada showed a higher level of public education expenditure than the United States.
- ▶ Public expenditures for the 1990–91 school year in the United States were 0.3 percent of GDP for preprimary education, 3.5 percent for grades 1–12, and 1.4 percent for higher education. France spent a larger fraction for preprimary education, while Italy spent the same fraction as the United States. Only Canada expended a larger fraction than the United States for 1st–12th grade and higher education.
- ▶ In grades 1–12, public expenditures per student in the G-7 countries ranged from \$2,624 in Japan to \$4,765 in the United States; in higher education, public expenditures ranged from \$1,988 in Japan to \$9,087 in the United Kingdom (\$8,275 in the United States).

Public education expenditures are an indication of public investment in education. In the United States and other countries, there are additional private expenditures for education. Three alternative measures allow examination of the magnitude of public investment in education. The first provides a measure of the fraction of a country's resources that are allocated to public education. The second provides a measure of the public investment in each child who is in the education system. The third provides a measure of public educational investment in each child compared to available resources per person in the country.

Current public expenditures for education, by country: School year 1990–91

G-7 countries	Per student ¹								
	As a percentage of GDP ²			Constant 1990–91 U.S. dollars ³			As a percentage of GDP per capita		
	Pre- primary	1st– 12th	Higher education	Pre- primary	1st– 12th	Higher education	Pre- primary	1st– 12th	Higher education
Canada ⁴	—	4.0	2.1	—	\$4,558	\$8,556	—	23.2	43.5
France	0.5	3.2	0.7	\$2,077	3,375	4,449	11.4	18.6	24.5
Former West Germany	0.2	2.3	0.8	1,302	3,293	5,537	6.7	16.9	28.4
Italy ⁵	0.3	3.1	0.7	2,058	3,720	4,421	12.1	22.0	26.1
Japan	0.1	2.3	0.2	726	2,624	1,988	3.9	14.2	10.8
United Kingdom	0.2	3.2	0.9	1,943	3,054	9,087	11.9	18.7	55.5
United States	0.3	3.5	1.4	2,228	4,765	8,275	9.9	21.2	36.8

—Not available.

¹Enrollment is in all institutions, public and private, and is based on headcount estimates for preprimary through 12th grade. For higher education, it is full-time equivalent enrollment.

²Gross Domestic Product is Gross National Product less net property income from abroad.

³Purchasing power parity indices (PPPI) were used to convert other currencies to U.S. dollars.

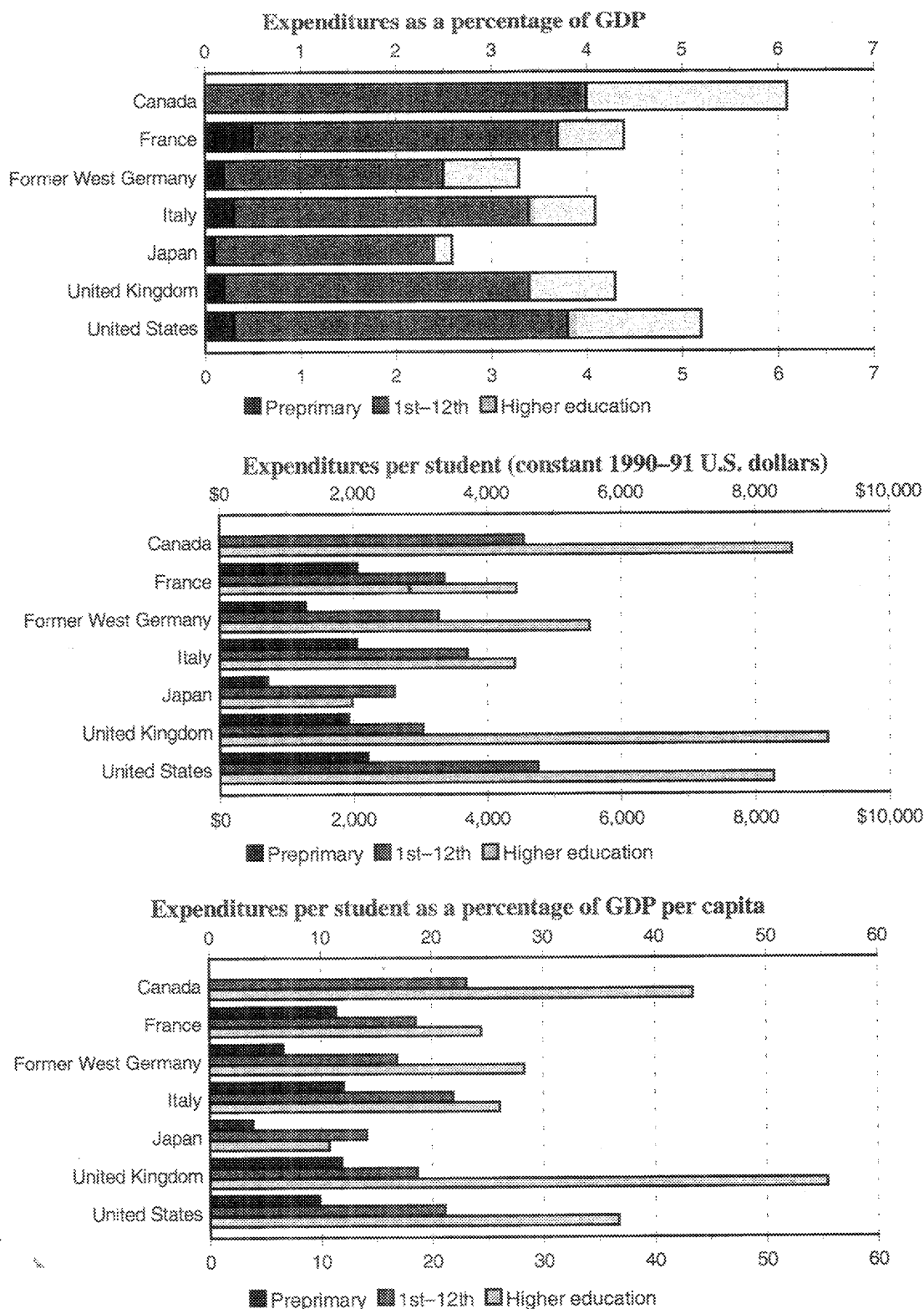
⁴Preprimary expenditures for Canada are grouped with elementary and secondary data.

⁵1989 data.

NOTE: The fiscal year begins in different months in the above countries. See supplemental note to *Indicator 54* for an explanation of how expenditures were adjusted. See supplemental tables 54-1 through 54-5 for additional expenditure data and the supplemental note to *Indicator 54* for a discussion of this data.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project, 1993.

International comparison of public expenditures for education: School year 1990-91



NOTE: Preprimary expenditures for Canada are grouped with elementary and secondary data. Data for Japan are for 1989.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project, 1993.

Growth of expenditures per student and tuition levels

- ▶ **At public universities, between 1981 and 1991, tuition charges increased by 36 percent (in constant dollars), while expenditures per full-time-equivalent (FTE) student for administration and research increased about the same amount and expenditures per FTE student for instruction increased 13 percent.**
- ▶ **At private universities during the same period, tuition charges increased 53 percent while expenditures for instruction increased 38 percent. Expenditures increased 45 percent for administration and 71 percent for institutionally-based scholarships (see supplemental table 55-2).**
- ▶ **Tuition charges increased less at public 2-year colleges than at other public institutions (supplemental table 55-3). Instructional expenditures at public 2-year colleges increased about the same as at public 4-year colleges, but less than at public universities (see supplemental table 55-1).**

Rising college tuition levels are of considerable concern to policymakers, educators, students, and their families. Why tuition continues to climb is a hotly debated subject. Comparison of the growth rate of expenditures per student in various categories is an indication of how the allocation of expenditures changed while total expenditures per student rose or fell.

Indices of selected expenditures per full-time-equivalent student (1981=100) and average undergraduate tuition charges (in constant 1993 dollars) at public and private universities: Academic years ending 1977-91

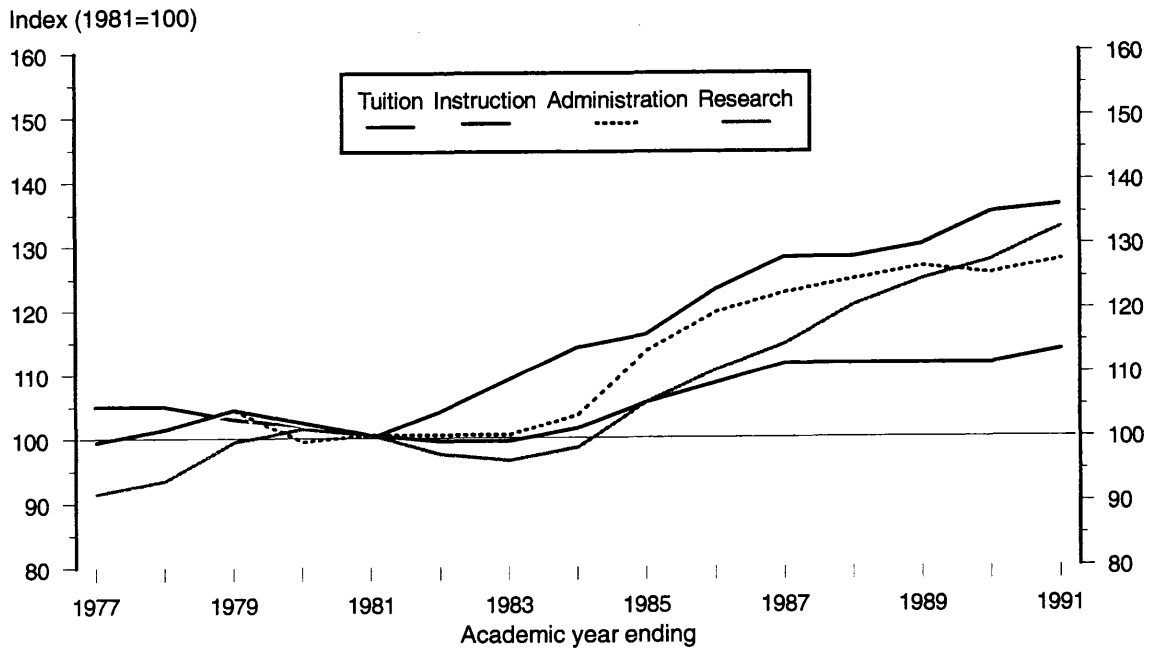
Academic year ending	Public universities					Private universities				
	Tuition charges	Expenditures				Tuition charges	Expenditures			
		Total	Instruc- tion	Admin- istration	Research		Total	Instruc- tion	Admin- istration	Research
1977	105	98	99	99	91	100	97	97	92	103
1978	105	99	101	101	93	99	96	96	92	101
1979	103	103	104	104	99	99	97	95	98	102
1980	102	102	102	99	101	99	99	98	101	102
1981	100	100	100	100	100	100	100	100	100	100
1982	104	99	99	100	97	104	100	102	99	95
1983	109	98	99	100	96	112	101	104	107	91
1984	114	101	101	103	98	118	108	109	118	97
1985	116	106	105	113	105	123	113	112	121	103
1986	123	110	108	119	110	127	117	116	126	109
1987	128	112	111	122	114	134	128	129	139	119
1988	128	115	111	124	120	140	129	127	141	122
1989	130	117	111	126	124	142	131	131	143	122
1990	135	117	111	125	127	147	133	132	141	125
1991	136	120	113	127	132	153	137	138	145	123

NOTE: The Higher Education Price Index is used to convert expenditures to constant dollars and the Consumer Price Index is used to convert tuition charges to constant dollars.

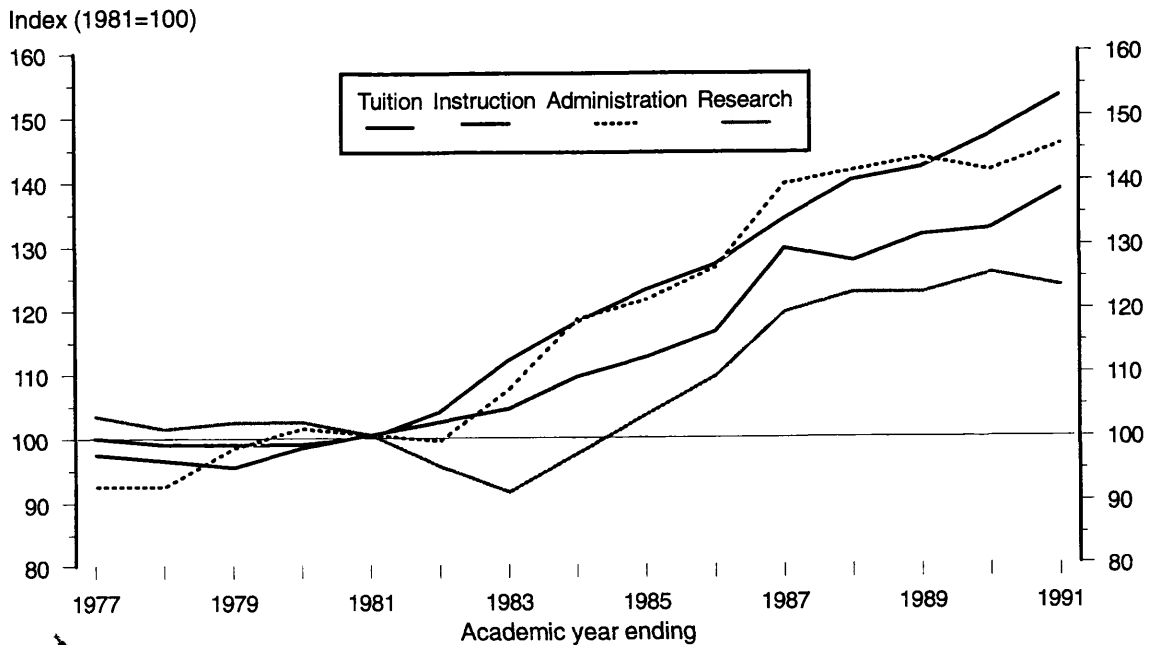
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS Institutional Characteristics, Financial Statistics, and Fall Enrollment surveys.

Indices of selected expenditures per full-time-equivalent student and average undergraduate tuition charges (in constant 1993 dollars) at public and private universities: Academic years ending 1977-91

Public universities



Private universities



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS Institutional Characteristics, Financial Statistics, and Fall Enrollment surveys.

Salaries of teachers

- ▶ Between 1980 and 1993, average overall teacher salaries, adjusted for inflation, increased by 21 percent, from \$29,766 to \$35,873; elementary teacher salaries increased by 22 percent, and secondary teacher salaries increased by 19 percent.
- ▶ The increase in the 1980s followed a period of decline during the 1970s. Teacher salaries peaked in 1973 at \$34,390, but lost nearly \$5,000 during the decade, falling to a low of \$29,473 in 1981. When compared to the earlier peak, teacher salaries have shown an increase only since 1987.
- ▶ The average beginning salary for teachers increased 17 percent between 1980 and 1993, from \$20,504 to \$23,969.
- ▶ Percentage increases in teacher salaries between 1981 and 1993 ranged from a high of 51 percent in New England to a low of 9 percent in the Rocky Mountain states.

There has been much discussion about increasing the supply and quality of teachers. Education officials are experimenting with teacher salary structures, creating new career steps, career ladders, merit pay schemes, and new positions with greater authority and responsibility in order to attract and retain better teachers. In the past, such experiments have been associated with increases in teachers' salaries.

Average annual salary (in constant 1993 dollars) for public elementary and secondary school teachers: Selected years 1960–93

School year ending	All teachers	Elementary teachers	Secondary teachers	Beginning teacher salary*
1960	\$24,599	\$23,712	\$25,983	—
1964	28,127	27,235	29,398	—
1968	31,584	30,669	32,729	—
1972	34,127	33,138	35,273	\$24,128
1976	32,876	32,041	33,755	23,104
1980	29,766	29,019	30,678	20,504
1984	31,184	30,547	32,064	21,562
1988	35,017	34,373	35,974	23,938
1992	34,618	34,053	35,421	24,001
1993	35,873	35,308	36,609	23,969

—Not available.

*Beginning teacher salary is for the calendar year.

Average annual salaries of public school teachers, percentage increase of salaries between 1981 and 1993, and per capita personal income for 1992 (in 1993 dollars), by region

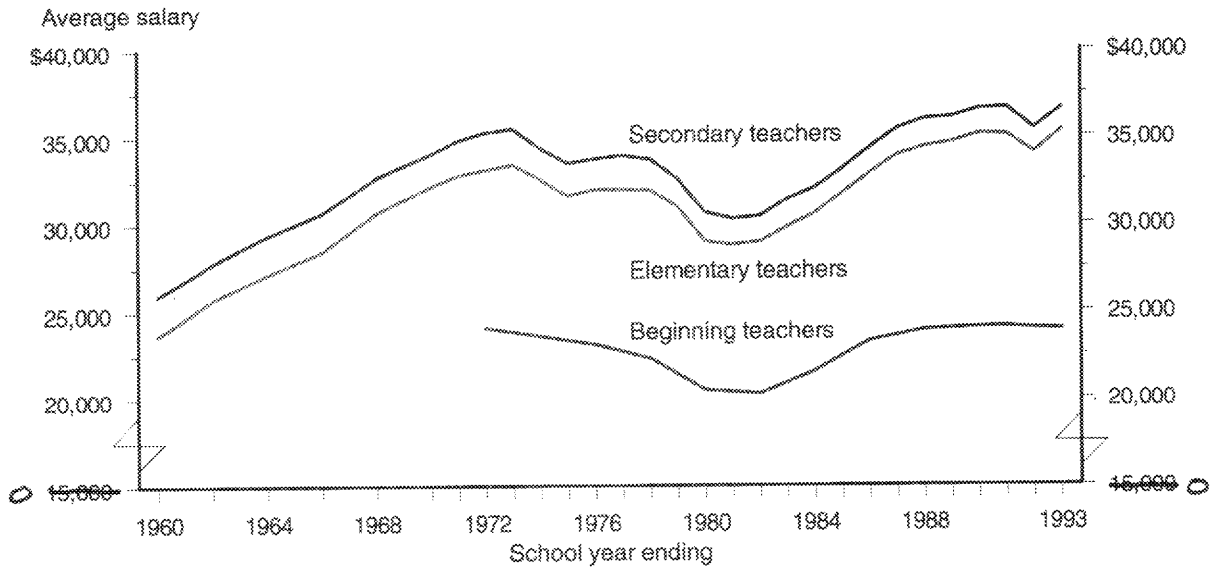
Region	All teachers 1980–81	All teachers 1992–93	Percentage increase 1981–93	Per capita personal income (1992)
50 states and D.C.	\$29,473	\$35,873	21.7	\$20,745
New England	26,816	40,527	51.1	24,225
Mideast	32,725	43,625	33.3	24,130
Southeast	25,121	30,089	19.8	20,487
Great Lakes	30,871	38,666	25.3	17,617
Plains	25,533	31,565	23.6	17,376
Southwest	26,824	29,979	11.8	18,347
Rocky Mountains	28,251	30,675	8.6	18,839
Far West	35,619	40,448	13.6	21,891

NOTE: Regions are identified in supplemental table 56-2.

SOURCE: National Education Association, *Estimates of School Statistics, 1993* (Copyright © 1993 by NEA. All rights reserved). U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993, table 76*; American Federation of Teachers, *Survey and Analysis of Salary Trends 1993, 1993, Table III-2*.

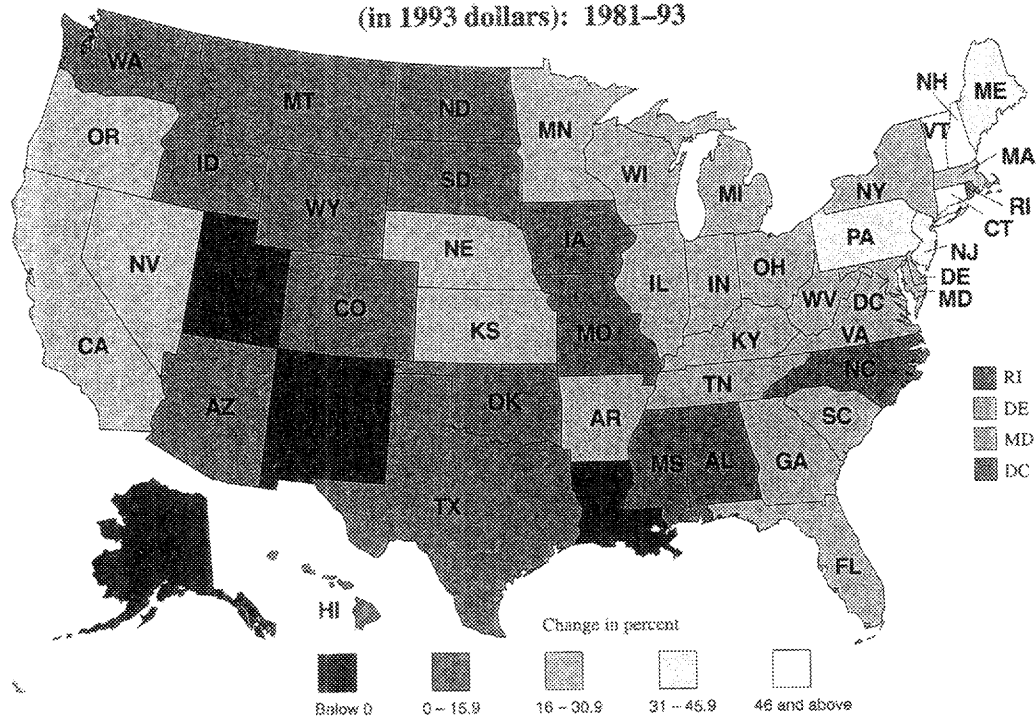
Average salaries of teachers

Average annual salary and average beginning salary for public school teachers (in 1993 dollars): Selected school years ending 1960-93



Note: Plotted points for average annual salary for teachers are: even years 1960-1968, and all years 1970-1993. Plotted points for average beginning salary for teachers are: even years 1972-88 and 1990-93.

Percentage change in public school teacher salaries (in 1993 dollars): 1981-93



SOURCE: National Education Association, *Estimates of School Statistics, 1993* (Copyright © 1993 by NEA. All rights reserved.). U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 76; American Federation of Teachers, *Survey and Analysis of Salary Trends, 1993, 1993*.

Salaries of full-time college faculty

- ▶ Following years of growth, inflation-adjusted faculty salaries at public 4-year institutions decreased slightly between 1991 and 1992 at all professorial ranks.
- ▶ Despite gains during most of the 1980s and early 1990s, the purchasing power of faculty salaries at all types of institutions and at all professorial ranks was lower in 1992 than it had been two decades earlier.
- ▶ At 4-year colleges and universities, faculty salaries at private institutions have traditionally been lower than those at public institutions. However, salary differences for associate and assistant professors have narrowed in recent years. Also, in 1992, professors' salaries were actually higher at private than at public institutions.
- ▶ Faculty salaries are lower at 2-year than at 4-year institutions. For example, in 1992, assistant professors at 2-year public institutions earned 7 percent less on average than their counterparts at 4-year public institutions and full professors earned 19 percent less.

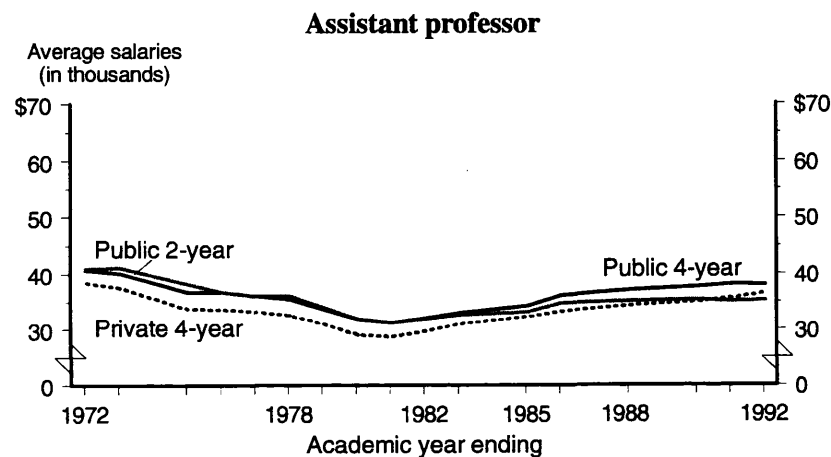
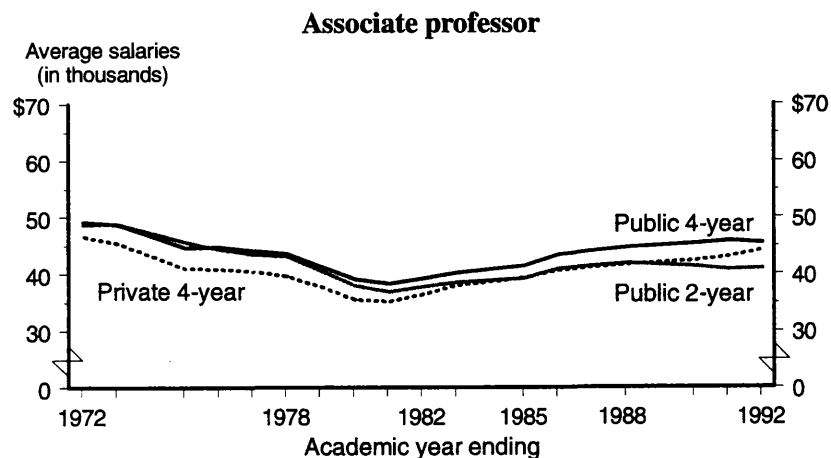
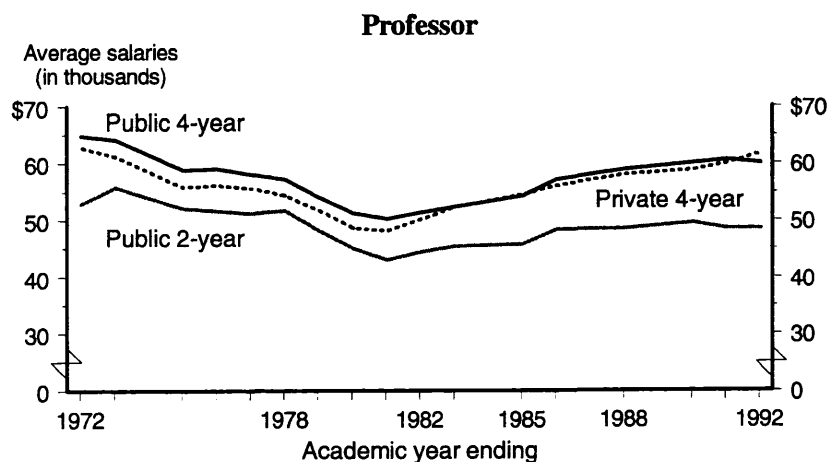
Faculty salaries affect higher education's ability to attract and retain qualified instructional personnel. In addition, salaries are a significant component of college and university expenditures.

Average salaries (in 1993 constant dollars) of full-time faculty in institutions of higher education, by academic rank and type and control of institution: Selected academic years ending 1972-92

Type of institution and academic year ending	Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
4-year institutions						
1972	\$64,727	\$48,992	\$40,428	\$62,499	\$46,350	\$38,251
1975	58,628	44,449	36,468	55,610	40,698	33,555
1978	56,963	43,299	35,318	54,180	39,415	32,336
1982	51,102	38,949	31,791	49,886	36,093	29,279
1985	54,028	41,143	34,006	54,342	39,065	31,948
1988	58,610	44,367	36,740	57,643	41,267	34,055
1990	59,640	45,019	37,371	58,520	41,983	34,725
1991	60,205	45,409	37,737	59,630	42,626	35,309
1992	59,764	45,151	37,661	61,374	43,848	36,201
2-year institutions						
1972	\$52,677	\$48,582	\$40,665	\$35,711	\$35,462	\$32,128
1975	51,941	45,422	38,020	33,566	32,705	28,658
1978	51,537	42,853	35,858	31,383	32,009	27,615
1982	44,167	37,474	31,537	32,095	30,158	24,398
1985	45,460	38,914	32,911	31,711	28,747	24,798
1988	48,248	41,475	34,885	32,775	29,615	26,184
1990	49,149	40,939	35,022	33,732	29,190	27,443
1991	48,245	40,426	34,712	31,362	27,998	26,121
1992	48,145	40,652	34,931	33,300	29,075	26,276

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS survey of faculty salaries, various years.

**Average salaries (in constant 1993 dollars) of full-time faculty in institutions of higher education, by academic rank and type and control of institution:
Selected academic years ending 1972-92**



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS survey of faculty salaries, various years.

Sources of supply of newly hired teachers

- ▶ **Between 1988 and 1991, there was a shift in sources of supply of newly hired teachers as both public and private schools hired a larger proportion of first-time teachers and a smaller proportion of reentrants.**
- ▶ **Transfers from other teaching positions comprised just over one-third of new hires in 1991. Most of these transferred within the same sector and state in both public and private schools.**
- ▶ **The majority of first-time teachers in both sectors in 1988 and in the public sector in 1991 were in college in the previous year, although among public first timers, slightly fewer came directly from college in 1991 than in 1988. In addition, fewer reentrants came from college in 1991 than in 1988.**
- ▶ **In 1991, a considerable number of first-time and reentering teachers had worked as substitute teachers in the previous year.**

In the last two decades, as fewer college graduates entered the teaching profession and student enrollments increased, policymakers have become concerned about the supply of new teachers needed to meet the demand. Our school systems depend on new college graduates, transfers, and reentering teachers to meet demand. Reentrants offer more teaching experience and training but at higher salaries than first-time teachers. First-time teachers have higher rates of attrition from the profession. The extent of dependence on these alternative sources has implications for school budgets and teacher recruitment and retention.

Percentage distribution of newly hired teachers, by sector, supply source, and prior year activity: School years ending 1988 and 1991

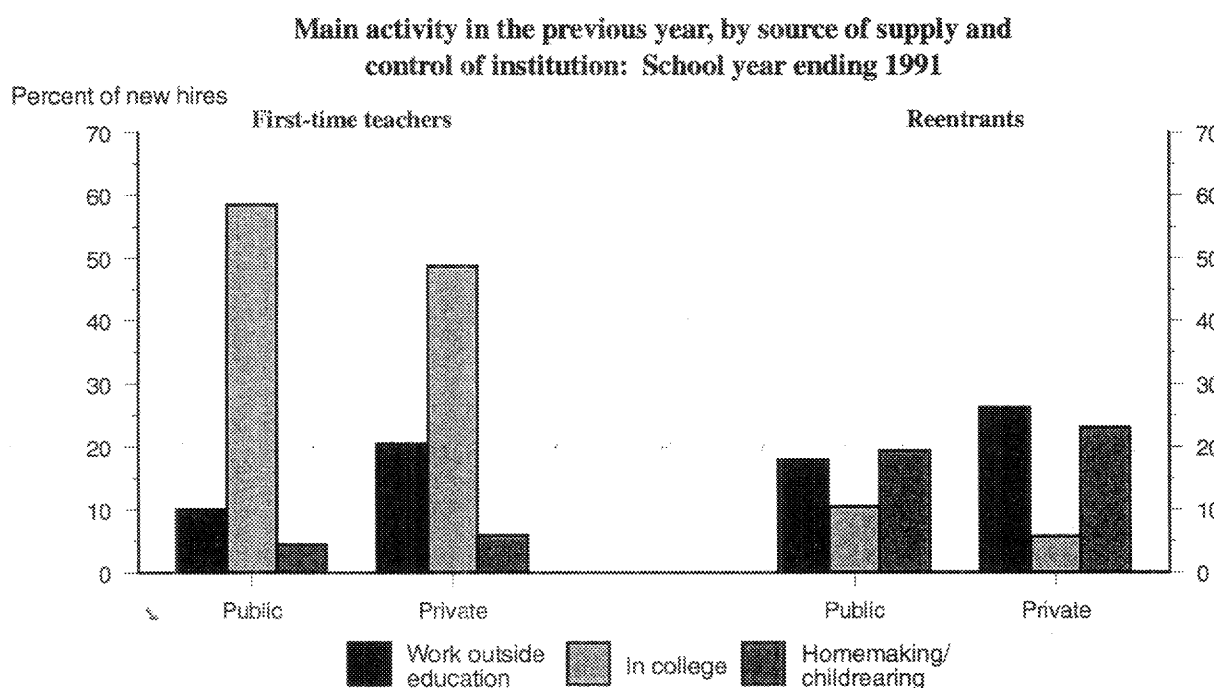
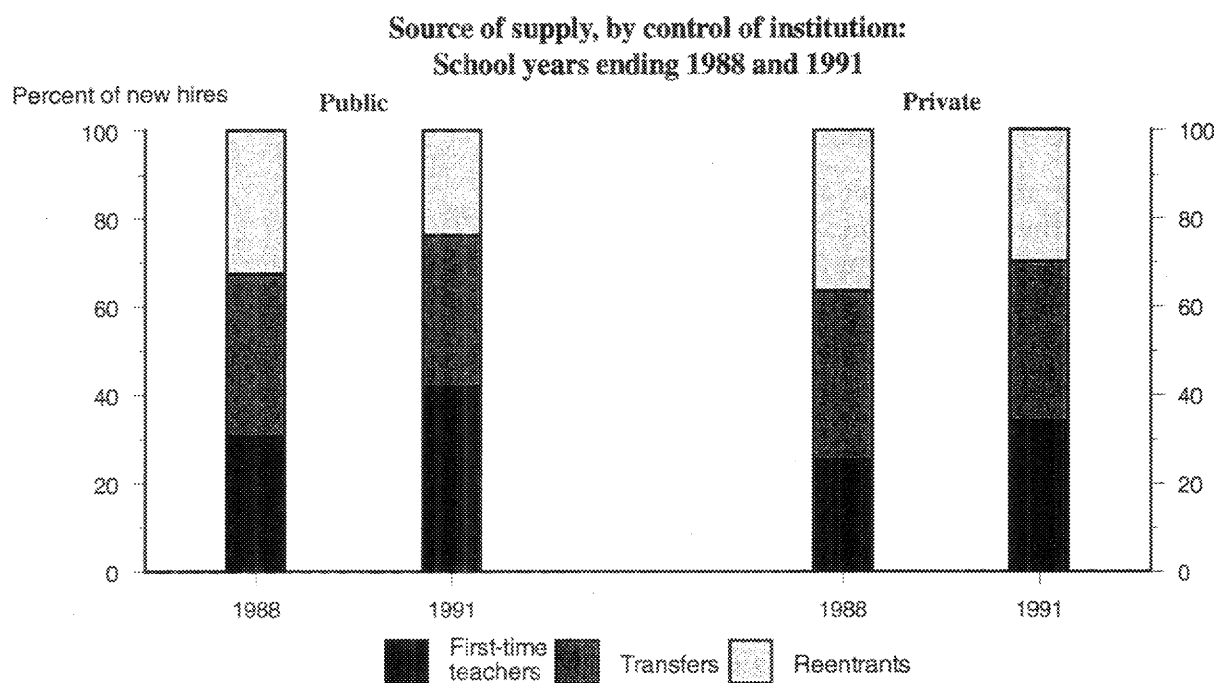
Supply source and prior year activity	Public schools		Private schools	
	1988	1991	1988	1991
Supply source				
First-time teachers	30.6	41.7	25.2	34.0
Transfers	36.6	34.3	38.1	36.1
Within state and sector	20.8	21.6	19.0	18.1
Across state	8.3	7.1	8.3	7.0
Across sector	7.5	5.6	10.9	11.0
Reentrants	32.8	24.0	36.7	30.0
Prior year activity				
First-time teachers - Total	100.0	100.0	100.0	100.0
Work in education	5.7	5.2	4.8	7.5
Work outside education	11.0	10.0	24.5	20.6
College	66.5	58.4	51.8	48.7
Homemaking/childrearing	3.6	4.4	7.7	5.8
Other	13.3	22.0	11.3	17.4
Substitute teaching	—	18.0	—	12.0
Reentrants - Total	100.0	100.0	100.0	100.0
Work in education	10.3	19.1	8.9	11.7
Work outside education	17.4	17.9	21.2	26.1
College	18.0	10.4	20.0	5.6
Homemaking/childrearing	27.8	19.3	28.6	23.1
Other	26.5	33.3	21.3	33.6
Substitute teaching	—	23.8	—	18.7

—Substitute teaching was not a response option in the 1988 questionnaire.

NOTE: Newly hired teachers are defined as regular teachers who teach half-time or more and who in the previous year did not hold regular teaching positions in that public school district or private school.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 and 1990–91 (Teacher Questionnaire).

Percentage of newly hired teachers, by source of supply and main activity in the previous year



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 and 1990-91 (Teacher Questionnaire).

Certification and education of full-time public secondary school teachers

- ▶ In 1991, more than 9 out of 10 full-time teachers in public secondary schools were certified to teach in their main assignment field. Seventy-seven percent of these teachers either majored or minored in this field and 52 percent held a graduate degree in some field.
- ▶ The percentage of teachers who majored or minored in their main assignment field varied across fields from 62 percent for science teachers to 89 percent for social science teachers.
- ▶ Of those teachers with another assignment field in 1991, 64 percent were certified to teach in this field. This percentage varied from 58 for those teaching arts and foreign languages to 71 for those teaching mathematics as another assignment field.
- ▶ Between 1988 and 1991, there was no change in the percentage of mathematics and science teachers who had majored or minored in their field, a slight increase in the percentage of English teachers who had done so, and a slight decrease in the percentage of arts and foreign language teachers who had done so.

Concern about the quality of education in America has included an interest in the qualifications of teachers, especially in mathematics and science. Certification status and educational background are indirect measures of teacher qualifications. Whether a teacher is certified to teach in their field and majored or minored in their field may indicate the breadth of knowledge in the subject matter they bring to the classroom.

Percentage of full-time public secondary school teachers with selected professional characteristics, by assignment field: School years ending 1988 and 1991

Assignment field	Certified in main assignment field		Certified in other assignment field ¹		Majored or minored in main assignment field		Graduate degree in any field	
	1987-88	1990-91	1987-88	1990-91	1987-88	1990-91	1987-88	1990-91
All teachers	93.3	95.2	66.7	64.2	79.0	76.8	51.5	52.1
English and humanities	94.2	95.6	68.0	61.5	83.4	83.0	51.6	49.4
English	93.7	96.0	69.3	64.0	76.8	81.0	51.3	50.1
Arts and foreign languages	94.8	95.1	66.1	58.4	92.5	85.6	51.9	48.5
Social science	95.0	95.9	67.7	60.7	86.8	88.8	54.7	56.0
Mathematics and science	91.8	94.6	71.4	68.8	69.5	68.7	52.7	54.1
Mathematics	92.1	94.2	74.7	71.0	75.4	74.9	50.6	51.5
Science	91.6	95.0	70.3	68.1	62.9	62.0	55.0	56.8
Education specialties ²	93.2	95.0	58.3	59.7	79.8	73.4	49.6	51.5

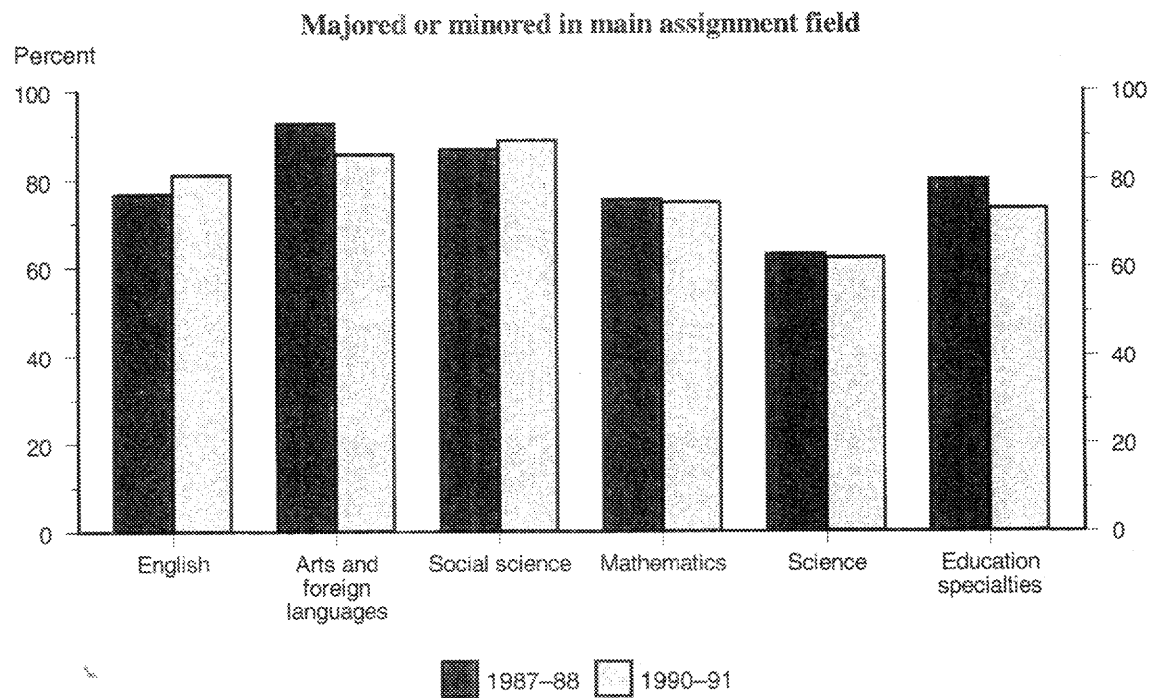
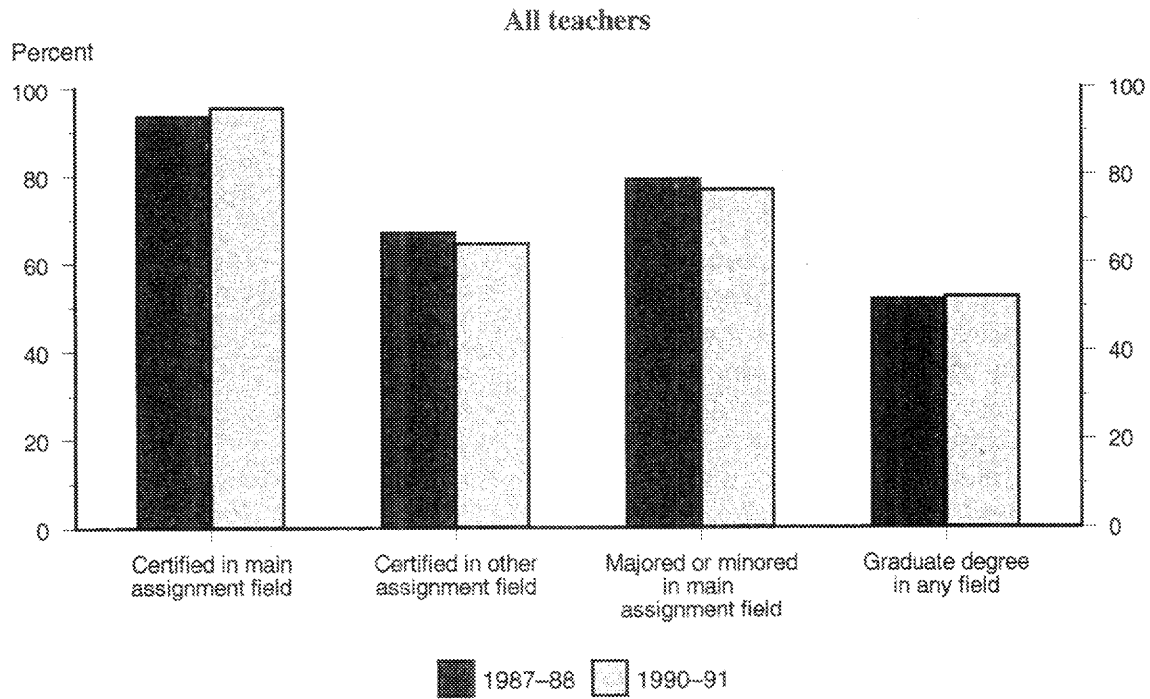
¹Calculated only for those teachers who have another assignment field. Twenty-six percent of teachers reported having another assignment field in 1987-88 and 22 percent reported having another assignment field in 1990-91.

²Education specialties are: elementary, home economics, physical, vocational, and special education.

NOTE: There are many ways to match major/minor field of study with teaching assignment fields. See the supplemental note to Indicator 59 for definitions of certification and major/minor in assignment field used in this table and in supplemental tables 59-1 and 59-2. Also, see supplemental table 59-3 and the supplemental note for a more strict definition of majoring or minoring in teaching assignment field.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 and 1990-91 (Teacher Questionnaire).

Percentage of full-time public secondary school teachers with selected professional characteristics: School years ending 1988 and 1991



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 and 1990-91 (Teacher Questionnaire).

Teacher professional development

- ▶ About 15 percent of public and private school teachers in school year 1991–92 reported pursuing a new degree or completing a degree program within the last year.
- ▶ Fifty-seven percent of private school and 42 percent of public school teachers who had pursued or completed a degree reported that their purpose was professional development in their current field.
- ▶ In the 1990–91 school year, 61 percent of public school teachers and 49 percent of private school teachers reported that they participated in teacher workshops or in-service training. About 92 percent of elementary teachers said that such training was relevant to their main assignment field compared to about 80 percent at the secondary level.
- ▶ Teachers with more than 10 years of teaching experience were less likely to pursue or complete a new degree, and more likely to participate in teacher workshops or in-service training, than teachers with less than 10 years of teaching experience.

Teacher professional development for current teachers includes both seminars offered by schools or school districts and courses at institutions of higher education. The extent to which teachers pursue and complete advanced degrees for professional development while continuing to teach may indicate either the commitment of the teaching profession to improving teaching practice or salary structures that reward advanced degree attainment. Teachers may also be more or less inclined to take additional courses depending on their age, prior commitments, or on the environment in which they teach.

Percentage of teachers engaging in various types of professional development activities, by control of school and selected teacher characteristics: School years 1990–91 and 1991–92

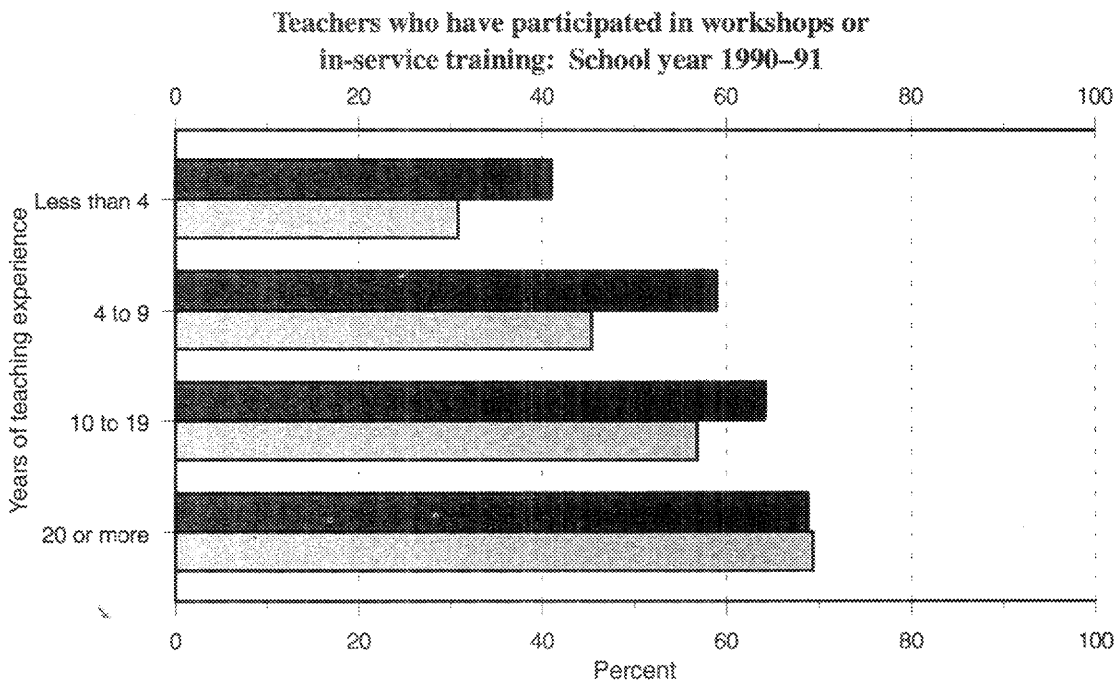
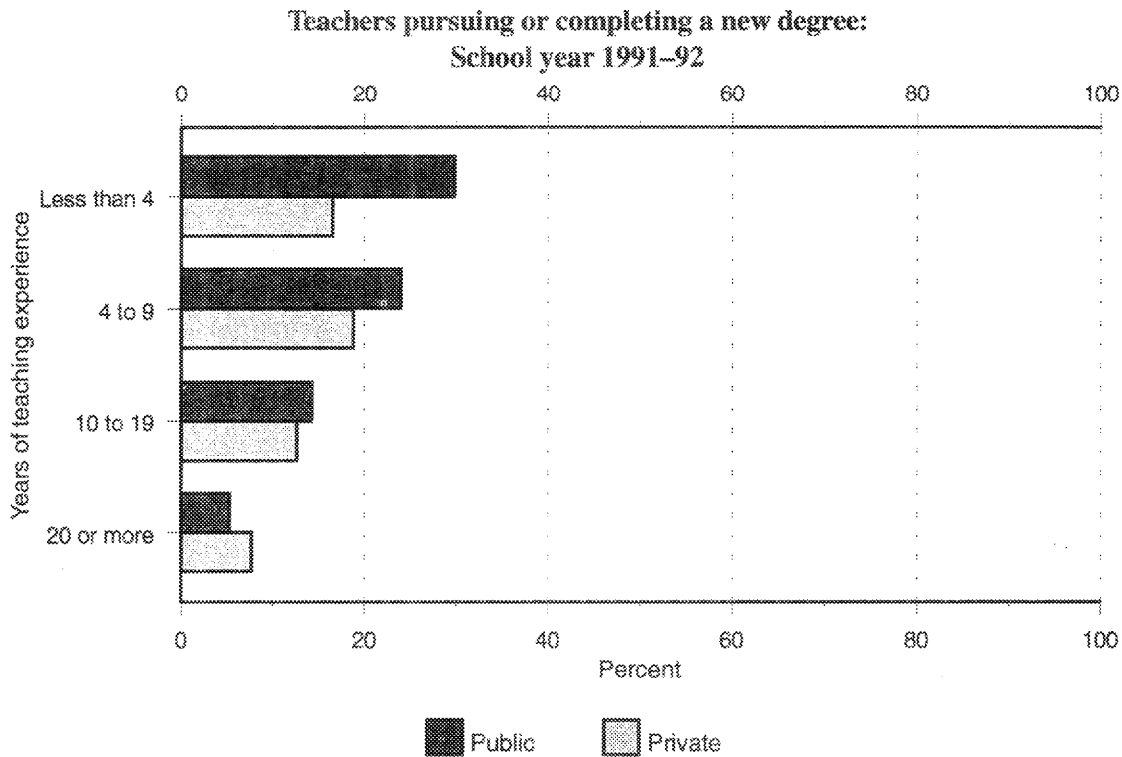
Control of school and teacher characteristics	1991–92		1990–91	
	Pursuing or completing new degree	Purpose of degree was "professional development in current field" ¹	Participating in teacher workshops or in-service training	Reporting training was relevant to current main assignment field ²
Public	15.7	41.7	61.4	86.1
Teaching level				
Elementary	15.6	42.9	62.4	92.2
Secondary	15.9	40.3	60.2	79.0
Years of teaching experience				
Less than 4 years	29.8	45.0	41.0	88.9
4 to 9 years	23.9	46.2	59.0	84.0
10 to 19 years	14.2	36.0	64.2	86.3
20 years or more	5.3	37.1	68.8	86.6
Private	14.6	57.4	48.7	87.0
Teaching level				
Elementary	13.6	57.5	51.9	91.2
Secondary	15.5	57.4	45.5	82.1
Years of teaching experience				
Less than 4 years	16.5	52.8	30.9	91.1
4 to 9 years	18.8	58.1	45.5	86.8
10 to 19 years	12.6	67.1	56.9	86.4
20 years or more	7.7	46.8	69.5	84.9

¹As a percentage of those pursuing or completing a new degree.

²As a percentage of those participating in teacher workshops or in-service training.

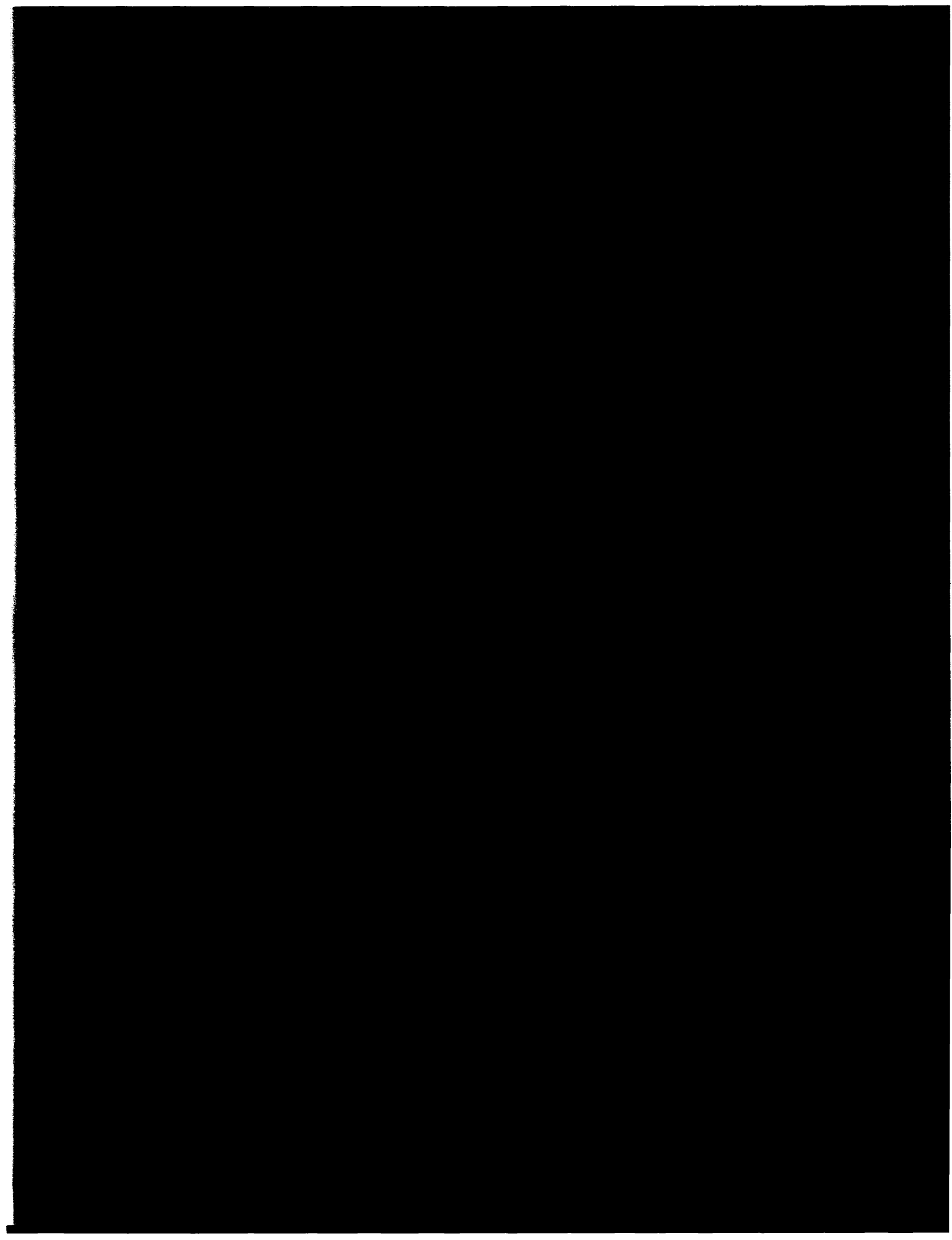
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1990–91 and Teacher Follow-up Survey, 1991–92.

**Percentage of teachers engaging in various types of professional development activities, by control of school and years of teaching experience:
School years 1990-91 and 1991-92**



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1990-91 and Teacher Followup Survey, 1991-92.







Supplemental Tables and Notes

Table 1-1 Percentage of the population enrolled in school, by age: October 1970-92

October	Age															
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1970	13.2	28.7	80.6	98.9	99.7	99.8	99.9	100.0	99.9	99.9	99.7	99.0	98.1	94.1	87.2	57.8
1971	13.0	30.6	84.8	98.9	99.6	99.8	99.8	99.9	99.9	99.9	99.8	99.1	98.6	94.5	87.1	59.1
1972	15.8	34.0	85.7	98.5	99.6	99.9	99.8	100.0	99.8	99.9	99.8	98.6	97.7	93.8	85.6	57.5
1973	14.8	35.1	86.8	98.9	99.7	99.7	99.8	99.7	99.9	99.8	99.7	98.6	97.1	93.2	84.5	52.2
1974	20.0	38.3	89.9	99.1	99.7	99.8	99.8	99.8	100.0	100.0	99.9	98.8	97.6	93.7	82.9	53.2
1975	22.1	41.5	90.9	99.4	99.9	99.8	100.0	99.9	99.8	99.8	99.6	98.9	98.1	94.3	84.3	56.2
1976	20.8	42.7	92.3	99.5	99.8	99.8	99.9	99.9	99.8	99.8	99.9	98.8	98.2	93.3	86.2	53.0
1977	22.0	43.2	92.4	99.5	99.9	99.9	99.9	99.9	99.8	99.7	99.0	100.0	98.3	93.9	84.9	56.9
1978	25.7	44.7	92.1	99.1	99.6	99.8	99.9	99.4	99.6	99.6	99.6	99.3	98.4	94.7	85.0	52.4
1979	25.4	46.1	93.0	99.2	99.4	99.6	99.9	99.8	99.8	99.5	99.9	99.1	98.0	94.4	85.3	55.9
1980	27.6	47.2	93.2	99.4	99.5	99.5	99.7	99.6	99.7	99.8	99.7	98.7	98.5	93.9	85.2	54.6
1981	27.6	45.4	90.2	98.9	99.6	99.7	99.7	99.9	99.7	99.6	99.9	99.0	97.7	94.6	87.3	57.9
1982	27.6	46.1	91.5	99.4	99.8	99.6	99.8	99.9	99.8	99.9	99.5	98.8	98.9	94.6	88.1	57.1
1983	28.2	47.6	92.6	99.0	99.5	99.7	99.6	99.8	99.7	99.9	99.7	99.0	98.5	96.3	88.6	58.4
1984	28.5	46.5	91.4	99.1	99.6	99.2	99.4	99.7	99.7	99.6	99.7	98.3	97.8	95.3	88.5	58.6
1985	29.2	49.5	93.9	99.1	99.6	99.8	99.7	99.7	99.8	99.9	99.7	98.4	98.5	94.9	88.6	59.7
1986	29.3	49.5	91.8	99.4	99.8	99.8	99.8	99.8	99.5	99.7	99.8	98.2	97.9	95.5	89.6	61.0
1987	28.6	47.9	91.3	99.0	99.5	99.7	99.6	99.4	99.5	99.7	99.3	98.9	98.2	95.4	88.1	62.2
1988	27.6	49.2	92.6	99.3	99.7	99.6	99.6	99.9	99.6	99.6	99.7	99.3	98.5	94.6	88.8	62.8
1989	27.1	51.2	91.8	98.4	98.9	99.4	99.4	99.4	99.5	99.2	99.6	99.5	98.2	96.0	89.6	61.6
1990	32.6	56.1	93.2	99.8	99.5	99.9	99.6	99.6	99.6	99.7	99.6	99.6	98.4	95.6	89.5	64.4
1991	28.2	53.0	91.4	99.4	99.3	99.7	99.8	99.8	99.7	99.7	99.6	99.5	98.0	96.5	90.0	65.5
1992	27.7	52.1	92.4	98.6	99.3	99.3	99.5	99.3	99.3	99.5	99.4	99.4	98.9	96.3	91.9	68.1

October	Age															
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1970	45.8	39.1	30.7	20.2	16.3	14.7	12.6	10.8	9.6	7.7	7.6	6.4	7.0	5.4	5.2	5.4
1971	47.2	37.7	31.9	21.3	17.2	14.4	15.3	10.4	9.7	6.9	6.0	7.6	5.7	5.9	6.5	5.3
1972	42.7	37.8	31.2	20.5	16.9	15.2	13.8	11.9	9.9	8.4	9.1	7.1	6.8	6.7	5.9	5.6
1973	40.2	33.4	30.2	19.0	14.4	15.5	12.6	11.1	9.5	9.9	6.1	6.5	5.3	5.6	4.7	4.7
1974	39.4	33.4	31.6	20.1	15.9	13.8	14.0	11.5	10.6	11.0	7.7	7.7	7.0	7.0	7.4	6.5
1975	42.9	36.5	31.6	21.9	17.8	14.5	14.2	12.2	10.8	11.4	9.4	9.6	7.5	7.9	7.9	6.7
1976	44.8	37.1	30.9	22.3	16.7	16.1	13.4	12.4	11.5	10.2	9.7	8.1	8.2	7.7	6.7	5.4
1977	41.8	37.1	32.9	21.8	17.6	15.4	15.2	12.9	10.7	11.7	10.9	9.7	9.0	8.1	6.5	6.7
1978	42.7	33.7	28.6	21.9	16.2	14.7	11.8	11.0	10.0	9.4	8.6	8.9	7.9	7.1	5.7	4.2
1979	41.3	35.1	30.0	21.1	17.3	13.7	13.5	12.4	9.8	10.3	9.0	9.0	7.0	8.1	7.2	5.6
1980	43.0	33.9	30.6	22.3	16.7	13.5	12.0	11.2	10.0	8.8	7.9	8.0	8.2	6.5	6.8	6.3
1981	43.4	36.5	29.7	21.9	16.4	14.2	11.6	10.7	9.2	9.3	8.1	8.7	8.3	8.0	6.7	6.2
1982	43.4	38.9	32.7	22.2	17.2	13.8	12.6	11.4	9.4	9.2	9.5	7.4	8.1	7.0	6.3	6.1
1983	46.6	35.8	32.5	24.1	16.4	13.4	13.0	11.1	9.9	8.6	9.1	8.6	7.7	7.7	6.9	5.8
1984	43.1	37.7	31.4	22.5	17.2	13.8	11.4	9.9	10.4	8.8	7.8	6.9	8.0	7.1	5.8	6.0
1985	45.7	38.3	33.8	22.4	15.7	13.4	12.0	10.3	9.6	9.7	9.1	7.9	7.2	6.3	6.7	6.4
1986	49.6	36.8	30.6	25.4	16.4	13.8	11.3	10.4	10.2	9.3	7.8	7.6	7.6	6.8	6.3	5.5
1987	48.8	42.3	34.9	23.2	17.2	12.7	12.7	9.7	8.6	7.3	7.1	6.6	5.5	6.2	5.6	5.3
1988	47.8	42.1	36.0	25.4	17.1	13.2	10.1	9.4	7.9	7.5	6.8	6.4	6.0	6.0	6.2	5.1
1989	50.6	39.0	38.0	27.9	18.5	14.2	12.6	10.2	9.3	7.9	6.9	6.7	6.3	4.9	5.2	5.4
1990	50.6	42.9	36.4	28.1	19.2	16.2	11.8	11.7	9.7	8.7	6.9	6.5	7.6	5.5	4.2	5.4
1991	54.0	43.6	40.5	28.2	20.9	17.0	12.4	11.4	10.7	9.1	7.7	7.0	7.4	6.6	5.4	4.6
1992	54.6	46.6	41.5	29.0	21.9	17.6	13.3	10.2	10.6	7.9	7.4	7.0	7.4	5.6	4.7	5.7

NOTE: School includes nursery schools but excludes day-care centers, and includes 2- and 4- year colleges and universities but excludes schools with programs of strictly less than 2 years.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 2-1 Percentage of 3- to 4-year-olds enrolled in pre-k and kindergarten, by race/ethnicity: October 1971-91 (3-year average)

Year	Enrolled in pre-k				Enrolled in kindergarten			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1971	15.4	—	—	—	6.6	—	—	—
1972	16.6	—	—	—	6.6	—	—	—
1973	19.1	19.5	19.0	13.8	6.7	6.1	9.6	7.9
1974	21.3	21.6	21.1	15.6	6.8	6.1	9.5	8.2
1975	23.0	23.6	22.2	15.8	7.5	6.7	10.3	9.1
1976	24.1	24.7	23.9	15.4	7.5	6.6	10.8	7.5
1977	25.4	26.1	25.8	15.4	7.1	6.4	11.0	6.0
1978	27.3	—	—	—	6.5	—	—	—
1979	29.2	—	—	—	6.2	—	—	—
1980	29.7	—	—	—	6.2	—	—	—
1981	30.4	32.3	28.4	18.7	6.0	5.1	9.5	6.3
1982	30.6	32.8	28.7	15.7	6.1	5.4	8.5	7.7
1983	30.7	32.9	28.9	15.3	6.0	5.2	8.8	8.0
1984	31.2	33.6	28.7	17.4	6.4	5.4	10.5	7.7
1985	31.9	34.6	28.6	19.2	6.1	4.8	11.4	7.6
1986	32.4	35.5	27.4	20.3	6.3	4.7	12.1	8.3
1987	32.5	36.1	25.9	18.7	6.0	4.3	10.4	9.1
1988	33.0	36.8	26.7	18.0	5.5	4.1	9.6	7.6
1989	36.0	39.9	30.4	19.6	4.5	3.7	7.5	6.1
1990	36.5	40.3	31.4	21.0	4.8	3.9	7.6	6.7
1991	36.2	40.1	30.8	21.0	5.4	4.2	8.1	8.6

—Not available.

NOTE: Due to small sample sizes for the black and Hispanic categories, 3-year averages are calculated. The 3-year average for 1991 is the average percentage enrolled in 1990, 1991, and 1992.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 2-2 Percentage of 5-year-olds enrolled in pre-k, kindergarten, and grades 1 or 2, by race/ethnicity: October 1971–91 (3-year average)

Year	Enrolled in pre-k				Enrolled in kindergarten				Enrolled in grades 1 or 2			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1971	2.1	—	—	—	71.1	—	—	—	10.3	—	—	—
1972	2.0	—	—	—	73.5	—	—	—	10.1	—	—	—
1973	2.3	2.0	3.2	3.2	75.0	75.7	70.6	76.5	10.2	10.0	10.8	10.8
1974	2.7	2.5	4.3	3.0	76.0	77.7	69.2	69.5	10.2	9.4	12.5	12.3
1975	2.8	2.6	3.7	2.5	77.7	79.3	71.4	74.1	10.3	9.3	14.0	10.7
1976	3.0	2.9	3.7	2.6	78.7	80.0	73.8	76.0	9.9	9.0	13.5	9.1
1977	3.0	3.0	3.5	1.6	78.9	79.9	74.6	78.5	10.0	9.5	12.9	8.0
1978	3.5	—	—	—	79.1	—	—	—	9.4	—	—	—
1979	3.4	—	—	—	80.0	—	—	—	8.8	—	—	—
1980	3.4	—	—	—	80.0	—	—	—	8.1	—	—	—
1981	3.2	3.5	3.1	1.7	80.2	81.9	76.1	74.0	7.6	6.2	12.5	10.1
1982	4.1	4.6	3.0	2.7	79.2	80.8	75.1	74.5	7.6	6.1	13.3	9.6
1983	4.4	4.9	3.2	2.5	79.5	80.7	76.0	76.6	7.3	6.1	11.4	10.2
1984	4.9	5.3	3.5	3.3	80.1	81.5	76.5	76.9	7.1	5.9	11.1	10.6
1985	4.4	4.8	3.0	3.1	81.4	82.6	79.4	77.6	6.2	5.0	9.2	9.1
1986	5.4	6.1	2.4	4.6	81.0	81.6	82.1	76.3	5.7	4.6	8.4	8.2
1987	6.1	6.9	2.5	5.3	80.4	81.1	80.6	77.5	5.3	3.9	9.7	7.0
1988	7.1	8.1	3.4	5.9	79.3	80.1	79.1	75.8	5.5	3.9	10.2	7.8
1989	7.7	8.7	5.2	5.2	79.6	80.7	77.6	77.8	5.3	3.6	9.7	7.6
1990	7.6	8.7	5.4	4.4	79.4	80.2	79.1	76.3	5.1	3.8	7.8	8.0
1991	7.5	8.6	5.7	4.3	79.8	80.2	80.3	78.3	5.0	3.8	6.6	7.9

—Not available.

NOTE: Due to small sample sizes for the black and Hispanic categories, 3-year averages are calculated. The 3-year average for 1991 is the average percentage enrolled in 1990, 1991, and 1992.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 2-3 Percentage enrolled in preprimary education, by age, level, and family income: October 1970-92

Year	3- to 4-year-olds in pre-k				5-year-olds in kindergarten			
	Total	Low income	Middle income	High income	Total	Low income	Middle income	High income
1970	14.1	9.1	11.5	26.4	66.9	46.4	67.4	75.5
1971	14.2	10.6	11.6	26.7	72.0	62.7	70.5	80.9
1972	17.9	15.6	14.4	32.7	74.2	65.0	72.4	85.2
1973	17.7	15.0	13.7	34.7	73.7	67.0	73.8	76.9
1974	—	—	—	—	—	—	—	—
1975	24.4	20.2	21.4	37.7	78.0	68.6	78.9	80.2
1976	22.9	15.1	19.5	42.4	79.0	72.4	79.7	80.8
1977	24.9	18.2	22.0	40.7	79.0	72.7	79.3	82.5
1978	28.4	21.9	24.9	47.1	78.7	73.9	79.3	79.5
1979	28.7	22.1	24.6	48.7	79.7	78.7	77.7	88.2
1980	30.4	22.6	26.9	50.0	81.6	78.1	81.4	84.9
1981	30.0	20.7	27.5	46.8	78.7	72.4	79.0	82.7
1982	30.8	21.7	27.6	50.6	80.2	78.3	79.4	84.3
1983	30.9	21.1	27.7	51.5	78.8	75.7	79.3	80.0
1984	30.4	16.1	28.1	54.0	79.6	78.5	80.2	78.3
1985	32.1	18.4	30.1	53.1	81.8	81.8	80.7	85.6
1986	33.1	19.9	30.1	55.8	82.5	82.2	81.9	85.0
1987	31.8	17.9	29.7	51.4	78.7	77.0	78.1	81.5
1988	32.5	20.5	28.6	53.7	80.1	79.6	79.8	81.2
1989	34.6	23.8	31.4	52.4	79.2	78.7	78.3	81.8
1990	40.8	30.8	36.9	61.3	79.5	77.6	78.8	83.5
1991	34.1	22.4	31.5	53.2	79.7	77.9	78.8	83.7
1992	33.6	23.9	30.5	52.0	80.3	81.3	79.6	81.1

—Not available.

NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 3-1 Percentage of students who were enrolled in private school, by family income, school level, and type: October 1979, 1982, 1985, and 1991

School level and type	Family income*							
	Total Income				Low income			
	1979	1982	1985	1991	1979	1982	1985	1991
Preschool	63.4	64.6	62.1	60.2	25.5	18.7	20.8	17.4
Church-related	24.6	26.2	24.3	27.8	13.4	10.3	8.2	5.6
Non-church-related	38.8	38.3	37.9	32.5	12.1	8.4	12.6	11.9
Kindergarten	13.9	16.0	14.6	14.2	3.2	4.9	4.2	4.0
Church-related	9.3	12.2	10.6	10.0	1.7	3.6	3.3	3.2
Non-church-related	4.6	3.8	4.0	4.3	1.4	1.3	0.9	0.8
Elementary (grades 1-8)	11.0	10.8	10.8	9.5	3.9	3.8	3.7	2.6
Church-related	9.6	9.5	9.3	7.9	3.4	3.6	3.2	2.3
Non-church-related	1.4	1.3	1.5	1.7	0.4	0.2	0.5	0.3
Secondary (grades 9-12)	7.1	7.4	8.2	6.9	2.3	2.0	2.9	2.2
Church-related	5.7	5.9	6.8	5.2	1.8	1.7	2.3	1.3
Non-church-related	1.4	1.5	1.3	1.7	0.5	0.3	0.6	0.9

School level and type	Family income*							
	Middle income				High income			
	1979	1982	1985	1991	1979	1982	1985	1991
Preschool	63.3	66.4	60.0	59.4	78.3	80.6	80.8	81.6
Church-related	22.2	25.8	23.8	27.7	33.5	34.0	30.8	38.3
Non-church-related	41.1	40.6	36.2	31.6	44.8	46.6	50.0	43.2
Kindergarten	13.5	15.6	14.6	12.5	23.2	26.6	24.7	28.3
Church-related	9.2	12.0	10.3	9.2	15.5	19.8	18.1	18.3
Non-church-related	4.3	3.6	4.2	3.3	7.8	6.7	6.6	9.9
Elementary (grades 1-8)	9.4	10.2	10.1	8.3	18.4	17.2	17.7	17.8
Church-related	8.7	9.3	9.0	7.1	14.9	14.2	14.6	14.0
Non-church-related	0.7	0.9	1.1	1.2	3.6	3.0	3.2	3.8
Secondary (grades 9-12)	5.4	6.2	6.2	5.5	11.8	12.1	14.0	12.5
Church-related	4.6	5.1	5.5	4.4	9.2	9.3	11.2	8.9
Non-church-related	0.8	1.0	0.7	1.1	2.6	2.8	2.8	3.5

*Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 3-2 Percentage of students who were enrolled in private school, by race/ethnicity, school level, and type: October 1982, 1985, and 1991

School level and type	Total			White		
	1982	1985	1991	1982	1985	1991
Preschool*	64.6	62.1	60.2	71.7	69.5	68.4
Church-related	26.2	24.3	27.8	28.9	27.7	32.5
Non-church-related	38.3	37.9	32.5	42.8	41.8	35.9
Kindergarten*	16.0	14.6	14.2	18.4	16.3	17.0
Church-related	12.2	10.6	10.0	14.3	11.8	12.2
Non-church-related	3.8	4.0	4.3	4.2	4.5	4.7
Elementary*	10.8	10.8	9.5	12.3	13.0	11.4
Church-related	9.5	9.3	7.9	10.7	11.3	9.4
Non-church-related	1.3	1.5	1.7	1.6	1.7	2.0
Secondary*	7.4	8.2	6.9	8.5	9.7	8.4
Church-related	5.9	6.8	5.2	6.9	8.1	6.3
Non-church-related	1.5	1.3	1.7	1.7	1.7	2.1

School level and type	Black			Hispanic		
	1982	1985	1991	1982	1985	1991
Preschool*	35.0	33.7	28.6	39.7	32.7	26.6
Church-related	16.5	12.6	8.8	17.9	11.9	11.2
Non-church-related	18.4	21.1	19.8	21.8	20.7	15.4
Kindergarten*	8.6	9.0	10.0	9.6	12.4	4.9
Church-related	5.2	6.4	5.9	7.1	10.5	3.6
Non-church-related	3.4	2.6	4.0	2.5	1.9	1.2
Elementary*	4.8	3.4	4.1	8.9	6.7	5.6
Church-related	4.4	2.6	3.3	8.7	6.4	5.2
Non-church-related	0.4	0.8	0.7	0.3	0.2	0.4
Secondary*	2.4	2.1	2.7	6.5	5.8	3.8
Church-related	1.7	1.9	1.8	5.5	5.2	3.3
Non-church-related	0.7	0.2	0.8	1.0	0.6	0.4

*Totals for each level of school include attendance at private schools for which the type (church-related/non-church-related) was not reported.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 3-3 Family income composition of students in public and private schools, by school level and type: October 1979, 1982, 1985 and 1991

School level and type	Family income*											
	1979			1982			1985			1991		
	Low	Middle	High	Low	Middle	High	Low	Middle	High	Low	Middle	High
Preschool												
All public	24.6	58.5	16.9	28.6	55.3	16.0	23.7	62.3	14.0	31.5	55.3	13.2
All private	4.7	57.8	37.5	3.6	59.9	36.5	3.6	56.9	39.6	4.2	53.5	42.3
Private, church-related	6.4	52.3	41.3	4.9	57.2	37.9	3.6	57.8	38.6	2.9	54.1	43.1
Private, non-church-related	3.7	61.3	35.0	2.7	61.7	35.5	3.5	56.3	40.2	5.3	53.0	41.7
Kindergarten												
All public	16.4	65.9	17.6	19.5	62.6	17.9	20.9	62.2	16.9	23.0	58.9	18.2
All private	3.3	63.6	33.1	5.3	60.7	34.0	5.3	61.9	32.8	5.7	50.7	43.6
Private, church-related	2.7	64.5	32.8	5.2	61.5	33.4	5.8	60.9	33.3	6.6	53.1	40.4
Private, non-church-related	4.6	61.7	33.6	5.6	58.3	36.1	3.9	64.6	31.4	3.7	45.1	51.2
Elementary (grades 1-8)												
All public	13.1	64.4	22.5	17.6	60.8	21.7	18.2	61.0	20.9	18.4	60.5	21.0
All private	4.3	54.4	41.2	5.7	57.1	37.2	5.7	56.9	37.4	4.7	51.9	43.4
Private, church-related	4.4	57.5	38.1	6.2	58.9	34.9	5.7	58.8	35.5	5.0	53.8	41.2
Private, non-church-related	3.9	33.3	62.8	2.4	43.8	53.8	5.9	45.2	48.9	3.5	42.7	53.9
Secondary (grades 9-12)												
All public	10.5	59.4	30.1	13.1	58.4	28.4	13.2	58.3	28.5	14.7	59.6	25.8
All private	3.3	44.3	52.4	3.3	47.9	48.7	4.5	43.2	52.2	4.3	46.3	49.4
Private, church-related	3.1	46.4	50.5	3.5	49.8	46.7	4.3	45.9	49.8	3.5	49.5	47.0
Private, non-church-related	3.8	35.8	60.4	2.5	40.6	57.0	5.6	29.9	64.5	7.0	36.3	56.6

*Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in-between.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 3-4 Racial/ethnic composition of public and private schools, by school level and type: October 1982, 1985 and 1991

School level and type	1982			1985			1991		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
Preschool									
All public	63.4	25.8	6.4	59.9	24.8	12.3	60.4	22.4	13.3
All private	88.0	7.6	2.4	86.2	7.2	3.5	86.9	5.9	3.1
Private, church-related	87.3	8.8	2.6	87.9	6.9	3.3	89.4	3.9	2.8
Private, non-church-related	65.4	23.8	10.8	85.1	7.4	3.7	84.8	7.5	3.3
Kindergarten									
All public	69.2	16.8	10.6	69.4	17.3	9.8	64.1	16.9	14.7
All private	82.0	8.3	6.0	79.4	10.0	8.1	79.0	11.4	4.5
Private, church-related	83.7	6.5	5.8	79.5	9.8	9.5	81.3	9.7	4.8
Private, non-church-related	76.8	13.8	6.6	78.9	10.3	4.4	73.8	15.3	3.8
Elementary									
All public	71.3	16.1	9.3	68.4	17.1	10.9	67.2	16.8	11.9
All private	82.4	6.7	7.6	85.0	4.9	6.4	82.3	6.8	6.7
Private, church-related	81.4	7.0	8.3	85.3	4.3	7.2	82.1	6.7	7.5
Private, non-church-related	89.6	4.8	2.0	83.2	8.6	1.7	83.2	7.2	2.7
Secondary									
All public	73.8	15.8	7.5	72.1	16.0	8.5	68.3	16.7	10.6
All private	86.2	4.8	6.6	87.6	3.9	5.9	84.2	6.1	5.6
Private, church-related	86.3	4.3	6.9	86.7	4.2	6.3	84.4	5.7	6.6
Private, non-church-related	86.0	6.8	5.1	92.2	2.5	3.5	83.8	7.6	2.7

NOTE: The percentages do not sum to 100 because included among students but not reported separately are those who are not white, black, or Hispanic. Most are Asian, and some are American Indian.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 4-1 Dropout and retention rates for 16- to 24-year-olds, by student characteristics: 1992

Student characteristic	Percent retained in one or more grades ¹	Dropout rate ²		
		Totals ³	Never retained	Retained
Total	11.5	11.0	9.4	19.8
Sex				
Male	14.2	11.3	9.5	18.5
Female	8.8	10.7	9.3	21.9
Race/ethnicity ⁴				
White	10.5	7.7	6.0	18.8
Black	18.1	13.7	12.0	20.1
Hispanic	10.9	29.4	29.2	24.1
Family income ⁵				
Low	16.5	24.6	22.6	33.2
Middle	11.3	10.1	8.6	16.6
High	7.8	2.3	1.5	8.5
Disability status				
No disability	9.5	10.6	9.1	19.4
Disability ⁶				
Learning disability only	32.0	15.7	13.3	21.0
Learning disability and other disability	51.8	15.6	15.0	16.8
Other disability only	29.0	22.2	20.2	26.9
Other disability only	24.3	13.1	10.1	22.1
Language at home/English proficiency				
English only	11.9	8.8	7.1	19.5
Non-English language spoken at home ⁷	9.3	21.5	21.3	22.3
Speak English very well ⁸	10.6	11.2	10.2	18.9
Speak English less than very well	6.9	39.7	40.5	32.1

¹Percentages are based on those who responded to the item on grade retention.

²The percentage who are not enrolled in school and do not have a high school diploma or equivalency certificate.

³Included in the total are some for whom whether they repeated is unknown.

⁴Not shown separately are non-Hispanics who are neither white nor black.

⁵Low income is the bottom 20 percent of family incomes; high income is the top 20 percent of family incomes; and middle income is the 60 percent in-between.

⁶Reported to have had at least one of the following disabling conditions: Learning disability, mental retardation, speech impairment, serious emotional disturbance, deafness, other hearing impairment, blindness, other vision impairment, orthopedic impairment, or other health impairment (lasting more than six months).

⁷Included but not shown separately are some for whom English language proficiency is unknown.

⁸English proficiency is determined using responses to the question asked about those who spoke a language other than English at home: "How well does this person speak English?" Possible responses were "Very well," "Well," "Not well," and "Not at all." Persons who responded less than "Very well" were included in the category "Speak English less than very well."

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1992.

Table 4-2 Dropout rates among 16- to 24-year-olds, by number of grades repeated and highest grade repeated: 1992

Highest grade repeated	Percent of 16-24 year olds ¹	Dropout rate ²		
		Total	Repeat one grade only	Repeat more than one grade
Total	100.0	11.0	19.8	40.9
None	88.6	9.4	—	—
Kindergarten	0.6	11.1	11.1	(3)
First	1.5	12.4	11.6	(3)
Second	1.3	10.7	11.1	(3)
Third	1.1	16.4	13.3	(3)
Fourth	0.6	20.0	19.6	(3)
Fifth	0.6	14.5	13.5	(3)
Sixth	0.5	20.2	17.1	(3)
Seventh	0.8	29.7	24.5	(3)
Eighth	0.5	42.2	37.1	(3)
Ninth	1.1	33.6	27.9	(3)
Tenth	0.6	28.2	27.8	(3)
Eleventh	0.3	14.9	15.8	(3)
Twelfth	0.4	9.5	5.8	(3)
K-6	6.1	14.2	13.1	32.4
K-2	3.4	11.5	11.3	(3)
3-6	2.7	17.4	15.3	34.3
7-10	2.9	33.0	28.5	47.3
11-12	0.7	11.8	10.4	(3)

—Not applicable.

¹Percentages are based on those who responded to the grade retention item. Not shown separately but included in the total are some repeaters for whom whether they repeated is unknown.

²The percentage who are not enrolled in school and do not have a high school diploma or equivalency certificate.

³Too few cases for a reliable estimate.

SOURCE: U.S. Bureau of the Census, Current Population Survey, October 1992.

Table 5-1 Percentage of high school students in grades 10-12, ages 15-24, enrolled the previous October who are enrolled again the following October or who had completed high school, by sex and race/ethnicity: October 1972-92

October	Total	Male	Female	White	Black	Hispanic	Male			Female		
							White	Black	Hispanic	White	Black	Hispanic
1972	93.9	94.1	93.7	94.7	90.5	88.8	95.0	90.2	88.5	94.4	90.7	89.1
1973	93.7	93.2	94.3	94.5	90.1	90.0	94.0	88.2	92.1	95.0	91.8	88.2
1974	93.3	92.6	94.0	94.2	88.4	90.1	93.4	89.2	87.2	95.1	87.7	92.9
1975	94.2	94.6	93.9	95.0	91.3	89.1	95.3	91.6	89.7	94.6	91.0	88.4
1976	94.1	93.5	94.8	94.4	92.6	92.7	93.7	91.5	92.4	95.1	93.7	92.9
1977	93.5	93.1	93.9	93.9	91.4	92.2	93.4	92.2	90.2	94.4	90.7	94.7
1978	93.3	92.5	94.1	94.2	89.8	87.7	93.6	89.0	84.1	94.9	90.5	91.5
1979	93.3	93.2	93.3	94.0	90.1	90.2	93.6	92.2	89.5	94.3	88.3	90.9
1980	93.9	93.3	94.5	94.8	91.8	88.3	94.3	92.3	82.4	95.2	91.3	93.3
1981	94.1	94.0	94.2	95.2	90.3	89.3	94.8	90.6	89.3	95.5	90.0	89.3
1982	94.5	94.2	94.9	95.3	92.2	90.8	95.1	91.1	90.5	95.4	93.4	91.2
1983	94.8	94.2	95.3	95.6	93.0	89.9	95.3	93.1	86.2	96.0	92.9	93.8
1984	94.9	94.6	95.2	95.6	94.3	88.9	95.2	94.0	87.7	95.9	94.5	89.8
1985	94.8	94.6	95.0	95.7	92.2	90.2	95.4	91.7	90.6	95.9	92.7	90.0
1986	95.3	95.3	95.3	96.3	94.6	88.1	96.2	94.9	87.6	96.3	94.3	88.7
1987	95.9	95.7	96.2	96.5	93.6	94.6	96.1	93.8	95.2	96.9	93.3	94.0
1988	95.2	94.9	95.6	95.8	94.1	89.6	95.7	93.8	87.7	95.9	94.4	91.8
1989	95.5	95.5	95.5	96.5	92.2	92.2	96.3	93.0	92.2	96.7	91.4	92.3
1990	96.0	96.0	96.1	96.7	95.0	92.1	96.5	95.8	91.3	96.9	94.3	92.8
1991	96.0	96.2	95.8	96.8	94.0	92.7	97.2	94.7	89.9	96.3	93.2	95.4
1992*	95.6	96.1	95.1	96.3	95.0	91.8	96.5	96.7	92.4	96.0	93.3	91.0

*Beginning in 1992, the Current Population Survey changed the questions used to obtain the educational attainment of respondents. See the supplemental note to *Indicator 21* for further discussion.

NOTE: Data for 1987 through 1992 reflect new editing procedures instituted by the Bureau of the Census for cases involving missing data on school enrollment items.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys. U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1992*.

Table 5-2 Continuous attendance and grade level progression rates for students 15- to 24-years-old, by sex, race/ethnicity, and grade level the previous October: October 1992

Grade last year	Total	Sex		Race/ethnicity		
		Male	Female	White	Black	Hispanic
Continuous attendance rate (percent)²						
9-11 average	96.8	97.4	96.3	97.3	96.3	94.4
9	97.8	98.6	96.9	98.4	96.5	94.9
10	97.0	97.3	96.6	97.3	95.7	96.1
11	95.7	96.1	95.3	96.1	96.7	91.8
12	67.5	65.6	69.3	68.7	57.4	66.7
13-15 average	84.4	83.6	85.1	84.8	81.5	78.6
13	83.5	81.1	85.7	83.8	83.2	78.1
14	80.9	81.4	80.4	81.4	72.1	82.3
15	90.7	91.2	90.3	90.8	92.7	(¹)
16	41.7	42.2	41.2	41.6	(¹)	(¹)
17	65.9	70.1	61.1	65.6	(¹)	(¹)
Grade level progression rate (percent)²						
9-11 average	98.1	97.7	98.5	98.8	96.0	96.9
9	97.8	96.7	98.9	98.7	93.9	98.0
10	98.2	98.3	98.0	98.9	96.2	96.0
11	98.4	98.3	98.5	98.8	97.9	96.9
12	95.8	95.6	96.1	96.3	95.7	90.2
13-15 average	86.9	87.8	86.0	87.1	89.4	79.9
13	85.9	86.1	85.7	86.4	85.3	77.3
14	84.4	86.6	82.4	84.1	93.4	82.3
15	91.5	92.3	90.7	91.4	93.0	(¹)
16	69.0	70.0	68.2	67.6	(¹)	(¹)
17	64.1	(¹)	(¹)	68.2	(¹)	(¹)

¹Too few sample observations for a reliable estimate.

²The continuous attendance rate is the percentage of those enrolled the previous October who were enrolled again the following October. The grade level progression rate is the percentage of those enrolled two consecutive Octobers who advanced at least one grade level. At most grade levels, the continuous attendance rate is conceptually similar to the school persistence rate of table 5-1, but is numerically slightly different because of data used to measure grade level the previous October. However, the continuous attendance rate for grade 12 is the percentage of students in grade 12 the previous October who enrolled in college (or in grade 12 again) the following October. Similarly, the continuous attendance rate for grade 16 (4th year of college) is the percentage of students in grade 16 the previous October who enrolled in the 5th year of college (or in the 4th year again) the following October.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Note on persistence rates

The event dropout rate is the number of recent dropouts as a percentage of estimated 10th-, 11th-, and 12th-grade enrollment the previous October. The high school persistence rate is 100 minus the event dropout rate.

The high school persistence rate is defined as the proportion of students enrolled in grades 10, 11, and 12 the previous October who either enrolled again the following October or graduated from high school. To calculate these rates requires estimating 1) the number who left high school before graduating (recent dropouts), and 2) the number of students enrolled in grades 10, 11, and 12 the previous October. Using the October Current Population Survey (CPS), the first is estimated as the number of persons 15 to 24 years old who were not enrolled during the month of the survey, who were enrolled 1 year earlier, and who have completed 11 or fewer years of schooling. The second is estimated by the sum of 3 groups: 1) recent dropouts, 2) those 15- to 24-year-olds enrolled in grades 11 and 12 during the survey month, and 3) those 15- to 24-year-olds who have completed 12 (or more) years of schooling and who indicate they graduated during the survey year. Those enrolled in special schools are counted as "not enrolled in regular school" and may be classified as recent dropouts.

The college student persistence rate is defined as the proportion of students enrolled the previous October who were enrolled in college again the following October. Calculating this rate requires distinguishing students who were enrolled in high school, college as undergraduates, and college as graduate students. The basis for distinguishing these groups is educational attainment. However, the October CPS reports only *current* educational attainment, so educational attainment for the previous October must be inferred.

Educational attainment in the CPS is reported as "years of schooling completed." Individuals with 12 years of schooling completed are regarded as high school graduates, 16 years completed as college graduates, and so on. Years of schooling completed is based on the responses to two

questions: 1) "What is the highest grade . . . ever attended?" and 2) "Did . . . complete it?" For example, an individual who responds that the highest grade he ever attended was first year of college and that he did not complete it, is regarded as having completed 12 years of schooling.

For the purpose of calculating the persistence rate, two assumptions are made:

- First, respondents who were enrolled the previous October are assumed to have *then* reached their highest grade attended if they were not enrolled again the following October. This assumption would overstate the level for those who made the transition to the next level in mid-year.
- Second, respondents who were enrolled in October are assumed to have been in the highest year *completed* the previous October. This would understate the level for those who attended part time and had not made the transition to the next level during the previous year.

Consider three examples. First, those who were enrolled in the previous October, but not in the following October, and whose highest grade *attended* is 13 are assumed to have been freshmen in the previous October. Second, those who were enrolled in the previous October as well as the following October, and whose highest grade *completed* is 13 years of schooling, are assumed to have been freshmen in the previous October. Third, those who were enrolled in the previous October, but not in the following October, and whose highest grade *completed* is 16 years of schooling, are assumed to have been college seniors in the previous October. Some students may be misclassified, but if the extent of misclassification is not very different across groups or over time, then differences between groups and changes over time are useful, although the inferred level may be high or low.

Table 8-1 Average undergraduate tuition, room, and board as a percentage of income of families with children 6-17 years old, by control of institution and family income percentile: 1975-92

Year	Public institutions					Private institutions				
	Family Income percentile					Family Income percentile				
	10th	25th	50th	75th	90th	10th	25th	50th	75th	90th
1975	32.1	16.9	10.5	7.5	5.5	70.5	37.2	23.2	16.4	12.2
1976	32.6	16.8	10.3	7.4	5.5	71.1	36.7	22.5	16.1	11.9
1977	32.3	16.8	10.2	7.2	5.4	71.1	37.0	22.4	15.9	11.8
1978	31.7	16.3	9.9	7.1	5.2	71.7	37.0	22.3	16.2	11.8
1979	30.9	16.2	9.7	6.8	4.9	70.1	36.7	22.1	15.4	11.2
1980	29.8	17.1	10.1	6.9	5.0	68.8	39.5	23.2	15.9	11.6
1981	30.3	18.3	10.5	7.2	5.3	70.2	42.4	24.4	16.7	12.2
1982	31.6	19.8	11.2	7.6	5.5	74.3	46.6	26.4	17.8	12.9
1983	32.8	20.8	11.7	7.7	5.6	78.1	49.5	27.9	18.3	13.2
1984	34.0	20.8	11.9	7.8	5.6	81.8	50.2	28.7	18.8	13.5
1985	34.4	20.6	11.6	7.8	5.6	85.6	51.1	28.9	19.4	13.9
1986	36.0	21.6	12.0	7.9	5.7	91.4	55.0	30.6	20.1	14.4
1987	36.9	22.1	12.1	7.9	5.7	95.8	57.3	31.4	20.6	14.8
1988	37.4	22.0	12.3	8.0	5.8	98.0	57.6	32.1	21.1	15.2
1989	37.6	21.9	12.3	8.1	5.7	100.4	58.5	32.9	21.7	15.3
1990	37.7	22.7	12.9	8.4	5.9	102.4	61.7	35.0	22.8	16.0
1991	39.4	24.5	13.5	8.9	6.3	106.4	66.1	36.5	24.0	17.1
1992	39.8	25.3	13.9	9.0	6.4	108.8	69.1	37.9	24.6	17.4

NOTE: Tuition data are for academic years beginning 1975-92 and family income data are for calendar years 1975-92.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 306. U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, Series P-60, "Money Income of Families and Persons: March...."* various years, based on the March supplement to the Current Population Survey.

Table 8-2 Average undergraduate tuition, room, and board (in constant 1993 dollars) as a percentage of the income of all families at selected family income percentiles, by control of institution: 1964-92

Year	Public institutions				Private institutions			
	Constant dollars	Family income percentile			Constant dollars	Family income percentile		
		20th	50th	80th		20th	50th	80th
1964	\$4,432	29.0	14.4	9.2	\$8,897	58.3	28.8	18.6
1965	4,514	27.7	14.0	9.0	9,208	56.6	28.5	18.3
1966	4,588	25.6	13.4	8.7	9,498	53.1	27.7	17.9
1967	4,615	25.5	13.2	8.5	9,565	52.8	27.3	17.6
1968	4,647	24.0	12.6	8.1	9,655	49.8	26.2	16.9
1969	4,745	23.4	12.4	7.9	9,980	49.1	26.0	16.7
1970	4,797	24.7	12.7	8.1	10,204	52.5	27.1	17.2
1971	4,849	25.6	13.0	8.2	10,424	55.1	27.9	17.7
1972	5,045	25.4	12.8	8.0	10,513	52.9	26.7	16.7
1973	4,944	23.8	12.0	7.5	10,312	49.5	25.0	15.6
1974	4,587	22.5	11.5	7.2	9,986	48.9	25.1	15.7
1975	4,479	23.4	11.8	7.3	9,849	51.4	25.9	16.1
1976	4,549	23.3	11.6	7.3	9,932	50.9	25.3	15.8
1977	4,508	23.1	11.4	7.0	9,927	50.9	25.1	15.5
1978	4,423	21.8	10.8	6.6	10,013	49.3	24.4	15.0
1979	4,317	20.7	10.3	6.4	9,794	46.9	23.4	14.6
1980	4,167	21.9	10.7	6.5	9,605	50.6	24.7	15.1
1981	4,238	23.6	11.5	6.9	9,813	54.6	26.6	15.9
1982	4,416	25.9	12.4	7.2	10,376	60.7	29.0	17.0
1983	4,585	26.4	12.5	7.4	10,908	62.9	29.8	17.5
1984	4,747	26.8	12.7	7.4	11,425	64.5	30.5	17.8
1985	4,804	26.8	12.7	7.4	11,952	66.6	31.7	18.3
1986	5,023	27.0	12.7	7.4	12,774	68.7	32.4	18.9
1987	5,158	27.5	12.9	7.5	13,387	71.4	33.4	19.5
1988	5,230	27.6	13.0	7.5	13,691	72.3	33.9	19.5
1989	5,257	27.5	12.9	7.4	14,028	73.3	34.3	19.7
1990	5,268	27.6	13.1	7.5	14,297	74.8	35.6	20.5
1991	5,455	29.8	14.1	8.0	14,775	80.6	38.1	21.8
1992	5,563	31.3	14.4	8.3	15,203	85.6	39.4	22.6

NOTE: Tuition data are for academic years beginning 1964-92 and family income data are for calendar years 1964-92. The calendar year Consumer Price Index was used to calculate constant dollar figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 306. U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, Series P-60*, based on the March supplement to the Current Population Survey.

Table 9-1 Percentage of high school graduates enrolled in college in the October following graduation, by sex and type of college: 1973-92

October	Male			Female		
	Total	2-year	4-year	Total	2-year	4-year
1973	50.0	14.6	35.4	43.4	15.2	28.2
1974	49.4	16.6	32.8	45.9	13.9	32.0
1975	52.6	19.0	33.6	49.0	17.4	31.6
1976	47.2	14.5	32.7	50.3	16.6	33.8
1977	52.1	17.2	35.0	49.3	17.8	31.5
1978	51.1	15.6	35.5	49.3	18.3	31.0
1979	50.4	16.9	33.5	48.4	18.1	30.3
1980	46.7	17.1	29.7	51.8	21.6	30.2
1981	54.8	20.9	33.9	53.1	20.1	33.0
1982	49.1	17.5	31.6	52.0	20.6	31.4
1983	51.9	20.2	31.7	53.4	18.4	35.1
1984	56.0	17.7	38.4	54.5	21.0	33.5
1985	58.6	19.9	38.8	56.8	19.3	37.5
1986	55.8	21.3	34.5	51.9	17.3	34.6
1987	58.3	17.3	41.0	55.3	20.3	35.0
1988	57.1	21.3	35.8	60.7	22.4	38.3
1989	57.6	18.3	39.3	61.6	23.1	38.5
1990	58.0	19.6	38.4	62.2	20.6	41.6
1991	57.9	22.9	35.0	67.1	26.8	40.3
1992	59.9	36.9	63.1	63.8	23.9	40.0

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 10-1 Completion and enrollment status for first-time postsecondary students during the 1989-90 academic year by degree objective and other student characteristics: Spring 1992

Student characteristic	Degree objective:									
	Vocational certificate			Associate's degree			Bachelor's degree			
	Completed in:			Completed	Continuously enrolled ¹	Reenrolled after interruption ^{1,2}	No reenrollment after interruption ³	Continuously enrolled ⁴	Reenrolled after interruption ²	No reenrollment after interruption ³
	Nine months or less	Over nine months	Not completed							
Total	29.2	21.3	49.5	12.3	19.1	22.5	46.1	56.8	18.9	24.2
Race/ethnicity ⁵										
White	29.6	23.1	47.3	12.8	18.5	21.6	47.2	57.6	17.9	24.5
Black	26.4	17.5	56.1	7.9	12.2	27.1	52.9	50.3	23.4	26.3
Hispanic	23.2	9.2	67.6	16.6	27.0	28.0	28.4	46.0	27.7	26.3
Asian	(6)	(6)	(6)	(6)	(6)	(6)	(6)	68.8	19.3	11.8
Sex										
Male	30.8	18.2	51.0	11.0	23.4	21.0	44.6	52.8	19.9	27.3
Female	28.1	23.5	48.5	13.3	15.6	23.7	47.4	60.7	18.0	21.3
Socioeconomic status										
Low (25 percent)	36.6	16.2	47.2	4.6	22.7	20.0	52.7	50.4	18.8	30.9
Middle (50 percent)	28.0	23.1	48.9	12.4	15.7	24.9	47.1	53.8	18.8	27.4
High (25 percent)	16.4	26.8	56.9	16.7	23.0	19.8	40.5	59.6	19.0	21.4
Dependent student family income										
Less than \$20,000	35.3	18.2	46.5	7.8	17.1	23.0	52.1	47.6	20.2	32.3
\$20,000-39,999	10.8	26.3	62.9	18.3	22.0	21.2	38.4	57.4	19.6	23.1
\$40,000-59,999	16.3	44.8	39.0	15.8	22.0	20.5	41.7	56.2	19.7	24.2
\$60,000 or more	18.8	14.0	67.2	14.6	16.5	26.5	42.5	66.7	16.2	17.2
Time between high school graduation and entry into postsecondary education										
12 months or less	19.4	22.2	58.4	16.6	23.5	22.0	37.9	59.5	18.0	22.5
More than 12 months	36.1	20.7	43.2	5.1	11.6	23.4	60.0	37.7	25.3	37.0
Marital/family status as of spring 1992										
Married, no children	22.6	23.9	53.6	7.6	19.7	16.1	56.6	34.3	20.6	45.1
Married with children	42.2	19.0	38.7	3.6	11.2	23.5	61.7	22.1	21.5	56.4
Single, no children	22.6	26.2	51.3	17.2	24.4	25.5	33.0	63.0	19.7	17.3
Single with children	17.6	18.0	64.4	9.7	7.1	22.9	60.3	49.1	23.1	27.9
High school credential										
Diploma	28.7	22.5	48.8	12.7	20.1	22.1	45.1	57.2	18.6	24.2
Equivalency certificat	31.7	14.8	53.6	7.6	6.5	27.2	58.7	38.8	35.7	25.5
Student's self-rating of academic ability compared to student's own age group										
Above average	30.6	23.2	46.3	15.7	21.3	22.9	40.1	67.5	14.3	18.2
Average or below	28.8	20.9	50.3	11.3	18.5	22.4	47.8	49.2	22.5	28.4
Expected level of postsecondary educational attainment										
Less than 2 years	33.7	26.9	39.4	3.8	3.6	6.3	86.3	(6)	(6)	(6)
2 to 3 years	23.4	14.3	62.3	9.3	14.6	24.5	51.7	16.9	27.2	56.0
Bachelor's degree or higher	29.0	20.1	50.9	13.9	21.8	22.2	42.1	58.0	18.8	23.2
Average hours worked per week while enrolled in school ⁷										
None	30.8	22.7	46.5	11.2	23.7	19.4	45.7	56.7	20.7	22.5
1-20 hours	23.5	36.2	40.3	16.8	20.6	24.3	38.4	63.2	14.9	21.9
More than 20 hours	29.3	18.1	52.6	11.2	17.3	22.8	48.7	52.7	20.8	26.5
Percentage of months employed while enrolled in school										
None	34.7	21.6	43.8	6.1	12.2	18.6	63.1	44.4	19.4	36.2
1 to 50 percent	25.0	27.9	47.1	15.1	21.9	26.4	36.6	64.7	18.2	17.1
More than 50 percent	28.3	19.7	52.0	13.1	20.4	23.1	43.4	56.8	20.4	22.8
Months enrolled during 1989-90 school year										
1-6	36.1	12.0	52.0	1.4	8.5	33.0	57.1	26.8	39.7	33.5
7-9	33.7	21.4	44.9	17.2	17.5	23.8	41.5	57.5	22.5	20.1
10-12	12.2	40.7	47.2	17.7	29.5	16.5	36.3	65.5	13.9	20.6

Table 10-1 Completion and enrollment status for first-time postsecondary students during the 1989-90 academic year by degree objective and other student characteristics: Spring 1992—Continued

Student characteristic	Degree objective:									
	Vocational certificate			Associate's degree			Bachelor's degree			
	Completed in:			Com- pleted	Contin- uously enrolled ¹	Reenrolled after inter- ruption ^{1,2}	No reenrollment after interruption ³	Contin- uously enrolled ⁴	Reenrolled after inter- ruption ²	No reenrollment after interruption ³
Nine months or less	Over nine months	Not com- pleted								
Type of institution first enrolled in										
4-year	18.6	9.4	72.0	6.5	26.6	18.9	48.0	61.6	16.1	22.3
2-year	27.8	12.5	59.7	13.1	18.3	22.7	45.9	43.1	27.5	29.4
Less than 2-year	31.8	30.4	37.9	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
Cumulative grade point average (on 4.0 scale)										
3.25 or higher	33.4	30.4	36.3	12.9	18.9	27.7	40.5	67.4	17.4	15.2
2.75 to 3.24	27.0	14.9	58.2	15.5	21.3	20.7	42.5	60.6	19.7	19.7
Below 2.75	10.8	15.1	74.1	6.2	20.3	25.8	47.8	34.5	27.6	38.0
Degree of involvement in academic and social activities in school										
Never involved	34.7	14.4	50.9	7.4	14.6	24.7	53.3	35.1	25.5	39.4
Once	24.2	26.3	49.6	13.8	21.2	22.9	42.2	52.5	19.3	28.2
Sometimes	26.1	24.8	49.1	15.2	21.0	20.0	43.8	61.0	19.3	19.7
Often	34.5	26.2	39.3	15.3	21.0	16.2	47.5	66.4	14.4	19.2
Received financial aid of some form during 1989-90 academic year										
Yes	33.6	23.6	42.8	14.4	20.6	18.3	46.8	61.9	15.4	22.7
No	24.8	18.6	56.7	10.9	18.0	24.9	46.2	52.1	22.2	25.7
Received financial aid in the form of grants during 1989-90 academic year										
Yes	34.4	22.0	43.6	14.1	20.2	18.2	47.5	62.9	15.4	21.7
No	26.7	21.1	52.2	11.4	18.4	24.4	45.7	52.4	21.3	26.3
Received financial aid in the form of loans during 1989-90 academic year										
Yes	37.0	26.9	36.1	14.9	18.2	14.0	52.9	61.5	14.8	23.7
No	26.9	19.1	54.0	12.0	19.2	23.5	45.3	55.4	20.0	24.6
Enrollment status in 1989-90										
Full-time	30.6	24.9	44.5	16.7	21.8	22.4	39.2	63.3	17.3	19.4
Part-time	29.7	13.8	56.5	3.1	12.0	29.2	55.8	22.7	39.2	38.1
Mixed	(⁵)	(⁵)	(⁵)	12.3	34.1	20.6	32.9	61.5	22.8	15.7

¹Includes enrollment or reenrollment toward a bachelor's degree.

²Reenrolled toward degree after an interruption, that is, a year with more than 4 consecutive months not enrolled. However, may not be enrolled at the time of the follow-up survey.

³Has an interruption in enrollment and has not reenrolled during the survey period.

⁴A small number of bachelor's degree recipients are included in "continuously enrolled."

⁵Included in the total but not reported separately are American Indian students.

⁶Too few observations for a reliable estimate.

⁷During the 1989-90 academic year. Includes work-study and assistantships.

NOTE: See the supplemental note to *Indicator 10* for detailed information about the definition of terms in this table and how they were measured.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992 (data analysis system).

Table 10-2 Weighted sample size (thousands) and percentage distribution across selected student characteristics for first-time postsecondary students in the 1989-90 academic year, by degree objective: Spring 1992

Student characteristic	Degree objective:					
	Vocational certificate		Associate's degree		Bachelor's degree	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
Total	376	100.0	708	100.0	1162	100.0
Race/ethnicity ¹						
White	270	71.8	566	79.9	920	79.2
Black	55	14.6	70	9.9	92	7.9
Hispanic	36	9.6	52	7.3	76	6.5
Asian	(2)	(2)	(2)	(2)	64	5.5
Sex						
Male	153	40.7	315	44.5	573	49.3
Female	223	59.3	393	55.5	589	50.7
Socioeconomic status						
Low (25 percent)	126	33.5	124	17.5	75	6.5
Middle (50 percent)	195	51.9	374	52.8	434	37.3
High (25 percent)	56	14.9	210	29.7	653	56.2
Dependent student family income						
Less than \$20,000	269	71.5	347	49.0	294	25.3
\$20,000-39,999	56	14.9	162	22.9	300	25.8
\$40,000-59,999	30	8.0	128	18.1	288	24.8
\$60,000 or more	20	5.3	71	10.0	280	24.1
Time between high school graduation and entry into postsecondary education						
12 months or less	154	41.0	444	62.7	1020	87.8
More than 12 months	221	58.8	263	37.1	142	12.2
Marital/family status as of spring 1992						
Married, no children	38	10.1	57	8.1	40	3.4
Married with children	119	31.6	133	18.8	58	5.0
Single, no children	148	39.4	436	61.6	964	83.0
Single with children	31	8.2	29	4.1	18	1.5
High school credential						
Diploma	320	85.1	656	92.7	1138	97.9
Equivalency certificate	57	15.2	51	7.2	24	2.1
Student's self-rating of academic ability compared to student's own age group						
Above average	79	21.0	187	26.4	482	41.5
Average or below	289	76.9	512	72.3	665	57.2
Expected level of postsecondary educational attainment						
Less than 2 years	126	33.5	21	3.0	(2)	(2)
2 to 3 years	98	26.1	193	27.3	22	1.9
Bachelor's degree or higher	118	31.4	479	67.7	1117	96.1
Average hours worked per week while enrolled in school						
None	117	31.1	121	17.1	236	20.3
1-20 hours	37	9.8	144	20.3	366	31.5
More than 20 hours	221	58.8	443	62.6	560	48.2

Table 10-2 Weighted sample size (thousands) and percentage distribution across selected student characteristics for first-time postsecondary students in the 1989-90 academic year, by degree objective: Spring 1992—Continued

Student characteristic	Degree objective:					
	Vocational certificate		Associate's degree		Bachelor's degree	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
Percentage of months employed while enrolled in school						
None	89	23.7	64	9.0	84	7.2
1 to 50 percent	83	22.1	144	20.3	403	34.7
More than 50 percent	186	49.5	469	66.2	634	54.6
Months enrolled during 1989-90 school year						
1-6	169	44.9	194	27.4	114	9.8
7-9	94	25.0	198	28.0	393	33.8
10-12	95	25.3	284	40.1	614	52.8
Type of institution first enrolled in						
4-year	13	3.5	72	10.3	843	75.5
2-year	173	46.9	619	88.4	269	24.1
Less than 2-year	184	49.9	(2)	(2)	(2)	(2)
Cumulative grade point average (on 4.0 scale)						
3.25 or higher	175	46.5	241	34.0	354	30.5
2.75 to 3.24	128	34.0	326	46.0	590	50.8
Below 2.75	25	6.6	82	11.6	138	11.9
Non-grade	15	4.0	(2)	(2)	(2)	(2)
Missing	33	8.8	55	7.8	77	6.6
Degree of involvement in academic and social activities in school						
Never involved	141	38.2	193	27.6	100	9.0
Once	123	33.3	273	39.0	337	30.2
Sometimes	71	19.2	180	25.7	454	40.7
Often	26	7.0	42	6.0	209	18.7
Received financial aid of some form during 1989-90 academic year						
Yes	197	53.4	277	39.6	553	49.6
No	173	46.9	423	60.4	562	50.4
Received financial aid in the form of grants during 1989-90 academic year						
Yes	156	42.3	240	34.3	455	40.8
No	207	56.1	454	64.9	637	57.1
Received financial aid in the form of loans during 1989-90 academic year						
Yes	112	30.4	88	12.6	253	22.7
No	251	68.0	606	86.6	840	75.3
Enrollment status in 1989-90						
Full-time	229	60.9	410	57.9	867	74.6
Part-time	109	29.0	174	24.6	73	6.3
Mixed	(2)	(2)	73	10.3	133	11.4
Missing	27	7.2	51	7.2	89	7.7

¹Included in the total but not reported separately are American Indian students.

²Too few observations for a reliable estimate.

NOTE: Percent distributions do not always sum to 100 due to missing data. In the two cases where more than 5 percent of the students were missing, the number and percentage of missing cases are shown. See the supplemental note to Indicator 10 for detailed information about the definition of terms in this table and how they were measured.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992 (data analysis system).

Note on postsecondary persistence

This indicator is based on data collected from a nationally representative sample of first-time beginning students in postsecondary education in academic year 1989–90. Students were surveyed in 1990 and again in the spring of 1992. The National Postsecondary Student Aid Study of 1990 (NPSAS:90) provided the base year data for the Beginning Postsecondary Students Longitudinal Survey which re-interviewed these students in the spring of 1992.

(See the entries in the data sources section of this report for more information about these surveys.)

Whereas most research on postsecondary persistence examines persistence within a given institution, this indicator examines persistence toward the degree without regard to the specific institution attended: transfers between institutions do not affect persistence if students are working toward the same objective at the new institution.

Initial degree objective. Postsecondary education programs vary widely in duration, and it would be misleading to compare persistence measures for students pursuing short and long duration programs. To discourage comparisons across programs of different length and to tailor the measures to short and long programs, a different set of statistics were calculated for students pursuing 1) a vocational certificate or license, 2) an associate's degree, and 3) a bachelor's degree. Degree intention was determined from the response to the question, "Toward which degree or other award are the courses you are taking leading?" It was therefore possible for students to be working toward a degree that the institution did not offer (for example, a student could be attending a community college and working toward a bachelor's degree).

In NPSAS:90, institutions were sampled first, then students were sampled within institutions. One consequence for this analysis is that students may not be working toward a degree at the sampled institution, but may be pursuing a degree at another institution. For such students, attendance at the NPSAS institution is inconsequential for their degree plans. If a

student was not working toward a degree at the NPSAS institution but attended another institution in 1989–90, the degree objective, if there was one, at the other institution was used. In the few cases where a respondent attended several other institutions in 1989–90, the degree objective at the institution the respondent attended earliest was used.

Intended degree: vocational certificate or license

Because these programs are typically of short duration and therefore, could have been completed by the time of the follow-up survey, the measures emphasize degree completion. Students are classified as follows: 1) completed certificate or license within one month of starting the program; 2) completed certificate or license in more than one month from starting the program; and 3) no certificate or license completed in the survey period.

Intended degree: associate's degree

For students working toward an associate's degree, the measures emphasize both degree completion and continuity of enrollment. Students are classified as follows: 1) completed; 2) continuously enrolled; 3) reenrolled following interrupted enrollment; and 4) interrupted without reenrollment.

Intended degree: bachelor's degree

Because students would not normally complete a baccalaureate degree within the survey period, the indicator emphasizes continuity of enrollment. Students are classified as follows: 1) continuously enrolled; 2) reenrolled following interrupted enrollment; and 3) interrupted without reenrollment.

Continuity of enrollment. Enrollment is defined as continuous if enrollment is never interrupted for more than four consecutive months.

Reenrollment. For associate's and bachelor's degree seekers, those who interrupted their enrollment are broken into two groups: those who had reenrolled at least once by the time of the spring 1992 follow-up survey, and those who had not. It is important to note that

reenrollment does not imply current (spring 1992) enrollment. Students who reenrolled may have experienced subsequent interruptions in enrollment.

Transfer from associate's to bachelor's degree programs. It is possible for students to transfer from a 2-year college to a 4-year college or university without completing an associate's degree. Such transitions are clearly a form of persistence, and it would be inappropriate to treat them as interruptions in enrollment. For students whose initial degree objective is an associate's degree, therefore, "continuously enrolled" and "reenrolled" includes enrollment toward associate's and bachelor's degrees.

Completion of associate's and bachelor's degrees. A small number of students appear to have misinterpreted survey questions about completion of associate's and bachelor's degree requirements. To guard against erroneously classifying continuing students as degree completers, associate's and bachelor's degree completion was defined subject to two additional pieces of information: year in school and cumulative months enrolled toward the degree.

Comparisons across student characteristics
Among students with the same degree intentions, the measures of completion and enrollment status are reported by a variety of student characteristics. Several of the characteristics are more applicable than others in describing the completion status of students with a particular degree goal.

The degree of academic and social involvement at the institution. This index is based on the student's reported frequency of the following activities: contact with faculty outside of class, meetings with an advisor concerning academic plans, discussions of academic matters with faculty outside class, participation in study groups outside class, participation in social and cultural activities with friends from school, participation in school clubs, and participation in intramural and intercollegiate activities. This index is a measure of the degree to which a student is socially and academically involved with a postsecondary institution. Because students who

obtain a postsecondary certificate typically complete the degree in a relatively short period of time, this variable is less applicable to students with a goal of a vocational certificate or license.

Months enrolled during 1989-90. This characteristic is a measure of the intensity of a student's first-year enrollment. It is the number of months the student was enrolled during the initial year. Again, since students who obtain a postsecondary certificate typically complete the degree in a relatively short period of time, this variable is more applicable to students with a goal of an associate's or a bachelor's degree.

Type of institution first enrolled in. This is a characteristic of the programs offered by the institution the student was attending during their first year, e.g., 4-year institution or a 2-year institution. This allows comparison of the enrollment status of students seeking a bachelor's degree who started at 2-year and 4-year institutions.

Selected analyses are restricted to NPSAS institutions

Certain information was collected only for the NPSAS institution (for example, financial aid information and measures of involvement). For these items it is potentially misleading to examine persistence for all students rather than just those who were pursuing their degree objective in the NPSAS institution. Consequently, analyses of certain student characteristics are based on a restricted sample of those students whose degree objective is associated with the NPSAS institution. These characteristics are: type of institution, grade point average, degree of involvement in academic and social activities in school, forms of financial aid received in 1989-90, and enrollment status in 1989-90.

Handling of missing data

Some students did not supply complete information on degree objective and completion for all enrollment spells. For the purposes of these indicators, students were classified on the basis of all available information, even if some other information is missing. While this may result in some misclassifications, comparing this

approach with a more conservative approach using only students with complete information suggests the effect is minimal. The largest difference in weighted frequencies between the two approaches is for certificate noncompleters: 68.4 percent (available information) versus 66.7 percent (complete information), a difference of 1.7 percentage points, which is not statistically significant. For associate's and bachelor's degree seekers, frequencies using the two approaches differ by less than one percentage point.

Table 11-1 Percentage of currently employed persons who took one or more courses during the last 12 months to improve their skills on their current job, by work status and worker characteristics: 1990-91

Worker characteristics	All workers	Full-time workers	Part-time workers
Total	29.5	33.1	16.4
Sex			8.9
Men	29.3	32.3	
Women	29.7	34.2	19.7
Race/ethnicity			18.0
White, non-Hispanic	31.6	35.3	
Black, non-Hispanic	20.1	22.6	7.5
Hispanic	22.7	26.8	10.7
Asian	20.6	22.4	15.1
American Indian	33.5	35.0	24.6
Age			4.8
17-19	7.3	10.4	
20-24	20.4	26.0	9.5
25-34	29.7	32.0	19.4
35-44	29.7	32.0	19.4
45-54	36.1	38.4	23.9
55-64	29.9	32.4	15.8
65 and older	28.4	32.3	17.3
	18.6	29.1	9.2
Educational attainment			2.8
Less than high school graduate	6.8	8.2	
High school graduate	19.0	21.2	10.8
Vocational/trade school	36.7	39.4	23.4
Some college	33.1	39.4	16.1
Bachelor's degree	46.6	49.4	32.4
Advanced degree	50.3	53.4	34.9
Occupation			41.2
Executive, professional, technical	49.9	51.2	
Executive, administrative, managerial	47.1	47.8	34.3
Professional	51.3	53.2	42.8
Technical	49.7	52.2	36.9
Sales and administrative support	24.0	28.4	11.2
Sales	23.5	28.0	10.1
Administrative support	24.3	28.6	11.9
Service	17.8	22.4	12.0
Farming	7.0	7.3	4.0
Precision production, craft, and repair	21.4	22.4	9.9

Table 11-1 Percentage of currently employed persons who took one or more courses during the last 12 months to improve their skills on their current job, by work status and worker characteristics: 1990-91—Continued

Worker characteristics	All workers	Full-time workers	Part-time workers
Operators, fabricators, laborers	19.2	21.7	8.0
Machine operators, assemblers, inspectors	21.9	24.3	3.8
Transportation and material movers	17.2	19.9	8.3
Handlers, equipment cleaners, laborers	15.4	16.7	12.2
Industry			
Agriculture, forestry, and fisheries	9.6	10.2	6.5
Mining	28.5	28.5	—
Construction	18.5	20.1	2.5
Manufacturing	28.7	30.8	9.1
Transportation, communications, public utilities	29.2	30.7	17.3
Trade	18.4	22.2	10.0
Finance, insurance, and real estate	43.8	49.8	20.4
Services	32.5	37.4	20.9
Public administration	47.3	49.2	22.5

—Too few workers for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, 1991 (Adult Education Component).

Table 11-2 Percentage of workers who received skill improvement training at any time while on their current job, by worker characteristics: 1983 and 1991

Worker characteristics	1983	1991
Sex	35	40
Men	34	41
Women		41
Age 16 and over	35	
Age	18	18
16-19	28	31
20-24	39	41
25-34	41	48
35-44	37	46
45-54	31	37
55-64	19	25
65 and over		
Educational attainment	26	29
High school graduate or less	41	46
Some college	54	61
College graduate		
Occupation	54	60
Executive, professional, technical	47	53
Executive, administrative, managerial	61	67
Professional	52	59
Technical	32	38
Sales and administrative support	32	35
Sales	32	40
Administrative support	23	28
Service	3	6
Private household workers	25	29
Service, except private household	16	21
Farming, forestry, fishing	35	38
Precision production, craft and repair	19	22
Operators, fabricators, laborers		
Machine operators, assemblers, inspectors	22	25
Transportation and material moving	18	25
Handlers, equipment cleaners, laborers	14	15

**Table 11-2 Percentage of workers who received skill improvement training at any time while on their current job, by worker characteristics: 1983 and 1991—
Continued**

Worker characteristics	1983	1991
Industry		
Agriculture, forestry, and fisheries	19	23
Mining	35	45
Construction	24	26
Manufacturing	31	38
Durable goods	34	40
Nondurable goods	28	35
Transportation, communications, public utilities	38	46
Trade	24	26
Wholesale	30	34
Retail	22	24
Finance, insurance, and real estate	47	54
Services	41	47
Business and repair services	29	34
Personal services	19	23
Entertainment and recreational services	24	32
Professional and related services	49	55
Public administration	58	68

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *How Workers Get Their Training: A 1991 Update*, table 38, Bulletin 2407, August 1992.

Table 12-1 Explanations of levels of reading proficiency

Level 350 Learn from specialized reading materials

Readers at this level can extend and restructure the ideas presented in specialized and complex texts. Examples include scientific materials, literary essays, and historical documents. Readers are also able to understand the links between ideas, even when those links are not explicitly stated, and to make appropriate generalizations. Performance at this level suggests the ability to synthesize and learn from specialized reading materials.

Level 300 Understand complicated information

Readers at this level can understand complicated literary and informational passages, including material about topics they study at school. They can also analyze and integrate less familiar material and provide reactions to and explanations of the text as a whole. Performance at this level suggests the ability to find, understand, summarize, and explain relatively complicated information.

Level 250 Interrelate ideas and make generalizations

Readers at this level use intermediate skills and strategies to search for, locate, and organize the information they find in relatively lengthy passages and can recognize paraphrases of what they have read. They can also make inferences and reach generalizations about main ideas and author's purpose from passages dealing with literature, science, and social studies. Performance at this level suggests the ability to understand specific or sequentially related information.

Level 200 Partial skills and understanding

Readers at this level can locate and identify facts from simple informational paragraphs, stories, and news articles. In addition, they can combine ideas and make inferences based on short, uncomplicated passages. Performance at this level suggests the ability to understand specific or sequentially related information.

Level 150 Simple, discrete reading tasks

Readers at this level can follow brief written directions. They can also select words, phrases, or sentences to describe a simple picture and can interpret simple written clues to identify a common object. Performance at this level suggests the ability to carry out simple, discrete reading tasks.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992*, 1994.

Indicator 12

Table 12-2 Percentage of students ages 9, 13, or 17 scoring at or above the five levels of reading proficiency: 1971, 1975, 1980, 1984, 1988, 1990, and 1992

Proficiency level	Year						
	1971	1975	1980	1984	1988	1990	1992
Level 350 Learn from specialized reading materials							
Age							
9	0	0	0	0	0	0	0
13	0	0	0	0	0	0	1
17	7	6	1.25	6	1.25	7	7
Level 300 Understand complicated information							
Age							
9	1	1	1	1	1	2	1
13	110	110	111	111	111	111	215
17	139	139	138	140	41	41	243
Level 250 Interrelate ideas and make generalizations							
Age							
9	16	15	18	17	18	18	16
13	58	59	61	59	59	59	62
17	179	180	81	283	286	284	282
Level 200 Partial skills and understanding							
Age							
9	59	262	1.268	62	63	59	62
13	93	93	295	94	95	94	93
17	96	96	297	1.298	1.299	298	97
Level 150 Simple, discrete reading tasks							
Age							
9	91	293	1.295	92	93	90	92
13	100	100	100	100	100	100	100
17	100	100	100	100	100	100	100

¹Statistically significant difference from 1992.

²Statistically significant difference from 1971.

NOTE: See table 12-1 for further description of the proficiency levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 12-3 Percentile distribution of reading proficiency scores, by age and race/ethnicity: 1980, 1984, 1988, 1990, and 1992

Percentile	Age 9					Age 13					Age 17				
	1980	1984	1988	1990	1992	1980	1984	1988	1990	1992	1980	1984	1988	1990	1992
All students															
5	149	141	142	135	141	199	197	200	196	191	209	220	226	220	213
10	7	159	157	150	156	213	210	213	210	208	228	236	242	237	231
25	191	184	184	179	183	235	234	234	233	235	258	263	266	264	259
50	217	213	214	210	214	260	258	258	257	262	288	290	291	291	288
75	241	240	240	240	239	283	282	281	282	287	316	317	316	319	315
90	262	263	263	266	260	302	302	302	302	309	340	340	337	343	338
95	273	277	278	280	272	314	314	314	314	322	354	353	349	356	351
White															
5	161	152	150	144	153	209	205	204	204	204	226	230	233	229	229
10	175	167	165	160	167	222	218	217	217	219	242	246	247	246	244
25	199	192	192	188	193	243	241	238	240	243	267	271	271	271	268
50	223	220	219	218	221	265	263	262	263	268	294	297	295	298	294
75	246	245	244	247	244	287	286	285	286	292	320	322	320	324	319
90	265	267	267	271	264	306	305	304	306	312	343	343	340	347	341
95	276	280	281	285	276	317	317	316	318	324	357	356	352	360	354
Black															
5	123	121	125	115	119	179	180	191	182	170	176	202	214	201	188
10	139	135	138	129	132	191	192	202	194	185	191	216	228	217	206
25	165	159	162	153	156	211	213	222	217	210	217	239	251	242	235
50	192	187	188	182	185	233	236	242	243	239	244	264	274	268	263
75	216	213	217	211	214	255	259	264	266	266	270	288	300	294	288
90	236	235	238	236	236	275	280	284	286	287	293	311	321	316	312
95	247	248	252	251	249	286	293	299	299	303	307	324	333	331	328
Hispanic															
5	123	120	122	125	125	183	181	181	178	165	184	202	204	206	194
10	138	135	140	139	139	195	193	195	191	184	197	217	218	224	208
25	164	161	165	161	163	215	216	219	214	213	225	242	246	250	235
50	192	189	196	189	193	238	240	240	239	242	253	269	274	276	263
75	218	215	222	219	222	259	264	262	262	267	279	295	298	303	289
90	238	236	247	239	245	279	284	284	284	289	307	318	316	327	313
95	250	247	259	253	255	291	296	297	296	303	321	332	328	339	325

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Indicator 12

Table 12-4 Average reading proficiency, by parents' highest education level: 1971-92

Parents' highest education level	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school graduate	1971	110	189	116	238	120	261
	1975	110	190	1214	239	1216	262
	1980	26	2194	1210	238	1213	262
	1984	26	2195	129	240	1212	2269
	1988	25	192	28	2246	29	267
	1990	25	193	28	241	29	2270
	1992	25	195	26	239	28	271
Graduated from high school	1971	122	208	32	256	31	283
	1975	124	211	133	255	134	281
	1980	1225	1213	31	254	132	2278
	1984	1220	209	1236	253	1235	281
	1988	216	211	31	253	30	282
	1990	217	209	31	2251	30	283
	1992	216	207	28	252	28	280
More than high school	1971	133	224	138	270	142	302
	1975	134	222	140	270	1246	301
	1980	1240	1226	1249	271	1251	299
	1984	1237	223	1246	268	1250	301
	1988	245	220	252	2265	258	300
	1990	242	218	1250	2267	258	300
	1992	245	220	257	270	261	299

¹Statistically significant difference from 1992.

²Statistically significant difference from 1971.

NOTE: Percent of students represents the percentage of all students from each subgroup. Not shown are about one-third of students at age 9 and smaller percentages at ages 13 and 17 who did not know their parents' highest education level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 12-5 Average reading proficiency and time spent on homework, by age: 1984 and 1992

Amount of homework	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
None	1984	36	212	23	254	22	276
	1992	32	211	21	253	22	274
Didn't do assigned homework	1984	4	198	4	247	11	287
	1992	4	193	4	251	12	286
Less than 1 hour	1984	*42	218	36	261	*26	290
	1992	47	215	36	260	29	291
1-2 hours	1984	13	216	29	266	27	296
	1992	12	211	29	269	25	298
More than 2 hours	1984	6	201	9	264	13	303
	1992	5	195	10	267	12	308

* Statistically significant difference from 1992.

NOTE: "Percent of students" represents the percentage of all students of a particular age in a particular year who did a given amount of homework.

SOURCE: National Assessment of Educational Progress, Trends in Academic Progress: Achievement of American Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1992.

Table 12-6 The number of reading materials in the home and average reading proficiency, by age: 1971 and 1992

Number of types of materials in the home	Year	Age 9		Age 13		Age 17		
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency	
0-2	1971		*28	*186	*17	*227	*11	*246
	1992	37	197	22	241	18	269	
3	1971		32	*208	*25	*249	*22	*274
	1992	33	214	31	256	27	286	
4	1971		*39	223	*58	*266	*67	296
	1992	30	224	48	271	55	299	

*Statistically significant difference from 1992.

NOTE: Students were asked whether they had access to each of four types of reading material: Newspapers, magazines, books and encyclopedias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.

Note on NAEP cohorts

Three of the NAEP assessments, reading, math and science, report the progress of students by age. Proficiencies are reported for ages 9, 13, and 17. The modal grades for these age groups are 4th, 8th, and 11th grade. The fourth examination, writing, is given to students in grades 4, 8, and 11, regardless of their age. In all four subjects, it would appear that the time span between the youngest and middle age/grade is greater than between the middle and oldest group. However, the way age is defined (on a calendar or fiscal year basis) and the time at which each age/grade is assessed (fall, winter, or spring) results in the same length of time (or years of schooling) between the three age groups. A discussion of this methodology follows.

Age is determined on a calendar year basis for 9- and 13-year-olds, but on a fiscal year basis for 17-year-olds. In other words, the reading, math and science scores in 1992 represent students born in 1982 (9-year-olds), students born in 1978 (13-year-olds) and students born between October 1, 1974 and September 30, 1975 (17-year-olds). The writing scores represent students in grades 4, 8, or 11, at the time of the assessment regardless of age.

In addition to different age definitions, the time of the school year when the assessment is administered varies across age levels: 9-year-olds/4th-graders are tested in the winter, 13-year-olds/8th-graders are tested in the fall and 17-year-olds/11th graders are tested in the spring for all the assessments. Since 9-year-olds are tested between January and February of the year they turn 10, and 13-year-olds are tested between October and December of the year they turn 13, the 13-year-olds have had almost three and three-quarters more years of schooling than the 9-year-olds. Likewise, since 17-year-olds are tested between March and May, they will either be 16 or 17 at the time of the assessment (the difference is due to the age being determined on a fiscal year basis), and thus, they have had about three and three-quarters more years of exposure to school than 13-year-olds.

These different means of determining a student's

age and the various testing times have been adopted in order to try to measure a uniform period of growth between the three age/grade group. Comparing age/grade cohorts over time can be more problematic, however. Nine-year-olds in 1988 generally represent the same age cohort as 13-year-olds in 1992, two points in time not quite 4 years apart. However, the 17-year-olds tested in 1992 were generally younger than the 1988 13-year-old age cohort was in 1992. Therefore, care must be taken when examining student cohort across assessments in different years.

Table 13-1 Explanations of levels of writing task accomplishment

Level 350 Effective, coherent writing

The writing at this level provided clear complete responses to the assigned task. It tended to contain supportive details and discussion that contributed to the effectiveness of the response. This writing was also characterized by an overall unity and coherence not found at the lower levels.

Level 300 Complete, sufficient writing

Responses at this level tended to be complete and to contain sufficient information to accomplish the basic task.

Level 250 Focused, clear writing

Writing at this level tended to be more focused and clear, containing enough development and detail likely to accomplish the assigned task successfully.

Level 200 Incomplete, vague writing

The writing at this level, although clearer and more detailed than at the previous level, still tended to be vague and incomplete.

Level 150 Disjointed, unclear writing

Writing at this level tended to be too brief and disjointed to be considered a response to the task or, when longer, so vague and unclear that it was hard to understand

NOTE: This scale has a range of 0-500 with a mean of 250 and a standard deviation of 50.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Indicator 13

Table 13-2 Percentage of students at or above each of five writing proficiency levels, by grade: 1984, 1988, 1990, and 1992

Proficiency level	Grade	1984	1988	1990	1992
Level 350					
Can write effective responses containing supportive details and discussion					
	4	0.0	0.0	0.0	0.0
	8	0.1	0.2	0.6	1.6
	11	2.1	1.1	4.1	1.9
Level 300					
Can write effective responses containing sufficient information					
	4	0.5	0.8	0.5	0.5
	8	13.0	13.2	12.1	24.7
	11	38.6	39.2	36.7	35.8
Level 250					
Can begin to write focused and clear responses to tasks					
	4	10.1	14.6	12.2	13.0
	8	72.4	67.1	57.0	75.0
	11	89.4	92.7	94.3	87.4
Level 200					
Can write partial or vague responses to tasks					
	4	54.4	56.1	52.7	58.4
	8	98.3	97.2	93.3	97.7
	11	99.5	99.7	99.1	99.5
Level 150					
Can respond to tasks in abbreviated, disjointed, or unclear ways					
	4	92.6	90.5	88.8	92.7
	8	100.0	99.9	99.8	99.9
	11	100.0	100.0	100.0	100.0

NOTE: See table 13-1 for further description of the proficiency levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 13-3 Percentile distribution of writing proficiency scores, by grade and race/ethnicity: 1984, 1988, 1990, and 1992

Percentile	Grade 4				Grade 8				Grade 11			
	1984	1988	1990	1992	1984	1988	1990	1992	1984	1988	1990	1992
All students												
5	144	135	131	142	216	209	195	214	236	244	227	233
10	157	151	147	157	227	222	208	227	249	255	240	246
25	179	177	174	182	247	243	231	250	269	273	262	266
50	204	207	203	208	268	264	257	275	291	292	288	288
75	229	235	231	233	288	286	282	300	312	311	312	310
90	251	259	255	256	304	305	304	320	330	326	334	328
95	263	274	268	269	313	316	318	332	340	335	347	338
White												
5	155	151	146	159	224	217	202	220	249	252	235	244
10	167	165	162	172	235	229	215	234	260	263	247	256
25	188	189	186	194	253	249	237	256	277	279	269	275
50	211	216	211	217	273	270	263	280	298	297	294	295
75	233	242	237	240	291	291	287	304	316	315	317	314
90	255	265	260	261	306	309	309	324	333	329	338	331
95	266	278	273	273	315	319	323	335	343	338	350	341
Black												
5	124	109	105	117	201	194	182	200	222	232	213	216
10	135	122	120	131	212	205	193	213	232	243	225	226
25	160	148	144	153	229	226	216	232	252	258	245	245
50	182	173	172	176	248	247	240	257	270	276	268	264
75	205	200	199	198	265	266	263	282	290	294	291	283
90	228	224	223	218	281	285	285	306	309	309	311	301
95	240	238	239	229	292	296	297	319	318	318	324	309
Hispanic												
5	130	125	120	133	197	199	187	203	208	228	217	220
10	141	139	135	144	207	210	199	219	217	236	232	234
25	162	163	159	166	225	231	221	242	238	256	253	252
50	188	191	184	189	247	251	247	265	260	274	275	275
75	214	218	210	213	268	271	270	288	281	294	301	294
90	235	241	234	235	286	290	292	310	297	309	324	314
95	247	257	248	247	298	301	305	324	306	316	338	324

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Indicator 13

Table 13-4 Average writing proficiency, by grade and parents' highest education level: 1984, 1988, 1990 and 1992

Parents' highest education level	Year	Grade 4		Grade 8		Grade 11	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school	1984	17	179	110	258	11	274
	1988	5	194	8	254	8	276
	1990	6	186	8	246	9	268
	1992	24	191	27	258	8	271
Graduated high school	1984	20	192	35	1261	135	284
	1988	18	199	31	1258	130	285
	1990	18	197	1233	1252	30	278
	1992	16	202	229	268	227	278
More than high school	1984	5	208	10	271	115	298
	1988	5	211	11	275	18	296
	1990	5	214	12	1267	18	292
	1992	6	201	12	280	220	292
Graduated college	1984	133	218	136	1278	136	300
	1988	241	212	241	12271	41	299
	1990	240	209	138	12265	40	298
	1992	242	214	244	2284	243	296

¹Statistically significant difference from 1992.

²Statistically significant difference from 1984.

NOTE: "Percent of students" represents the percentage of all students from each subgroup. Not shown are about one-third of students at age 9 and smaller percentages at ages 13 and 17 who did not know their parents' highest level of education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 13-5 Percentage of students making various types of grammatical errors, by sex, type of error, and grade: 1984 and 1992

Type of error	Grade	Total		Male		Female	
		1984	1992	1984	1992	1984	1992
Run-on sentences	4	15	13	14	13	17	14
	8	7	8	8	9	6	7
	11	5	5	5	5	4	5
Sentence	4	3	4	3	5	3	4
	8	3	4	4	5	3	4
	11	3	4	4	5	2	4
Awkward	4	25	32	26	33	25	32
	8	32	32	34	33	30	30
	11	31	26	35	28	27	25
Misspelled	4	8	9	9	10	7	8
	8	4	4	4	5	3	3
	11	2	2	3	3	2	2
Word-choice	4	1	1	1	1	1	1
	8	1	1	1	1	1	1
	11	1	1	1	1	1	1
Capitalization	4	1	1	1	1	1	1
	8	0	1	0	2	0	1
	11	0	1	0	1	0	0

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.

Table 14-1 Explanations of levels of mathematics proficiency

Level 350 Multi-step problem solving and algebra

Students at this level can apply a range of reasoning skills to solve multi-step problems. They can solve routine problems involving fractions and percents, recognize properties of basic geometric figures, and work with exponents and square roots. They can solve a variety of two-step problems using variables, identify equivalent algebraic expressions, and solve linear equations and inequalities. They are developing an understanding of functions and coordinate systems.

Level 300 Moderately complex procedures and reasoning

Students at this level are developing an understanding of number systems. They can compute with decimals, simple fractions, and commonly encountered percents. They can identify geometric figures, measure lengths and angles, and calculate areas of rectangles. These students are also able to interpret simple inequalities, evaluate formulas, and solve simple linear equations. They can find averages, make decisions on information drawn from graphs, and use logical reasoning to solve problems. They are developing the skills to operate with signed numbers, exponents, and square roots.

Level 250 Numerical operations and beginning problem solving

Students at this level have an initial understanding of the four basic operations. They are able to apply whole number addition and subtraction skills to one-step word problems and money situations. In multiplication, they can find the product of a two-digit and a one-digit number. They can also compare information from graphs and charts, and are developing an ability to analyze simple logical relations.

Level 200 Beginning skills and understandings

Students at this level have considerable understanding of two-digit numbers. They can add two-digit numbers, but are still developing an ability to regroup in subtraction. They know some basic multiplication and division facts, recognize relations among coins, can read information from charts and graphs, and use simple measurement instruments. They are developing some reasoning skills.

Level 150 Simple arithmetic facts

Students at this level know some basic addition and subtraction facts, and most can add two-digit numbers without regrouping. They recognize simple situations in which addition and subtraction apply. They also are developing rudimentary classification skills.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress. Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992.* 1994.

Table 14-2 Percentage of students scoring at or above the five levels of mathematics proficiency: 1978, 1982, 1986, 1990, and 1992

Proficiency levels	Age	1978	1982	1986	1990	1992
Level 350						
Multi-step problem solving and algebra	9	0	0	0	0	0
	13	1	0	20	20	0
	17	7	26	6	7	7
Level 300						
Moderately complex procedures and reasoning	9	1	1	1	1	1
	13	18	17	16	17	19
	17	152	148	152	256	259
Level 250						
Numerical operations and beginning problem solving	9	120	119	121	228	228
	13	165	1271	273	275	278
	17	192	193	296	296	297
Level 200						
Beginning skills and understandings	9	170	171	174	282	281
	13	195	298	299	298	299
	17	1100	100	100	100	100
Level 150						
Simple arithmetic facts	9	197	197	1298	299	299
	13	100	100	100	100	100
	17	100	100	100	100	100

¹Statistically significant difference from 1992.

²Statistically significant difference from 1978.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 14-3 Percentile distribution of mathematics proficiency scores, by age and race/ethnicity: 1978, 1982, 1986, 1990, and 1992

Percentile	Age 9					Age 13					Age 17				
	1978	1982	1986	1990	1992	1978	1982	1986	1990	1992	1978	1982	1986	1990	1992
All students															
5	157	159	163	173	172	198	212	218	218	221	241	245	252	253	256
10	171	173	177	186	185	213	225	230	230	233	254	256	263	264	267
25	195	196	199	208	208	238	246	248	250	253	276	276	281	283	286
50	220	220	223	231	231	265	270	269	271	274	301	299	301	305	308
75	244	243	246	253	253	291	292	290	292	294	325	322	323	327	328
90	264	263	264	271	271	313	311	309	310	312	345	341	343	345	345
95	276	274	276	282	282	327	322	321	320	323	356	351	354	356	355
White															
5	166	168	171	182	182	212	223	226	228	231	252	253	261	260	264
10	179	181	184	194	194	226	234	237	239	242	263	264	271	271	274
25	201	202	205	215	215	248	254	254	257	261	284	282	287	289	293
50	225	225	228	236	236	272	275	273	277	279	307	304	307	310	313
75	248	247	250	256	256	296	296	293	296	298	329	325	328	330	332
90	267	265	267	275	274	317	314	312	313	315	347	343	346	347	348
95	278	276	278	285	285	330	325	323	323	325	358	353	356	357	357
Black															
5	134	137	146	156	155	170	189	202	202	200	217	225	237	245	239
10	147	150	158	167	166	184	200	213	212	212	228	235	244	254	249
25	169	173	181	186	186	206	219	231	230	231	246	251	260	269	267
50	193	197	203	208	209	229	241	249	249	251	268	271	279	287	287
75	216	218	224	231	230	254	261	267	268	271	291	291	296	307	304
90	236	237	241	249	249	276	280	284	285	287	310	311	312	326	321
95	248	248	251	259	259	288	291	296	296	297	321	321	325	338	331
Hispanic															
5	144	148	155	162	159	180	202	206	206	212	224	232	236	229	248
10	156	161	164	173	169	193	214	216	216	224	234	241	249	242	258
25	179	181	185	193	190	214	231	236	234	241	253	255	265	264	273
50	204	205	206	216	212	237	252	254	255	259	275	275	283	282	292
75	227	227	226	235	234	262	274	274	275	279	299	297	301	304	311
90	250	246	245	252	253	284	293	292	292	295	320	315	319	325	328
95	260	257	254	262	263	296	304	301	303	304	332	327	329	336	336

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 14-4 Average mathematics proficiency, by age and parents' highest education level: 1978, 1982, 1986, 1990, and 1992

Parents' highest education level	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school graduate	1978	18	1200	112	1 245	113	280
	1982	18	1199	111	1 2251	114	279
	1986	24	1201	28	2 252	28	279
	1990	25	2 210	28	2 253	28	285
	1992	24	2 217	26	2 256	28	286
Graduated from high school	1978	123	219	133	263	133	294
	1982	125	218	134	263	133	293
	1986	1 216	218	131	263	1 228	293
	1990	1 216	2 226	1 227	263	1 226	294
	1992	214	222	2 23	263	2 21	298
More than high school	1978	9	1230	114	1 273	16	305
	1982	19	1 225	114	275	118	1304
	1986	27	1 229	115	1 274	224	305
	1990	7	236	217	2 277	224	308
	1992	8	2 237	218	2 278	225	308
Graduated from college	1978	124	1231	126	284	132	317
	1982	1 2 30	1 229	1 2 32	282	132	2 312
	1986	238	1231	1 237	280	1 237	314
	1990	240	2 238	241	280	239	316
	1992	242	2 236	244	283	243	316

¹Statistically significant difference from 1992.

²Statistically significant difference from 1978.

NOTE: Percent of students represents the percentage of all students from each subgroup. Not shown are about one-third of students at age 9 and smaller percentages at ages 13 and 17 who did not know their parents' highest education level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 14-5 Amount of time spent watching television each day and average mathematics proficiency, by age: 1982 and 1992

Age and year	Number of hours watched per day						
	0-2 hours		3-5 hours		6 or more hours		
	Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency	
Age 9							
	1992	40	231	41	233	19	219
	1982	44	218	29	227	26	214
Age 13							
	1992	36	280	51	273	13	255
	1982	45	273	39	269	16	256
Age 17							
	1992	53	314	40	300	7	285
	1982	69	305	26	296	5	279

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 15-1 Explanations of levels of science proficiency

Level 350 Integrates specialized scientific information

Students at this level can infer relationships and draw conclusions using detailed scientific knowledge from the physical sciences, particularly chemistry. They also can apply basic principles of genetics and interpret the societal implications of research in this field.

Level 300 Analyzes scientific procedures and data

Students at this level can evaluate the appropriateness of the design of an experiment. They have more detailed scientific knowledge, and the skill to apply their knowledge in interpreting information from text and graphs. These students also exhibit a growing understanding of principles from the physical sciences.

Level 250 Applies general scientific information

Students at this level can interpret data from simple tables and make inferences about the outcomes of experimental procedures. They exhibit knowledge and understanding of the life sciences, including a familiarity with some aspects of animal behavior and of ecological relationships. These students also demonstrate some knowledge of basic information from the physical sciences.

Level 200 Understands simple scientific principles

Students at this level are developing some understanding of simple scientific principles, particularly in the life sciences. For example, they exhibit some rudimentary knowledge of the structure and function of plants and animals.

Level 150 Knows everyday science facts

Students at this level know some general scientific facts of the type that could be learned from everyday experiences. They can read simple graphs, match the distinguishing characteristics of animals, and predict the operation of familiar apparatus that work according to mechanical principles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Indicator 15

Table 15-2 Percentage of students scoring at or above the five levels of science proficiency: 1977, 1982, 1986, 1990, and 1992

Proficiency level	Age	1977	1982	1986	1990	1992
Level 350						
Integrates specialized scientific information	9	0	0	0	0	0
	13	11	0	20	0	20
	17	9	17	8	9	10
Level 300						
Analyzes scientific procedures and data	9	3	2	3	3	3
	13	11	10	9	11	12
	17	142	1237	14	43	247
Level 250						
Applies general scientific information	9	126	124	128	131	233
	13	149	151	153	1257	261
	17	82	1277	81	81	83
Level 200						
Understands simple scientific principles	9	168	171	1272	276	278
	13	186	1290	292	292	293
	17	97	1296	97	97	98
Level 150						
Knows everyday science facts	9	194	195	1296	297	297
	13	199	2100	2100	2100	2100
	17	100	100	100	100	100

¹Statistically significant difference from 1992.

²Statistically significant difference from 1977.

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 15-3 Percentile distribution of science proficiency scores, by age and race/ethnicity: 1977, 1982, 1986, 1990, and 1992

Percentile	Age 9					Age 13					Age 17				
	1977	1982	1986	1990	1992	1977	1982	1986	1990	1992	1977	1982	1986	1990	1992
All students															
5	144	151	155	160	163	174	185	189	191	193	213	203	212	210	218
10	161	167	170	176	178	191	200	203	206	209	231	222	230	229	234
25	190	194	196	202	204	218	224	227	230	235	261	253	260	260	264
50	222	221	225	230	232	249	251	252	256	260	291	285	290	292	296
75	251	249	253	257	258	278	277	277	281	284	320	315	319	323	327
90	277	272	277	279	281	302	299	298	302	303	346	342	345	348	350
95	291	286	291	292	294	317	313	310	315	315	362	357	360	363	364
White															
5	163	167	167	177	178	191	198	204	209	213	231	223	228	233	234
10	178	182	181	190	192	205	211	216	220	226	246	239	245	249	251
25	202	204	206	213	215	229	233	237	241	246	270	266	271	273	277
50	230	229	233	238	240	256	258	259	265	268	298	294	299	301	306
75	257	255	259	262	264	283	282	282	287	289	325	321	325	329	333
90	281	278	282	284	285	307	303	302	307	307	350	346	349	352	355
95	295	291	295	296	298	321	316	314	319	318	365	361	364	367	369
Black															
5	107	124	133	131	138	144	160	168	170	162	172	166	189	182	192
10	123	137	147	145	152	158	173	180	182	177	187	181	202	197	207
25	147	159	170	170	174	181	194	198	202	199	212	206	225	221	230
50	174	188	196	196	201	207	217	221	226	224	240	235	252	252	255
75	203	214	223	224	226	235	241	244	249	251	268	263	280	283	282
90	229	236	246	247	284	260	262	264	269	272	293	289	306	314	308
95	244	247	260	260	261	275	275	277	283	286	310	305	323	329	325
Hispanic															
5	125	127	134	146	143	147	166	171	174	180	194	178	194	189	197
10	140	142	148	159	157	161	179	181	185	193	208	194	209	204	215
25	164	162	173	181	179	186	201	202	206	215	234	219	232	231	242
50	191	191	200	206	205	213	226	226	231	238	262	248	259	261	273
75	219	216	226	233	230	240	249	250	256	261	290	278	286	293	298
90	246	236	252	253	254	266	271	270	280	282	317	302	310	317	323
95	261	246	265	267	265	282	285	283	294	292	331	321	324	330	339

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 15-4 Average science proficiency, by age and parents' highest education level: 1977, 1982, 1986, 1990, and 1992

Parents' highest education level	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school	1977	19	1199	113	1224	115	265
	1982	7	1198	110	225	113	259
	1986	24	1204	28	229	28	258
	1990	25	2210	28	2333	28	261
	1992	24	2217	26	2234	28	262
Graduated from high school	1977	127	223	133	245	133	284
	1982	215	218	226	243	1229	2275
	1986	1216	220	131	245	1228	2277
	1990	1216	226	1227	247	1226	2276
	1992	214	222	223	246	221	280
More than high school	1977	7	237	115	1260	117	296
	1982	8	229	17	1259	1222	2290
	1986	7	236	116	1258	224	295
	1990	7	238	17	263	224	297
	1992	8	237	218	2266	225	296
Graduated from college	1977	123	1232	127	266	130	309
	1982	242	1231	1237	1264	132	12300
	1986	238	235	1237	264	1237	304
	1990	240	236	241	268	239	306
	1992	242	2239	244	269	243	308

¹Statistically significant difference from 1992.

²Statistically significant difference from 1977.

NOTE: Percent of students represents the percentage of all students from each subgroup. Not shown are approximately one-third of students at age 9 and smaller percentages at ages 13 and 17 who did not know their parents' highest education level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, A National Assessment of Education Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 15-5 Science activities and proficiency at age 9: 1977 and 1992

Have you ever...	Year	Students answering "yes"		Students answering "no"	
		Percent of students	Average proficiency	Percent of students	Average proficiency
Experimented with living plants	1992	64	234	32	226
	1977	70	221	27	217
Experimented with batteries and bulbs	1992	49	233	46	231
	1977	51	225	43	217
Used a scale to weigh things	1992	91	234	8	218
	1977	89	220	9	202
Used a thermometer?	1992	91	234	7	217
	1977	84	222	14	199
Used a microscope?	1992	62	237	33	225
	1977	53	222	43	214
Used a calculator?	1992	98	233	2	203
	1977	87	222	11	195

SOURCE: U.S. Department of Education, National Center for Education Statistics, *A National Assessment of Education Progress, Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; Writing, 1984 to 1992, 1994.*

Table 16-1 Average reading literacy scale scores, by age, sex, and country: School year 1991-92

Country	Age 9			Age 14		
	Total	Male	Female	Total	Male	Female
Belgium ¹	507	503	512	481	480	486
Botswana	—	—	—	330	327	333
British Columbia, Canada ²	500	495	506	522	513	534
Cyprus	481	479	484	497	493	501
Denmark	475	463	489	525	523	527
Former East Germany ³	499	490	509	526	523	530
Finland ⁴	569	564	575	560	554	568
France ⁵	531	530	533	549	553	549
Greece ⁶	504	499	510	509	509	510
Hong Kong ⁷	517	512	524	535	533	538
Hungary ⁸	499	495	504	536	528	542
Iceland ⁹	518	508	528	536	530	543
Ireland ¹⁰	509	502	517	511	502	525
Italy ¹¹	529	525	537	515	511	520
Netherlands	485	483	488	514	511	520
New Zealand	528	519	539	545	544	549
Norway ¹²	524	517	533	516	516	520
Philippines ¹³	—	—	—	430	427	432
Portugal	478	474	483	523	528	520
Singapore	515	510	521	534	534	534
Slovenia	498	491	506	532	529	534
Spain ⁴	504	500	508	490	488	492
Sweden	539	533	546	546	540	555
Switzerland	511	507	517	536	535	538
Thailand ¹⁵	—	—	—	477	464	488
Trinidad/Tobago	451	443	460	479	466	492
United States ¹⁶	547	543	552	535	530	543
Venezuela ¹⁷	383	379	392	417	419	421
Former West Germany ¹⁸	503	501	508	522	522	526
Zimbabwe	—	—	—	372	380	363

—Country did not participate at this age level.

¹Schools in French-speaking Belgium only, students instructed in Flemish or German were excluded.

²Schools in British Columbia only. Students in Government Native Indian schools were excluded.

³Students in special schools for the handicapped and institutions for specially talented students were excluded.

⁴Swedish speaking, special education, and laboratory schools were excluded.

⁵Private schools were excluded (16 percent of 9-year-olds and 21 percent of 14-year-olds).

⁶For 14-year-olds, 1.4 percent in evening schools were excluded.

⁷International schools, ESF Foundation schools, schools not participating in Secondary School Places Allocation System (SSPA) and schools with class size of less than 20 were excluded.

⁸Very small schools in remote areas and ungraded schools were excluded.

⁹Schools where there were fewer than 5 students were excluded.

¹⁰Private schools and schools with fewer than 5 students were excluded.

¹¹Non-government schools were excluded.

¹²Schools for Lapps were excluded.

¹³Schools in earthquake and insurgency areas (about 39 percent of the population) were excluded.

¹⁴Students from schools with fewer than 10 students in the defined grade and from schools where medium of instruction was not Castillian Spanish were excluded.

¹⁵Laboratory schools and schools controlled by the Department of Fine Arts and Culture were excluded.

¹⁶Students in eligible schools not capable of taking the test (4.9 percent of each age group) were excluded.

¹⁷Students attending private rural schools were excluded.

¹⁸Students in special schools for the handicapped and non-graded private schools were excluded.

SOURCE: International Association for the Evaluation of Educational Achievement, Study of Reading Literacy, *How in the World Do Students Read?*, 1992.

Table 16-2 Average scores across narrative, expository, and documents domains for 9-year-olds on reading literacy assessment, by country: School year 1991-92

Country	Average score			Percentile score, narrative domain					
	Narrative	Expository	Documents	1st	5th	10th	90th	95th	99th
Belgium ¹	510	505	506	293	361	385	612	643	695
British Columbia, Canada ²	502	499	500	186	345	389	619	644	697
Cyprus	492	475	476	283	351	373	601	626	686
Denmark	463	467	496	186	186	299	592	628	682
Former East Germany ³	482	493	522	219	324	361	590	626	686
Finland ⁴	568	569	569	353	420	466	649	681	708
France ⁵	532	533	527	335	381	411	640	672	701
Greece	514	511	488	303	367	400	622	647	699
Hong Kong ⁶	494	503	554	273	350	383	601	618	677
Hungary ⁷	496	493	509	299	362	390	588	617	661
Iceland ⁸	518	517	519	297	361	390	627	647	700
Indonesia ⁹	402	411	369	205	280	316	489	528	566
Ireland ¹⁰	518	514	495	301	363	390	631	649	701
Italy ¹¹	533	538	517	303	379	411	627	650	701
Netherlands	494	480	481	311	359	382	591	625	688
New Zealand	534	531	521	299	365	403	647	679	707
Norway ¹²	525	528	519	186	342	390	629	654	702
Portugal	483	480	471	300	356	386	587	617	670
Singapore	521	519	504	306	364	395	623	653	701
Slovenia	502	489	503	296	355	389	648	650	700
Spain ¹³	497	505	509	291	357	389	597	641	687
Sweden	536	542	539	239	364	406	644	673	706
Switzerland	506	507	522	237	362	391	602	642	696
Trinidad/Tobago	455	458	440	232	312	343	567	605	676
United States ¹⁴	553	538	550	330	389	420	655	685	708
Venezuela ¹⁵	378	396	374	186	186	220	474	500	554
Former West Germany ¹⁶	491	497	520	226	340	372	594	629	690

¹Schools in French-speaking Belgium only, students instructed in Flemish or German were excluded.

²Schools in British Columbia only. Students in Government Native Indian schools were excluded.

³Students in special schools for the handicapped and institutions for specially talented students were excluded.

⁴Swedish speaking, special education, and laboratory schools were excluded.

⁵Private schools were excluded (16 percent).

⁶International schools, ESF Foundation schools, schools not participating in Secondary School Places Allocation System (SSPA) and schools with class size of less than 20 were excluded.

⁷Very small schools in remote areas and ungraded schools were excluded.

⁸Schools where there were fewer than 5 students were excluded.

⁹Schools outside of Java, Riau (Sumatra) and East Nusa Tenggara were excluded (30 percent of target population).

¹⁰Private schools and schools with fewer than 5 students were excluded.

¹¹Non-government schools were excluded.

¹²Schools for Lapps were excluded.

¹³Students from schools with fewer than 10 students in the defined grade and from schools where medium of instruction was not Castilian Spanish were excluded.

¹⁴Students in eligible schools not capable of taking the test (5 percent) were excluded.

¹⁵Students attending private rural schools were excluded.

¹⁶Students in special schools for the handicapped and non-graded private schools were excluded.

SOURCE: International Association for the Evaluation of Educational Achievement, Study of Reading Literacy, *How in the World Do Students Read?*, 1992.

Table 16-3 Average scores across narrative, expository, and documents domains for 14-year-olds on reading literacy assessment, by country: School year 1991-92

Country	Average score			Percentile score, narrative domain					
	Narrative	Expository	Documents	1st	5th	10th	90th	95th	99th
Belgium ¹	484	477	483	242	319	360	572	605	685
Botswana	340	339	312	121	227	247	411	417	452
British Columbia, Canada ²	526	516	522	290	362	394	635	676	750
Cyprus	516	492	482	282	340	378	601	638	705
Denmark	517	524	532	295	380	411	636	673	741
Former East Germany ³	512	523	543	315	381	408	633	648	708
Finland ⁴	559	541	580	354	421	453	628	641	699
France ⁵	556	546	544	362	414	447	639	681	748
Greece ⁶	526	508	493	322	376	401	602	640	711
Hong Kong ⁷	509	540	557	343	407	434	621	642	718
Hungary ⁸	530	536	542	326	389	420	640	680	748
Iceland ⁹	550	548	509	316	385	413	660	686	748
Ireland ¹⁰	510	505	518	282	356	384	630	643	725
Italy ¹¹	520	524	501	324	386	413	616	643	727
Netherlands	506	503	533	291	365	395	593	624	694
New Zealand	547	535	552	290	363	410	660	692	757
Norway ¹²	515	520	512	313	386	413	609	642	713
Philippines ¹³	421	439	430	272	321	342	530	571	662
Portugal	523	523	523	341	411	429	606	636	698
Singapore	530	539	533	367	410	434	629	666	735
Slovenia	534	525	537	360	410	441	607	643	700
Spain ¹⁴	500	495	475	308	364	391	581	613	688
Sweden	556	533	550	324	384	420	637	677	749
Switzerland	534	525	549	307	381	412	632	654	722
Thailand ¹⁵	468	486	478	239	324	363	573	599	662
Trinidad/Tobago	482	485	472	255	330	358	600	636	729
United States ¹⁶	539	539	528	324	381	410	673	705	764
Venezuela ¹⁷	407	433	412	220	290	330	526	556	629
Former West Germany ¹⁸	514	521	532	323	381	411	622	667	736
Zimbabwe	367	374	373	139	272	291	453	483	551

¹Schools in French-speaking Belgium only, students instructed in Flemish or German were excluded.

²Schools in British Columbia only. Students in Government Native Indian schools were excluded.

³Students in special schools for the handicapped and institutions for specially talented students were excluded.

⁴Swedish speaking, special education, and laboratory schools were excluded.

⁵Private schools were excluded (21 percent).

⁶Students in evening schools were excluded (1 percent).

⁷International schools, ESF Foundation schools, schools not participating in Secondary School Places Allocation System (SSPA) and schools with class size of less than 20 were excluded.

⁸Very small schools in remote areas and ungraded schools were excluded.

⁹Schools where there were fewer than 5 students were excluded.

¹⁰Private schools and schools with fewer than 5 students were excluded.

¹¹Non-government schools were excluded.

¹²Schools for Lapps were excluded.

¹³Schools in earthquake and insurgency areas (about 39 percent of the population) were excluded.

¹⁴Students from schools with fewer than 10 students in the defined grade and from schools where medium of instruction was not Castilian Spanish were excluded.

¹⁵Laboratory schools and schools controlled by the Department of Fine Arts and Culture were excluded.

¹⁶Students in eligible schools not capable of taking the test (5 percent) were excluded.

¹⁷Students attending private rural schools were excluded.

¹⁸Students in special schools for the handicapped and non-graded private schools were excluded.

SOURCE: International Association for the Evaluation of Educational Achievement, Study of Reading Literacy, *How in the World Do Students Read?*, 1992.

Table 16-4 Average reading achievement scores for students speaking a different language at home and for students speaking the school language, by country: School year 1991-92

Country	Age 9				Ave 14			
	Non-school language		School language		Non-school language		School language	
	Percent of students	Average score	Percent of students	Average score	Percent of students	Average score	Percent of students	Average score
Belgium ¹	11	481	89	512	9	435	91	491
Botswana	—	—	—	—	61	328	39	334
British Columbia, Canada ²	11	488	89	502	8	506	92	524
Cyprus	4	476	96	482	0	437	100	497
Denmark	5	441	95	480	3	470	98	527
Former East Germany ³	2	472	98	500	1	521	99	527
Finland ⁴	2	532	99	569	1	533	99	562
France ⁵	9	491	91	536	4	516	96	552
Greece ⁶	6	472	94	508	3	487	97	510
Hong Kong ⁷	13	488	87	522	4	495	96	537
Hungary ⁸	3	468	97	501	1	493	99	536
Iceland ⁹	4	487	97	519	0	508	100	536
Indonesia ¹⁰	73	394	28	403	—	—	—	—
Ireland ¹¹	3	495	97	510	1	482	99	513
Italy ¹²	27	513	73	537	26	488	74	525
Netherlands	13	459	88	489	9	489	91	518
New Zealand	8	465	92	535	6	470	94	551
Norway ¹³	4	471	96	527	2	473	98	519
Philippines ¹⁴	—	—	—	—	90	428	10	449
Portugal	3	469	97	479	2	504	524	449
Singapore	73	505	28	543	74	523	26	566
Slovenia	12	469	89	502	6	506	94	534
Spain ¹⁵	13	499	87	505	11	481	89	491
Sweden	9	486	91	544	5	501	95	549
Switzerland	21	476	79	521	15	497	85	544
Thailand ¹⁶	—	—	—	—	39	476	61	479
Trinidad/Tobago	15	439	85	456	16	456	84	485
United States ¹⁷	4	520	97	549	4	478	96	539
West Germany ¹⁸	11	461	90	509	8	455	92	530
Venezuela ¹⁹	18	383	82	388	5	394	95	421
Zimbabwe	—	—	—	—	83	371	17	385

—Country did not participate at this age level.

¹Schools in French-speaking Belgium only, students instructed in Flemish or German were excluded.

²Schools in British Columbia only. Students in Government Native Indian schools were excluded.

³Students in special schools for the handicapped and institutions for specially talented students were excluded.

⁴Swedish speaking, special education, and laboratory schools were excluded.

⁵Private schools were excluded (16 percent of 9-year-olds and 21 percent of 14-year-olds).

⁶For 14-year-olds, 1.4 percent in evening schools were excluded.

⁷International schools, ESF Foundation schools, schools not participating in Secondary School Places Allocation System (SSPA) and schools with class size of less than 20 were excluded.

⁸Very small schools in remote areas and ungraded schools were excluded.

⁹Schools where there were fewer than 5 students were excluded.

¹⁰Schools outside of Java. Riau (Sumatra) and East Nusa Tenggara were excluded (30 percent of target population).

¹¹Private schools and schools with fewer than 5 students were excluded.

¹²Non-government schools were excluded.

¹³Schools for Lapps were excluded.

¹⁴Schools in earthquake and insurgency areas (about 39 percent of the population) were excluded.

¹⁵Students from schools with fewer than 10 students in the defined grade and from schools where medium of instruction was not Castilian Spanish were excluded.

¹⁶Laboratory schools and schools controlled by the Department of Fine Arts and Culture were excluded.

¹⁷Students in eligible schools not capable of taking the test (5 percent of each age group) were excluded.

¹⁸Students attending private rural schools were excluded.

¹⁹Students in special schools for the handicapped and non-graded private schools were excluded.

SOURCE: International Association for the Evaluation of Educational Achievement, *Study of Reading Literacy, How In the World Do Students Read?*, 1992.

Table 17-1 Distribution of proficiency scores of 9-year-olds on mathematics assessment, by country: 1991

Country	Average proficiency score			Percentile scores						
	Total	Male	Female	1st	5th	10th	Median	90th	95th	99th
Comprehensive populations										
Canada ¹	430	430	431	296	337	363	435	490	506	537
Hungary	452	452	452	312	357	379	455	520	536	573
Ireland	426	425	427	273	317	345	433	493	514	545
Israel ²	442	447	438	310	347	373	445	504	523	555
South Korea	473	480	465	334	383	407	475	534	550	586
Slovenia	413	413	414	303	336	355	417	467	482	508
Soviet Union ³	447	448	446	310	349	374	450	514	532	579
Spain ⁴	432	432	432	287	330	353	437	499	518	551
Taiwan	454	455	453	304	360	384	457	521	539	571
United States ⁵	420	422	419	278	305	333	427	492	513	549
Populations with exclusions or low participation										
England ⁶	427	427	427	292	322	352	428	501	521	556
Italy, Emilia-Romagna ⁶	451	456	446	315	360	386	453	518	536	570
Portugal ⁷	418	422	414	284	327	347	422	485	500	530
Scotland ⁶	446	446	446	314	356	382	447	511	525	559
Canadian populations										
British Columbia	434	433	434	291	336	365	437	497	512	548
New Brunswick-English	427	429	426	288	326	353	433	489	505	540
Ontario-English	420	417	421	286	321	351	425	482	497	527
Ontario-French	414	415	414	292	333	353	419	470	482	512
Quebec-English	435	437	434	294	334	365	440	499	518	549
Quebec-French	443	444	441	318	356	380	447	497	513	540

¹Four out of 10 provinces.

²Hebrew-speaking schools.

³Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.

⁴Regions except Cataluña; Spanish-speaking schools.

⁵Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

⁶Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

⁷Restricted grades.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

Table 17-2 Distribution of proficiency scores of 13-year-olds on mathematics assessment, by country: 1991

Country	Average proficiency score			Percentile scores						
	Total	Male	Female	1st	5th	10th	Median	90th	95th	99th
Comprehensive populations										
Canada ¹	513	515	512	400	443	462	515	564	580	608
France	519	523	515	404	442	460	521	574	588	616
Hungary	529	528	528	401	447	465	531	588	605	639
Ireland	509	514	505	381	425	449	514	565	580	614
Israel ²	517	520	514	396	441	462	520	567	578	607
Italy, Emilia-Romagna ³	517	521	513	402	444	459	522	569	581	610
Jordan	458	461	454	345	371	390	459	520	539	568
South Korea	542	546	537	390	445	470	545	609	629	665
Scotland ³	511	511	512	400	438	454	513	564	580	604
Slovenia	504	506	501	407	432	445	507	556	570	599
Soviet Union ⁴	533	533	532	413	458	477	536	584	596	629
Spain ⁵	495	498	492	390	429	446	496	542	556	577
Switzerland ⁶	539	544	534	443	475	491	542	586	598	631
Taiwan	545	546	544	368	424	454	550	631	659	694
United States ³	494	494	494	366	407	430	495	554	574	616
Populations with exclusions or low participation										
Brazil, Fortaleza ⁷	432	442	425	319	345	364	429	502	519	544
Brazil, Sao Paulo ⁸	444	445	443	331	358	378	441	515	531	554
China ⁹	561	565	556	457	491	508	559	613	633	662
England ¹⁰	511	510	511	371	424	448	512	573	590	617
Mozambique ^{10,11}	427	431	424	346	370	385	429	468	478	503
Portugal ^{3,7}	483	485	482	369	406	427	487	535	549	577
Canadian populations										
Alberta	516	517	515	407	446	464	517	567	583	615
British Columbia	523	524	521	424	455	472	522	575	593	624
Manitoba-English	502	502	502	381	424	448	505	554	565	601
Manitoba-French	516	519	513	413	455	472	516	560	572	594
New Brunswick-English	501	503	500	381	426	448	503	552	570	598
New Brunswick-French	509	508	510	394	433	453	513	559	571	591
Newfoundland	506	504	509	386	431	454	509	555	571	601
Nova Scotia	509	511	506	395	435	457	510	560	575	613
Ontario-English	504	506	502	396	435	453	504	556	572	600
Ontario-French	494	493	495	384	423	442	497	538	553	582
Quebec-English ³	523	523	522	408	453	470	522	577	594	630
Quebec-French	528	531	525	435	465	481	529	573	587	609
Saskatchewan-English	513	516	510	407	438	461	515	562	577	608
Saskatchewan-French	525	527	524	447	461	482	525	566	578	601

¹Nine out of 10 provinces.²Hebrew-speaking schools.³Combined school and student participation rate is below .80 but at least .70; Interpret results with caution because of possible nonresponse bias.⁴Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.⁵Regions except Cataluña; Spanish-speaking schools.⁶Fifteen out of 26 cantons.⁷In-school population, restricted grades.⁸Restricted grades.⁹Twenty out of 29 provinces and independent cities; in-school population, restricted grades.¹⁰Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.¹¹Cities of Maputo and Beira; in-school population.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

Note on proficiency scores for IAEP mathematics and science

Indicators 17 and 18 contain mean proficiency scores and standard errors for each population participating in the second International Assessment of Educational Progress (IAEP). Proficiency scores allow the comparison of average proficiency across age groups within and between countries. Mean proficiency scores and standard errors were obtained following a series of different statistical analyses: item parameters estimation using item response theory (IRT), vertical equating of 9- and 13-year-old scales, and plausible values technology for estimation of proficiency distributions.

First, for each age group in mathematics and science, a random sample of 200 students was drawn from each participating population to build a reference population. Then, a three parameter logistic item response model was fitted using this reference population. Following examinations of goodness of fit statistics and consultation with content specialists, no items were excluded from the item parameter estimation.

Since there were some common items for 9- and 13-year-olds, it was possible to equate item parameter estimates to put proficiency scores for these two age groups on the same proficiency scale. This was done with a linear transformation of the 9-year-olds item parameters estimates using 13-year-olds item parameters estimates as the target scale. Finally, five draws from each student's proficiency distribution were obtained using plausible values technology developed for the National Assessment of Educational Progress (NAEP). This technology used three different sets of values as input: Item parameters estimates from the reference population, students' item mathematics or science responses, and students' answers to the background questions.

The proficiency scores were rescaled to give a mean of 500 and a standard deviation of 100. To do so, the proficiency scores for all the participating populations were merged, 9- and 13-year-olds together. An overall mean and an overall standard deviation were then calculated using the individual students' weights. These

values were used to transform linearly the five proficiency scores of each student on the targeted scale with mean and standard deviation as previously fixed (500, 100).³

Population mean proficiency scores were computed as the average of the five proficiency score means. Computation of standard errors of these means included contribution from two sources. A first contribution made use of the sampling plan and consisted of the jackknifed standard error of the first proficiency score. A second contribution was linked to the variation implicit in the presence of five possible proficiency scores. These two quantities were combined to give information concerning the variability of the results.

Table 18-1 Distribution of proficiency scores of 9-year-olds on science assessment, by country: 1991

Country	Average proficiency score			Percentile scores						
	Total	Male	Female	1st	5th	10th	Median	90th	95th	99th
Comprehensive populations										
Canada ¹	437	439	434	257	316	346	443	517	538	582
Hungary	438	443	434	270	331	360	441	511	534	567
Ireland	401	409	393	221	258	289	408	496	515	561
Israel ²	431	440	423	247	309	337	430	524	553	595
Korea	460	474	446	303	357	383	460	541	563	609
Slovenia	403	406	401	262	299	325	405	478	497	528
Soviet Union ³	434	441	428	284	328	356	433	515	547	588
Spain ⁴	430	439	421	250	305	334	435	522	541	567
Taiwan	456	466	445	254	321	359	458	553	576	627
United States ⁵	446	451	441	235	292	328	453	543	567	605
Populations with exclusions or low participation										
England ⁶	438	441	435	245	300	329	445	529	554	604
Italy, Emilia-Romagna ⁶	459	465	454	293	345	371	460	547	569	626
Portugal ⁷	394	402	387	233	280	306	395	480	499	549
Scotland ⁶	433	434	432	248	314	339	436	515	538	568
Canadian populations										
British Columbia	455	455	455	269	336	368	463	531	551	590
New Brunswick-English	429	429	429	223	273	319	440	516	542	579
Ontario-English	434	437	431	242	296	334	443	521	544	581
Ontario-French	402	402	403	255	294	321	401	480	502	545
Quebec-English	438	443	434	259	312	339	443	530	549	594
Quebec-French	437	439	434	283	329	358	441	512	531	567

¹Four out of 10 provinces.

²Hebrew-speaking schools.

³Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.

⁴Regions except Cataluña; Spanish-speaking schools.

⁵Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

⁶Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

⁷Restricted grades.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

Table 18-2 Distribution of proficiency scores of 13-year-olds on science assessment, by country: 1991

Country	Proficiency scores			Percentile scores						
	Total	Male	Female	1st	5th	10th	Median	90th	95th	99th
Comprehensive populations										
Canada ¹	533	539	527	384	434	460	534	606	628	670
France	532	540	524	370	417	442	534	611	639	677
Hungary	553	563	544	386	436	467	555	639	665	717
Ireland	510	521	499	334	391	418	511	594	616	668
Israel ²	534	543	527	379	426	449	536	614	635	676
Italy, Emilia-Romagna ³	537	545	529	384	432	459	538	612	632	672
Jordan	473	475	470	292	342	375	480	557	584	628
South Korea	571	580	559	395	457	490	575	648	670	710
Scotland ⁴	530	535	525	363	416	441	532	611	631	674
Slovenia	537	544	530	398	434	461	539	615	638	671
Soviet Union ⁴	541	546	535	383	438	465	545	612	629	661
Spain ⁵	525	531	519	380	428	453	524	596	617	663
Switzerland ⁶	562	573	551	408	467	491	566	637	662	701
Taiwan	563	567	560	339	420	463	572	655	673	715
United States ³	521	530	513	334	410	436	523	601	627	665
Populations with exclusions or low participation										
Brazil, Fortaleza ⁷	426	439	416	279	313	333	425	520	542	589
Brazil, Sao Paulo ⁸	454	469	442	305	333	354	454	545	578	629
China ⁹	526	535	517	355	411	439	528	608	638	683
England ¹⁰	532	537	528	358	415	443	535	615	639	685
Portugal ^{3,7}	506	517	497	339	391	418	509	589	614	654
Canadian populations										
Alberta	554	564	544	407	456	483	556	624	643	683
British Columbia	548	552	545	407	453	479	552	613	636	676
Manitoba-English	531	536	525	356	417	445	533	611	634	671
Manitoba-French	522	533	514	359	426	449	524	594	613	652
New Brunswick-English	521	527	515	344	406	441	525	597	616	657
New Brunswick-French	510	511	509	354	399	430	513	585	607	650
Newfoundland	521	530	512	361	413	441	522	601	624	663
Nova Scotia	532	537	527	364	428	453	534	609	631	668
Ontario-English	526	531	520	378	426	453	526	595	622	669
Ontario-French	497	503	491	345	401	422	496	572	590	630
Quebec-English ³	535	543	528	386	436	463	536	611	637	675
Quebec-French	544	551	536	403	449	475	543	614	638	675
Saskatchewan-English	538	544	531	379	435	464	540	611	635	676
Saskatchewan-French	517	521	513	380	440	460	513	585	608	639

¹Nine out of 10 provinces.² Hebrew-speaking schools.³ Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.⁴ Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.⁵ Regions except Cataluña; Spanish-speaking schools.⁶ Fifteen out of 26 cantons.⁷ In-school population, restricted grades.⁸ Restricted grades.⁹ Twenty out of 29 provinces and independent cities; in-school population, restricted grades.¹⁰ Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, 1992.

Table 19-1 SAT test-takers as a percentage of high school graduates, percentage of test-takers who are minorities, SAT mean scores, standard deviations, and percent scoring over 600: 1972–93

Year	Number of high school graduates ¹	SAT test-takers			Total mean	Verbal			Mathematics		
		Number ¹	As a percent of high school graduates ²	Percent minority		Mean	Standard deviation	Percent scoring 600 or higher	Mean	Standard deviation	Percent scoring 600 or higher
(in thousands)											
1972	3001	1023	34.1	—	937	453	111	11	484	115	17
1973	3036	1015	33.4	—	926	445	108	10	481	113	16
1974	3073	985	32.1	—	924	444	110	10	480	116	17
1975	3133	996	31.8	—	906	434	109	8	472	115	15
1976	3148	1000	31.8	15.0	903	431	110	8	472	120	17
1977	3155	979	31.0	16.1	899	429	110	8	470	119	16
1978	3127	989	31.6	17.0	897	429	110	8	468	118	15
1979	3117	992	31.8	17.1	894	427	110	7	467	117	15
1980	3043	992	32.6	17.9	890	424	110	7	466	117	15
1981	3020	994	32.9	18.1	890	424	110	7	466	117	14
1982	2995	989	33.0	18.3	893	426	110	7	467	117	15
1983	2888	963	33.3	18.9	893	425	109	7	468	119	16
1984	2767	965	34.9	19.7	897	426	110	7	471	119	17
1985	2677	977	36.5	20.0	906	431	111	7	475	119	17
1986	2643	1001	37.9	—	906	431	110	8	475	121	17
1987	2694	1080	40.1	21.8	906	430	111	8	476	122	18
1988	2773	1134	40.9	23.0	904	428	109	7	476	120	17
1989	2727	1088	39.9	25.3	903	427	111	8	476	121	18
1990	2587	1026	39.7	26.6	900	424	111	7	476	123	18
1991 ³	2505	1033	41.2	28.0	896	422	111	7	474	123	17
1992 ³	2505	1034	41.3	28.5	899	423	112	7	476	123	18
1993 ⁴	2534	1044	41.2	30.0	902	424	113	7	478	125	19

—Not available.

¹Includes public and private schools.

²The ratio of the number of individuals taking the SAT in the year to the number of high school graduates in the same year expressed as a percentage.

³Data for percentage taking the SAT have been revised from previously published figures.

⁴Number of public high school graduates is based on state estimates.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors, 1972–1993*. (Copyright © 1993 by College Entrance Examination Board. All rights reserved.). U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 98.

Table 19-2 Mean SAT scores of college-bound seniors, by section and sex: 1972-93

Year	Verbal			Mathematics			Combined		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1972	453	454	452	484	505	461	937	959	913
1973	445	446	443	481	502	460	926	948	903
1974	444	447	442	480	501	459	924	948	901
1975	434	437	431	472	495	449	906	932	880
1976	431	433	430	472	497	446	903	930	876
1977	429	431	427	470	497	445	899	928	872
1978	429	433	425	468	494	444	897	927	869
1979	427	431	423	467	493	443	894	924	866
1980	424	428	420	466	491	443	890	919	863
1981	424	430	418	466	492	443	890	922	861
1982	426	431	421	467	493	443	893	924	864
1983	425	430	420	468	493	445	893	923	865
1984	426	433	420	471	495	449	897	928	869
1985	431	437	425	475	499	452	906	936	877
1986	431	437	426	475	501	451	906	938	877
1987	430	435	425	476	500	453	906	935	878
1988	428	435	422	476	498	455	904	933	877
1989	427	434	421	476	500	454	903	934	875
1990	424	429	419	476	499	455	900	928	874
1991	422	426	418	474	497	453	896	923	871
1992	423	428	419	476	499	456	899	927	875
1993	424	428	420	478	502	457	902	930	877

NOTE: Background information needed for specific identification of college-bound seniors was not collected for the SAT before 1972. The term "college bound seniors" refers to those students from each high school graduating class who participate in the College Board Admission Testing Program, and does not include all first-year college students, nor all high school seniors.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors, 1972-1993* (Copyright © 1993 by College Entrance Examination Board. All rights reserved.)

Table 19-3 Percentage of college-bound seniors taking the SAT who scored in various ranges on the verbal and math sections of the SAT, by sex: 1993

Verbal	Score	Math		Total	
		Male	Female		
Male	Female	Total			
0	0	0	2	1	3
1	1	1	3	2	5
3	2	2	6	4	7
5	4	4	8	7	10
7	7	7	11	10	12
11	11	11	15	14	15
15	15	15	14	15	13
18	18	18	14	15	12
16	16	16	12	14	10
12	13	12	9	11	7
7	8	8	5	6	4
5	5	5	2	2	1
428	420	424	478	457	502
114	111	113	125	117	128
	Mean				
	Standard deviation				

NOTE: 800 is the highest score possible and 200 is the lowest score possible on each section of the SAT. The term "college bound seniors" refers to those students from each high school graduating class who participate in the College Board Admission Testing Program, and does not include all first-year college students, nor all high school seniors.

SOURCE: College Entrance Exam Board, *College Bound Seniors: 1993 Profile of SAT and Achievement Test Takers*.

Table 19-4 Distribution of college-bound seniors and average verbal and mathematics SAT scores, by selected characteristics: 1993

Characteristic	Percent of SAT test-takers	SAT mean score	
		Verbal	Mathematics
All students	100	424	478
Parents' income			
Less than \$10,000	6	352	416
\$10,000 - \$20,000	11	379	434
\$20,000 - \$30,000	14	404	453
\$30,000 - \$40,000	17	418	469
\$40,000 - \$50,000	13	431	483
\$50,000 - \$60,000	11	440	493
\$60,000 - \$70,000	8	449	504
\$70,000 or more	21	472	533
Parents' highest education level			
No high school diploma	5	338	408
High school diploma	37	395	445
Associate's degree	8	408	457
Bachelor's degree	27	445	502
Graduate degree	24	478	534
Locality			
Large city	23	412	468
Mid-size city	13	426	478
Small city, town	20	423	473
Suburb	32	441	498
Rural area	12	415	462

SOURCE: College Entrance Exam Board, *College Bound Seniors: 1993 Profile of SAT and Achievement Test Takers*.**Table 19-5** Average verbal and mathematics SAT scores of college-bound seniors, by race/ethnicity and parents' highest education level: 1993

Parents' highest education level	White		Black		Mexican American		Puerto Rican	
	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math
No high school diploma	374	422	308	351	332	395	323	363
High school diploma	412	459	338	374	373	426	361	396
Associate's degree	422	470	352	385	389	437	370	410
Bachelor's degree	456	509	377	409	418	464	382	431
Graduate degree	486	538	405	436	435	477	406	455
Parents' highest education level	Other Hispanic		Asian American		American Indian		Other	
	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math
No high school diploma	322	377	331	478	328	377	335	408
High school diploma	375	419	377	502	383	431	387	437
Associate's degree	388	435	396	501	394	445	402	450
Bachelor's degree	418	466	425	548	418	466	440	496
Graduate degree	430	487	484	588	443	491	481	536

SOURCE: College Entrance Exam Board, *College Bound Seniors: 1993 Profile of SAT and Achievement Test Takers*.

Note on interpreting SAT test scores

According to the College Board, the Scholastic Aptitude Test (SAT) is designed to measure verbal and quantitative reasoning skills related to academic performance in college. SAT scores are statistically controlled to maintain the same meaning from year to year, and therefore useful comparisons over time can be made.¹

Since 1941, SAT scores have been expressed relative to the performance of a group of approximately 11,000 candidates who took the test in 1941.² The mean raw score of that group was given the scaled score of 500 with a standard deviation of 100. In order that scores could be compared to this reference group, a short set of common items is included in each year's forms. Each new form is then linked with a previous form through these common items. Using some of the same items from year to year allows the forms to be equated back to the 1941 form. Therefore, a score of 500 on any form of the SAT corresponds to the mean of the 1941 group. Likewise a score of 600 falls one standard deviation above the mean of the 1941 group, and a score of 400 falls one standard deviation below the mean of the 1941 group.³

The decline or rise of test scores depends on many factors. Changes can involve variations in the composition of the test-takers. For example, between 1963 and 1970, a significant SAT score decline occurred. Because of a continuing increase in the proportion of high school graduates going to college over this period, the group of test-takers became progressively less selective, and this likely was a major factor in the score decline.⁴ The College Board notes that the relationship between SAT test scores and students' characteristics are "complex and interdependent."⁵ For example, educational, demographic, and socioeconomic factors might influence test scores. However, while these factors may be related, they are not necessarily causal. Moreover, changes in test scores can also be related to variations in performance among similar types of test-takers.

Standard Deviation Units

Performance on the SAT can be measured in a

number of ways. Changes in standard deviation units is one useful metric. Standard deviation units indicate how scores, on average, deviated from the mean. Since the standard deviation is measured on a *common scale* across different tests, it can also be used to compare score changes on a variety of measures.⁶

Once changes in scores across measures have been noted, the significance of these changes should be considered. Some have considered a decline of one standard deviation to be significant. This designation, however, is arbitrary.⁷ In *Investment in Learning*, Howard Bowen provides some guidelines for describing changes in standard deviation units (SDUs).⁸

Estimated changes as expressed in SDUs	Descriptive judgment
+ .75 or above	Extreme increase
+ .40 to .74	Large increase
+ .20 to .39	Moderate increase
+ .10 to .19	Small increase
- .09 to + .09	No change
- .10 to - .19	Small decline
- .20 to - .39	Moderate decline
- .40 to - .74	Large decline
- .75 or below	Extreme decline

Changes in standard deviation units are calculated using the following formula:

$$\frac{\mu_1 - \mu_2}{\sqrt{\frac{1}{2}(\sigma_1^2 + \sigma_2^2)}}$$

where μ_1 and μ_2 are the mean scores in years 1 and 2, respectively, and σ_1 and σ_2 are the standard deviations of scores in years 1 and 2, respectively.

For example, table 19-1 indicates that between 1980 and 1985 SAT mean verbal scores increased 7 points, and between 1980 and 1987 mean mathematics scores increased 10 points.

Applying the above formula, the following

standard deviation units are produced.

Verbal: $431-424/110.5 = +.063$

Math: $476-466/119.5 = +.084$

According to Bowen's template, the changes in standard deviation units suggest no significant change in scores in this period. Using the same calculation, the decline in verbal and mathematics scores from 1972 to 1993 were $-.259$ and $-.050$, respectively — moderate and not significant declines.

NOTES:

1. College Entrance Examination Board. *National Report: College Bound Seniors*, 1991.
2. Anastasi, Anne. *Psychological Testing*. MacMillan, Fifth edition, 1982, p. 90.
3. College Entrance Examination Board. *National Report: College Bound Seniors*, 1991.
4. College Entrance Examination Board. *On Further Examination: Report of the Advisory Panel on the Scholastic Aptitude Test Score Decline*, 1977.
5. College Entrance Examination Board, *National Report: College Bound Seniors*, 1991.
6. The Congress of the United States, Congressional Budget Office. *Trends in Educational Achievement*, April, 1986.
7. Adelman, Clifford. *The Standardized Test Scores of College Graduates, 1964-1982*. National Institute of Education, 1985, p.11.
8. Bowen, Howard. *Investment in Learning*. Jossey-Bass, 1977.

Table 20-1 Average document and quantitative literacy of adults, by highest level of educational attainment and race/ethnicity: 1992

Race/ ethnicity	Total	Highest level of educational attainment							
		0-8 yrs	9-12 yrs, no diploma	GED	High school diploma	Some college, no degree	2-year college degree	4-year college degree	Graduate/ professional degree
Document literacy									
Total	267	170	227	264	264	290	299	314	326
White	280	191	238	272	271	297	305	320	330
Black	230	151	207	235	235	261	263	279	285
Hispanic	213	131	197	236	242	263	288	285	306
Quantitative literacy									
Total	271	169	227	268	270	295	307	322	334
White	287	195	242	277	279	304	313	329	338
Black	224	140	197	235	232	258	267	280	285
Hispanic	212	128	196	240	240	265	286	286	312

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey, 1993*.

Table 20-2 Average document and quantitative literacy of adults, by age and race/ethnicity: 1992

Race/ ethnicity	Total	Age					
		16-18	19-24	25-39	40-54	55-64	65 and over
Document literacy							
Total	267	274	280	282	278	249	217
White	280	287	295	300	292	262	226
Black	230	248	251	245	226	201	173
Hispanic	213	237	238	216	208	187	151
Quantitative literacy							
Total	271	268	277	283	286	261	227
White	287	283	293	303	301	275	240
Black	224	236	241	239	226	203	163
Hispanic	212	230	234	214	212	195	144

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey, 1993*.

Table 20-3 Percentage of adults reaching each of five literacy levels for prose, document and quantitative literacy, by race/ethnicity: 1992

Literacy scale and race/ethnicity	Literacy proficiency level				
	1	2	3	4	5
Prose					
Total	21	27	32	17	3
White	14	25	36	21	4
Black	38	37	21	4	*
Hispanic	49	26	19	6	*
Document					
Total	23	28	31	15	3
White	16	27	34	19	3
Black	43	36	18	3	*
Hispanic	49	26	18	5	*
Quantitative					
Total	22	25	31	17	4
White	14	24	35	21	5
Black	46	34	17	3	*
Hispanic	50	25	19	5	*

* Percentage less than 0.5.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey, 1993*.

Note on adult literacy proficiency levels and scale scores

For the National Adult Literacy Survey (NALS), literacy was defined based on three types of skills: prose, document and quantitative literacy. Tasks were developed to measure these various literacy skills, and scales were created to report ability levels. Tasks that measure each type of skill were assigned a difficulty value based on a scale that ranges from 0 to 500. The prose literacy scale contained 41 tasks with difficulty values that range from 149 to 468; the document literacy scale contained 81 tasks with difficulty values that range from 69 to 396; and the quantitative literacy scale contained 39 tasks with difficulty values that range from 191 to 436. Literacy scale scores were placed on the same 0-500 scale by determining a person's ability to correctly answer questions of various difficulty values. The scores were then converted into proficiency levels that range 1 through 5. Five divisions along the scales were created by making cutpoints 50 points apart along the continuous scale. A person's skill level was determined by first deriving a score based on the difficulty values of the questions answered correctly compared to the difficulty values of the questions answered incorrectly, and then mapping this score onto the proficiency levels. Adults included in level 1 were those who could consistently succeed at level 1 tasks, but not at level 2 tasks, as well as those who could not consistently succeed at level 1 tasks and those who were not literate enough in English to take the test at all. Adults in levels 2 through 4 were consistently able to succeed at tasks at their proficiency level, but not at tasks for the next more difficult level. Adults in level 5 are consistently able to succeed at level 5 tasks. Below is a description of the three literacy scales and the tasks required at each proficiency level:

Prose literacy. Prose refers to any written text such as editorials, news stories, poems and fiction, and can be broken down into two types: Expository prose and narrative prose. Expository prose consists of printed information that defines, describes, or informs, such as newspaper stories or written instructions. Narrative prose tells a story. Prose varies in its length, density, and structure (e.g., use of section headings or topic sentences for paragraphs).

Prose literacy tasks include locating all the information requested, integrating information from various parts of a passage of text, and writing new information related to the text.

Prose Level 1 (Difficulty values 0–225). Level 1 prose literacy tasks required a person to read a short passage of text and locate a single piece of information that is identical to or synonymous with the information given in the question. If plausible but incorrect information was present in the text, it tended not to be located near the correct information.

Prose Level 2 (Difficulty values 226–275). Prose literacy tasks at level 2 required a person to locate a single piece of information in the text, compare and contrast easily identifiable information based on criteria provided in the question, or integrate two or more pieces of information, when distractors were present or when low level inferences were required.

Prose Level 3 (Difficulty values 276–325). Prose literacy tasks at level 3 required a person to match literal or synonymous information in the text with that requested in the question, to integrate multiple pieces of information from dense or lengthy text, or to generate a response based on information that could be easily identified in the text. Distracting information was present, but was not located near the correct information.

Prose Level 4 (Difficulty values 326–375). Prose literacy tasks at level 4 required a person to search through text and match multiple features, and to integrate or synthesize multiple pieces of information from complex or lengthy passages. More complex inferences were required, and conditional information had to be taken into consideration for these tasks.

Prose Level 5 (Difficulty values 376–500). Prose literacy tasks at level 5 required a person to search through text and match multiple features contained in dense text with a number of plausible distractors, to compare and contrast complex information, or to generate new information making high-level inferences or using specialized background knowledge.

Document literacy. Documents are short forms or graphically displayed information found in everyday life, including job applications, payroll

forms, transportation schedules, maps, tables and graphs. Document literacy tasks included locating a particular intersection on a street map, using a schedule to choose the appropriate bus, or entering information on an application form.

Document Level 1 (Difficulty values 0–225).

Document literacy tasks at level 1 required a person to locate information based on a literal match to the question or to enter information from personal knowledge into a document. Little, if any, distracting information was present.

Document Level 2 (Difficulty values 226–275).

Document literacy tasks at level 2 required the reader to match a piece of information either when several distractors were present or when low-level inferences were required. Tasks at this level also asked the reader to cycle through information in a document or to integrate information from various parts of a document.

Document Level 3 (Difficulty values 276–325).

Document literacy tasks at level 3 required a person to integrate multiple pieces of information from one or more documents. Other tasks asked readers to cycle through complex tables or graphs and locate particular features. The displays contained information that was irrelevant or inappropriate to the task.

Document Level 4 (Difficulty values 326–372).

Document literacy tasks at level 4 required a person to perform multiple-feature matches, cycle through documents, and integrate information, all of which required high-level inferences. Many of these tasks required readers to provide numerous responses but did not designate how many responses were needed. Conditional information was also present in the tasks at this level and had to be taken into account by the reader.

Document Level 5 (Difficulty values 376–500).

Document literacy tasks at level 5 required a person to search through complex displays that contained multiple distractors, to make high-level text-based inferences, and to use specialized knowledge. Tasks required readers to integrate information, compare and contrast data points and to summarize the results.

Quantitative literacy. Quantitative information may be displayed visually in graphs or charts or in numerical form using whole numbers,

fractions, decimals, percentages, or time units (hours and minutes). These quantities appeared in both prose and document form. Quantitative literacy refers to locating quantities, integrating information from various parts of a document, determining the necessary arithmetic operation, and performing that operation. Quantitative literacy tasks included balancing a checkbook, completing an order form and determining the amount of interest paid on a loan.

Quantitative Level 1 (Difficulty values 0–225).

Quantitative literacy tasks at level 1 required a person to perform single, relatively simple arithmetic operations, such as addition, when the question included the numbers to be used and the arithmetic operation to be performed.

Quantitative Level 2 (Difficulty values 226–275).

Quantitative literacy tasks at level 2 required a person to locate numbers by matching the required information with that given, infer the necessary arithmetic operation, or perform an arithmetic operation when the tasks specified the numbers and the operation to be performed. The quantities could be easily located in the text, and the operation could be determined from the format of the material.

Quantitative Level 3 (Difficulty levels 276–325).

Quantitative literacy tasks at level 3 required a person to locate numbers by matching the required information with that given, infer the necessary arithmetic operation and perform arithmetic operations on two or more numbers, or to solve a problem, when the numbers must be located in the text or document. The required operation(s) could be determined from the arithmetic-relation terms used in the question.

Quantitative Level 4 (Difficulty values 326–375).

Quantitative literacy tasks at level 4 required a person to perform two or more sequential arithmetic operations or a single arithmetic operation, when the quantities could be found in different displays, or when the operations had to be inferred from semantic information given or drawn from prior knowledge.

Quantitative Level 5 (Difficulty values 376–500).

Quantitative literacy tasks at level 5 required a person to perform multiple arithmetic operations sequentially, when the features of the problem had to be extracted from text; or when background knowledge was required to determine the quantities or operations needed.

Note on educational attainment

The Current Population Survey, which is used for *Indicators 21, 5, 34, 33*, and others, changed the questions used to determine a respondent's educational attainment beginning in 1992. Prior to 1992, the questions were: 1) "What is the highest grade or year of regular school ... has ever attended?" and 2) "Did .. complete the grade?" There were 19 response categories for none through grade 8; 1st through 4th year of high school, and 1st through 6th year of college.

If a respondent attended, for example, grade 12 but did not complete it, it was assumed he or she had completed grade 11. If the highest grade respondents had completed was 9, 10, or 11, they were classified as high school dropouts. If it was 12 or greater, they were considered as high school graduates. If it was 4th year of college or greater, they were considered to be college graduates.

Beginning in 1992, the two questions were changed to a single question: "What is the highest level of school ... has completed or the highest degree ... has received?" In the new response categories several of the lower levels have been collapsed into a single summary category such as "1st, 2nd, 3rd, or 4th grades." At the high school level a new category "12th grade, no diploma" was added. The biggest change was in the categories for high school completion and beyond. They are:

- High school graduate—high school diploma or equivalent (for example, GED)
- Some college but no degree
- Associate's degree in college—Academic program
- Associate's degree in college—Occupational or vocational program
- Bachelor's degree (For example: BA, AB, BS)
- Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA)
- Professional School Degree (For example: MD, DDS, DVM, LLB, JD)
- Doctoral degree (For example: PhD, EdD)

The new question puts more emphasis on credentials received beginning at the high school level and it puts less emphasis on the level attended or completed in college if that attendance did not lead to a credential.

These changes created some uncertainty about the comparability of measures, such as high school completion rates and college completion rates, over time.

High school completion. The earlier education attainment question did not deal explicitly with high school equivalency certificates. So it is possible that a person who attended grade 10, dropped out without completing it, and later took the GED test and received a high school equivalency credential would not have been counted as a high school graduate. The new question, however, explicitly treats these people as high school graduates. Since 1988, an additional question was added to the October Current Population Survey which explicitly asked respondents whether they had taken the GED. The vast majority of those who responded "yes" were classified as high school graduates using the attainment question.

The earlier education attainment question treated people who completed grade 12 as high school graduates. However, the new question added a new response category called "12th grade, no diploma" and these respondents were not treated as graduates. However, the number of people in this category has been very small. In summary, it appears that the change has had minor effects on measured high school completion rates.

College completion. With the increasing prevalence of people taking more than four years to finish college, i.e. receive a bachelor's degree, some analysts worried that the college completion rate based on "4th year or higher of college completed" would overstate the bachelor's degree (or higher) completion rate. However, the college completion rates among 25- to 29-year-olds in 1992 and 1993 using the new question are very similar to the completion rates in 1990 and 1991 using the old questions.

In summary, it appears that the change has had a very small effect on measured college completion rates.

Some college. With the new question, someone who attends college for only a few months should respond "Some college," but with the old questions they should have responded "Attended first year of college and did not complete it." In the past, the calculation of the percentage of the population with 1 to 3 years of college excluded these people. However, with the new question, the information to do so is not available, and those with only a few months of college are included in the category of "Some college." So, in principle, the percentage of people with "Some college" or an associate's degree would be larger than the percentage with 1 to 3 years of college. In summary, it does not appear useful to compare the percentage which "Some college or an associate's degree" with the percentage which completed "1 to 3 years of college."

Indicators 33 and 34 use labor force statistics for the civilian population and annual earnings for wage and salary workers with different levels of educational attainment. The discussion above suggests that the "high school graduate with no further education" category based on the new items is larger than before because it includes equivalency graduates but smaller than before because it excludes those who completed "12th grade, no diploma" and those with only a few months in college. The latter group are included in the "1 to 3 years of college" category. Nevertheless, the employment and earnings of the respondents added and dropped from each category are similar to each other and so the net effect of the misclassification on employment rates and average annual earnings are likely to be minor. For this reason, it was decided that it would be useful to continue the series, that is to compare the employment rates and average annual earnings of recent cohorts with "Some college or an associate's degree" to older cohorts who completed "1 to 3 years of college."

For further information on this issue see Kominski, Robert and Paul M. Siegel "Measuring education in the Current Population Survey." *Monthly Labor Review*, September 1993.

Table 22-1 Percentage of the population who have completed secondary and higher education, by sex, country, and age: 1991

Country	Both sexes		Male		Female	
	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education
25-64 years old						
Large countries						
United States	83.3	23.6	82.8	26.0	83.7	21.3
Japan*	69.7	13.3	70.9	21.5	68.5	5.2
Germany	81.8	11.2	89.4	14.5	74.1	7.8
United Kingdom	65.3	9.6	71.6	12.4	59.2	6.8
France	50.5	9.7	54.6	10.8	46.6	8.7
Italy	28.2	6.1	30.3	7.0	26.2	5.2
Canada	75.7	16.7	75.5	18.7	75.9	14.8
Other countries						
Australia	55.7	10.1	63.0	12.3	48.3	8.0
Austria	67.3	6.7	77.4	8.0	57.3	5.4
Belgium	43.2	9.6	45.4	12.5	40.9	6.6
Denmark	59.7	12.1	63.7	12.8	55.6	11.4
Finland	59.9	9.9	59.8	11.6	60.1	8.3
Ireland	40.2	8.0	37.4	9.5	43.0	6.5
Netherlands	56.3	6.2	62.5	8.5	49.9	3.8
New Zealand	55.6	10.2	62.1	12.5	49.4	7.9
Norway	79.1	12.3	80.2	14.7	78.1	10.0
Portugal*	7.8	4.0	7.5	4.7	8.1	3.3
Spain	21.8	9.9	24.7	10.7	19.1	9.1
Sweden	69.1	13.0	68.2	13.9	70.1	12.1
Switzerland	80.7	7.0	86.8	9.6	74.6	4.5
25-34 years old						
Large countries						
United States	86.1	23.7	85.7	23.5	86.5	23.8
Japan*	90.6	22.9	89.3	34.2	91.8	11.5
Germany	89.3	11.5	91.7	12.7	86.7	10.3
United Kingdom	79.2	11.7	80.7	13.6	77.6	9.8
France	65.9	11.6	67.3	11.7	64.5	11.5
Italy	43.1	6.6	42.3	6.7	43.8	6.4
Canada	86.0	17.5	84.6	18.0	87.3	17.1
Other countries						
Australia	63.8	12.7	67.7	13.6	60.0	11.8
Austria	79.0	23.7	85.7	23.5	86.5	23.8
Belgium	57.8	13.0	56.5	14.8	59.1	11.1
Denmark	71.5	11.9	70.7	11.5	72.3	12.3
Finland	81.0	11.1	79.1	12.2	82.9	10.0
Ireland	54.4	9.1	49.6	9.5	59.1	8.6
Netherlands	66.7	6.9	67.1	8.5	66.4	5.2
New Zealand	58.9	11.7	64.4	13.4	53.6	10.2
Norway	88.3	12.1	87.2	12.3	89.3	11.9
Portugal	12.6	5.9	11.0	5.9	14.2	6.0
Spain	40.2	16.3	40.7	14.9	39.7	17.8
Sweden	84.0	12.1	82.4	12.4	85.7	11.9
Switzerland	87.6	8.3	90.3	10.5	84.9	6.1

Table 22-1 Percentage of the population who have completed secondary and higher education, by sex, country, and age: 1991—Continued

Country	Both sexes		Male		Female	
	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education
35-44 years old						
Large countries						
United States	87.7	27.5	87.4	29.9	88.1	25.3
Japan*	77.0	14.5	77.0	23.6	77.0	5.4
Germany	87.0	14.8	91.9	18.5	81.9	11.0
United Kingdom	79.2	11.7	80.7	13.6	77.6	9.8
France	68.7	11.8	75.4	15.1	62.1	8.5
Italy	55.5	11.2	59.7	12.1	51.4	10.4
Canada	81.9	19.8	81.8	21.8	82.1	17.9
Other countries						
Australia	61.5	12.7	69.1	15.7	53.9	9.8
Austria	70.1	8.9	78.9	9.9	61.3	7.9
Belgium	48.5	10.8	50.2	13.8	46.7	7.8
Denmark	63.3	14.9	67.0	15.1	59.4	14.6
Finland	66.7	12.2	65.7	13.7	67.8	10.6
Ireland	41.1	9.1	39.2	11.2	43.1	7.1
Netherlands	59.4	7.8	66.3	10.8	52.2	4.8
New Zealand	58.2	12.2	64.8	14.9	51.8	9.6
Norway	83.4	15.7	83.6	19.1	83.1	12.3
Portugal*	9.6	4.7	9.5	5.6	9.6	3.9
Spain	23.2	11.2	27.2	12.5	19.3	10.0
Sweden	77.1	16.2	75.5	17.0	78.8	15.3
Switzerland	84.0	8.0	89.7	10.6	78.2	5.3
45-54 years old						
Large countries						
United States	81.2	23.2	81.0	28.1	81.4	18.7
Japan*	59.6	9.1	62.4	15.8	56.9	2.5
Germany	80.0	10.9	88.7	15.4	71.1	6.1
United Kingdom	57.7	7.6	66.6	10.9	48.9	4.4
France	44.9	9.8	50.5	11.5	39.4	8.0
Italy	20.0	5.0	23.7	6.4	16.4	3.6
Canada	67.9	16.4	68.8	20.1	67.1	12.7
Other countries						
Australia	53.5	8.5	62.6	11.2	43.9	5.6
Austria	63.3	5.1	75.1	7.9	51.6	2.4
Belgium	37.0	8.1	41.5	12.1	32.5	4.2
Denmark	55.2	11.9	61.0	13.5	49.2	10.3
Finland	49.6	9.5	50.2	11.4	49.0	7.5
Ireland	32.9	7.3	30.8	9.4	35.0	5.2
Netherlands	49.7	5.4	58.4	7.9	40.7	2.8
New Zealand	51.0	7.4	58.1	10.0	43.8	4.8
Norway	75.3	12.6	77.4	15.9	73.0	9.1
Portugal*	6.1	3.0	6.4	4.2	5.8	1.9
Spain	12.4	6.5	16.2	8.5	8.7	4.6
Sweden	61.1	13.6	59.7	14.8	62.6	12.4
Switzerland	77.5	6.7	84.4	9.5	70.2	3.7

*1989 data.

NOTE: In the United States completing secondary education is defined as completing the 12th grade or a GED; completing higher education is defined as completing 4 or more years of college.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project.

Table 23-1 Average vocational course units completed by public high school graduates, by vocational education category, sex, race/ethnicity, parents' highest education level, and urbanicity of school: 1969, 1982, 1987, and 1992

Characteristic	Total vocational				Consumer and home-maker education				General labor market preparation				Specific labor market preparation			
	1969	1982	1987	1992	1969	1982	1987	1992	1969	1982	1987	1992	1969	1982	1987	1992
Total	3.7	4.6	4.4	3.8	0.5	0.7	0.6	0.5	1.1	1.0	0.9	0.7	2.1	2.9	2.9	2.5
Sex																
Male	3.4	4.6	4.5	4.0	0.1	0.3	0.3	0.4	0.9	1.0	0.9	0.7	2.4	3.4	3.3	2.9
Female	3.9	4.6	4.4	3.6	0.9	1.0	0.9	0.7	1.2	1.1	1.0	0.7	1.8	2.6	2.6	2.2
Race/ethnicity																
White	3.4	4.5	4.5	3.7	0.4	0.6	0.6	0.5	1.0	1.0	0.9	0.7	2.0	2.9	3.0	2.5
Black	4.8	4.8	4.5	4.0	0.7	0.9	0.7	0.7	1.6	1.0	1.0	0.7	2.5	2.9	2.8	2.5
Hispanic	5.1	5.3	4.3	3.8	0.4	0.9	0.6	0.5	1.9	1.2	1.0	0.8	2.8	3.2	2.7	2.6
Asian	3.8	3.1	2.9	3.2	0.2	0.3	0.3	0.4	1.6	0.9	0.7	0.5	2.0	1.9	1.9	2.3
American Indian	—	5.1	4.7	4.8	—	0.5	0.6	0.6	—	1.1	0.9	0.7	—	3.5	3.2	3.5
Parents' highest education level																
Didn't finish high school	—	5.3	—	4.5	—	0.8	—	0.7	—	1.1	—	0.8	—	3.4	—	3.0
High school graduate	—	5.1	—	4.6	—	0.8	—	0.7	—	1.1	—	0.8	—	3.2	—	3.0
Some college	—	4.1	—	3.9	—	0.5	—	0.5	—	1.0	—	0.7	—	2.5	—	2.6
College graduate	—	3.1	—	2.5	—	0.4	—	0.4	—	0.8	—	0.5	—	1.9	—	1.7
Urbanicity of school																
Urban	—	4.2	—	3.5	—	0.6	—	0.4	—	0.9	—	0.7	—	2.7	—	2.4
Suburban	—	4.4	—	3.4	—	0.6	—	0.5	—	1.0	—	0.6	—	2.8	—	2.3
Rural	—	5.2	—	4.5	—	0.9	—	0.7	—	1.2	—	0.8	—	3.2	—	3.0

—Not available.

NOTE: Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course. For descriptions of academic, vocational, and personal use courses, see the supplemental note for Indicator 23.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *The 1969 Study of Academic Growth and Prediction*, 1992 High School and Beyond Transcript Study, 1987 NAEP High School Transcript Studies, and the National Education Longitudinal Study of 1988 (Transcript Study, 1992).

Table 23-2 Average number of course units completed by public high school graduates, by curriculum area, parents' highest education level, and urbanicity of school: 1982 and 1992

Characteristic	Total units		Academic		Vocational		Personal use	
	1982	1992	1982	1992	1982	1992	1982	1992
Parents' highest education level								
Didn't finish high school	21.3	23.5	13.3	16.2	5.3	4.5	2.6	2.7
High school graduate	21.4	23.5	13.7	16.4	5.1	4.6	2.7	2.6
Some college	21.6	24.0	14.9	17.3	4.1	3.9	2.7	2.8
College graduate	21.9	24.4	16.2	19.2	3.1	2.5	2.6	2.7
Urbanicity of school								
Urban	21.2	23.9	14.3	17.6	4.2	3.5	2.6	2.8
Suburban	21.5	23.9	14.4	17.7	4.4	3.4	2.7	2.8
Rural	21.5	24.0	13.8	16.9	5.2	4.5	2.5	2.5

NOTE: Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course. For descriptions of academic, vocational, and personal use courses, see the supplemental note for Indicator 23.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992 High School and Beyond Transcript Study, and the National Education Longitudinal Study of 1988 (Transcript Study, 1992).

Note on academic, vocational, and personal use courses

In this indicator Carnegie units are divided among 3 curriculum areas: Academic, vocational, and personal use. Within each area, courses included are:

Academic: **Mathematics** (basic, general, applied, pre-algebra, algebra I, geometry, advanced/other, advanced calculus); **Science** (survey, biology, chemistry, physics); **English** (survey, literature, composition, speech); **Social Studies** (American history, World history, American government, humanities/other); **Fine Arts** (fine arts and crafts, music, drama/dance); **Foreign Languages** (survey, English for speakers of other languages, years 1–4 by language).

Vocational: **Consumer and Homemaking Education**; **General Labor Market Preparation** (typewriting 1, introductory industrial arts, work experience/career exploration, general labor market skills); **Specific Labor Market Preparation** (agriculture/renewable resources, business, marketing and distribution, health occupations, occupational home economics, trade and industry, technical and communications).

Personal Use: **General skills**; **Health** (physical education); **Religion**; **Military Science**.

SOURCE: U.S. Department of Education, National Assessment of Vocational Education Statistics. *The Secondary School Taxonomy*, 1989.

Table 24-1 Percentage of high school graduates taking 4 units in English, 3 units in social studies, 3 units in science, 3 units in math, and 0.5 units in computer science¹: 1982, 1987, 1990, and 1992

Characteristic	1982	1987	1990	1992	Percentage point change			
					1982-87	1987-90	1990-92	1982-92
Total	2.1	16.3	22.7	29.4	14.2	6.4	6.7	27.2
Sex								
Male	2.9	18.4	23.9	28.1	15.4	5.5	4.3	25.2
Female	1.4	14.4	21.6	30.6	13.0	7.2	9.0	29.2
Race/ethnicity								
White	2.5	17.2	22.7	29.6	14.8	5.5	6.9	27.1
Black	1.1	11.7	25.1	27.6	10.6	13.3	2.5	26.5
Hispanic	0.7	8.6	20.3	28.7	7.9	11.7	8.4	28.0
Asian	6.0	28.1	27.8	32.2	22.1	-0.3	4.5	26.3
American Indian	0.6	—	—	22.1	—	—	—	21.5
Urbanicity (1982,1992)								
Urban	1.7	—	—	32.7	—	—	—	31.0
Suburban	2.7	—	—	27.3	—	—	—	24.7
Rural	1.5	—	—	29.3	—	—	—	27.8
Urbanicity (1987,1990)								
Big city	—	13.2	22.9	—	—	9.7	—	—
Urban fringe	—	18.7	22.9	—	—	4.2	—	—
Medium city	—	13.7	21.6	—	—	7.9	—	—
Small place	—	16.6	22.7	—	—	6.1	—	—
Control of school								
Public	2.1	15.5	22.4	28.7	13.5	6.9	6.3	26.6
Private	1.1	23.5	25.4	36.0	22.5	1.9	10.6	34.9
Parents' highest education level								
Didn't finish high school	1.2	—	—	32.2	—	—	—	31.0
High school graduate	1.2	—	—	28.1	—	—	—	26.9
Some college	2.8	—	—	28.8	—	—	—	26.0
College graduate	4.2	—	—	29.6	—	—	—	25.4

—Not available.

¹This course of study was recommended in *A Nation at Risk* for all high school students.

²Due to the use of a different editing procedure, the statistics shown for 1982 differ slightly from previously published figures.
SOURCE: U.S. Department of Education, National Center for Education Statistics, *The 1990 High School Transcript Study Tabulations, 1993* (based on the High School and Beyond Transcript Study and the 1987 and 1990 NAEP High School Transcript Studies), and the National Education Longitudinal Study Transcripts, 1992.

Table 24-2 Percentage of high school graduates taking 4 units in English, 3 units in social studies, 3 units in science, 3 units in math, 0.5 units in computer science, and 2 units in foreign language¹: 1982, 1987, 1990, and 1992

Characteristic	1982 ²	1987	1990	1992	Percentage point change			
					1982-87	1987-90	1990-92	1982-92
Total	1.6	12.0	17.3	23.3	10.4	5.2	6.0	21.7
Sex								
Male	2.0	13.3	17.7	21.0	11.2	4.4	3.3	19.0
Female	1.2	10.9	16.9	25.5	9.7	6.0	8.7	24.3
Race/ethnicity								
White	1.9	12.7	18.1	23.7	10.8	5.3	5.6	21.8
Black	0.7	8.3	14.4	21.9	7.6	6.1	7.6	21.2
Hispanic	0.3	5.5	15.7	20.0	5.2	10.2	4.3	19.7
Asian	5.2	24.3	23.8	29.4	19.1	-0.5	5.6	24.2
American Indian	0.6	—	—	11.4	—	—	—	10.8
Urbanicity (1982,1992)								
Urban	1.3	—	—	26.5	—	—	—	25.2
Suburban	2.0	—	—	23.4	—	—	—	21.4
Rural	1.3	—	—	20.6	—	—	—	19.3
Urbanicity (1987,1990)								
Big city	—	10.9	19.0	—	—	8.1	—	—
Urban fringe	—	15.4	19.3	—	—	3.9	—	—
Medium city	—	10.6	18.2	—	—	7.6	—	—
Small place	—	10.7	15.5	—	—	4.8	—	—
Control of school								
Public	1.5	11.4	16.9	22.4	9.9	5.5	5.6	21.0
Private	1.3	18.3	21.8	31.5	17.0	3.5	9.7	30.2
Parents' highest education level								
Didn't finish high school	1.0	—	—	25.0	—	—	—	24.0
High school graduate	1.2	—	—	22.1	—	—	—	20.9
Some college	2.1	—	—	22.9	—	—	—	20.8
College graduate	3.4	—	—	23.5	—	—	—	20.1

—Not available.

¹This course of study was recommended in *A Nation at Risk* for high school students planning to attend college.

²Due to the use of a different editing procedure, the statistics shown for 1982 differ slightly from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *The 1990 High School Transcript Study Tabulations, 1993*, (based on the High School and Beyond Transcript Study and the 1987 and 1990 NAEP High School Transcript Studies), and the National Education Longitudinal Study Transcripts, 1992.

Table 25-1 Percentage of high school graduates taking selected mathematics and science courses, by sex: 1982, 1987, 1990, and 1992

Mathematics and science courses (credits)	1982*			1987			1990			1992		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Mathematics												
Any mathematics (1.00)	99.0	99.4	98.7	99.4	99.3	99.4	99.6	99.4	99.7	99.6	99.3	99.9
Remedial/below grade level math (1.00)	32.5	35.9	29.5	24.9	26.7	23.2	23.6	25.7	21.7	17.4	19.5	15.4
Algebra I (1.00)	68.4	66.4	70.4	76.3	75.3	77.2	77.3	75.6	78.8	79.4	80.0	78.9
Algebra II (0.50)	36.9	37.5	36.3	47.1	45.8	48.4	49.2	47.8	50.5	56.1	54.0	58.1
Geometry (1.00)	48.4	48.3	48.5	61.5	61.2	61.7	64.7	63.9	65.4	70.4	69.0	71.7
Trigonometry (0.50)	12.2	13.3	11.2	19.0	20.3	17.8	18.4	18.4	18.3	21.1	21.4	20.8
Analysis/pre-calculus (0.50)	5.8	6.1	5.5	12.8	14.0	11.6	13.5	14.3	12.9	17.2	16.8	17.6
Calculus (1.00)	4.3	4.7	4.0	6.2	7.7	4.7	6.6	7.7	5.6	10.1	10.3	9.8
AP calculus (1.00)	1.4	1.4	1.4	3.4	4.0	2.8	4.2	5.1	3.4	5.5	5.7	5.4
Algebra II and geometry (1.50)	29.1	30.1	28.2	42.4	41.5	43.3	44.0	43.0	45.0	50.1	48.6	51.6
Algebra II, geometry, and trigonometry (2.00)	7.4	8.5	6.3	14.7	15.2	14.1	12.5	12.7	12.4	14.5	14.7	14.4
Algebra II, geometry, trigonometry, and calculus (3.00)	0.8	1.1	0.5	2.4	2.9	1.9	2.2	2.5	1.8	2.7	2.6	2.8
Science												
Any science (1.00)	97.6	97.5	97.7	98.7	98.4	99.0	99.4	99.2	99.7	99.6	99.5	99.7
Biology (1.00)	78.7	76.5	80.6	88.3	87.0	89.7	91.6	90.4	92.7	93.0	91.9	94.2
AP/honors biology (1.00)	6.7	6.2	7.2	2.8	2.8	2.7	5.0	4.5	5.4	5.7	5.8	5.7
Chemistry (1.00)	31.6	32.4	30.9	44.8	45.9	43.7	49.6	48.8	50.4	55.5	54.2	56.8
AP/honors chemistry (1.00)	2.6	3.1	2.1	3.4	4.0	2.8	3.5	4.2	2.9	4.0	4.3	3.7
Physics (1.00)	13.5	17.9	9.4	19.5	24.6	14.8	21.5	25.5	17.8	24.7	28.2	21.4
AP/honors physics (1.00)	0.9	1.2	0.5	1.7	2.5	0.9	2.1	2.6	1.6	2.9	4.0	1.9
Engineering (1.00)	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.4	0.3
Astronomy (0.50)	0.2	0.3	0.1	1.0	1.1	0.8	1.3	1.5	1.1	0.7	0.9	0.6
Geology (0.50)	11.4	12.7	10.2	14.9	15.6	14.1	25.3	26.2	24.5	18.4	18.8	18.0
Biology and chemistry (2.00)	28.6	28.4	28.9	43.0	43.7	42.3	48.2	47.2	49.1	53.9	52.2	55.6
Biology, chemistry, and physics (3.00)	9.8	12.5	7.4	16.8	20.8	12.9	18.9	22.1	16.0	21.6	24.4	18.9

*Due to the use of a different editing procedure, the statistics shown for 1982 differ slightly from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *The 1990 High School Transcript Study Tabulations, 1993* (based on the 1987 and 1990 NAEP High School Transcript Studies), High School and Beyond Transcript Study, and the National Education Longitudinal Study Transcripts, 1992.

Table 25-2 Percentage of high school graduates taking selected mathematics and science courses, by race/ethnicity: 1982, 1987, 1990, and 1992

Mathematics and science courses (credits)	1982*					1987				
	White	Black	Hispanic	Asian	American Indian	White	Black	Hispanic	Asian	American Indian
Mathematics										
Any mathematics (1.00)	99.1	99.6	98.6	100.0	96.6	99.3	99.5	99.4	100.0	99.4
Remedial/below grade level math (1.00)	27.0	54.4	48.5	18.8	52.6	20.6	46.5	42.5	16.3	40.7
Algebra I (1.00)	71.1	61.1	59.9	67.4	54.1	77.7	70.7	73.1	68.5	78.0
Algebra II (0.50)	40.5	26.2	22.5	55.0	20.0	51.9	32.4	30.2	67.2	28.5
Geometry (1.00)	53.9	30.3	29.0	64.3	26.3	65.1	44.0	40.2	81.4	48.4
Trigonometry (0.50)	13.8	6.3	6.8	25.7	7.7	20.9	10.9	9.9	42.1	6.5
Analysis/pre-calculus (0.50)	6.7	2.1	3.0	15.1	0.7	13.5	5.1	7.4	39.6	7.5
Calculus (1.00)	5.0	1.4	1.6	13.1	1.2	5.9	2.3	3.6	29.8	3.2
AP calculus (1.00)	1.7	0.3	0.3	5.9	0.0	2.8	1.4	2.6	24.0	1.3
Algebra II and geometry (1.50)	33.0	17.0	14.4	40.3	13.6	47.0	28.6	24.3	62.4	23.5
Algebra II, geometry, and trigonometry (2.0)	8.5	2.9	4.2	12.9	3.1	16.9	8.0	7.4	31.1	3.5
Algebra II, geometry, trigonometry, and calculus (3.00)	0.9	0.2	0.5	2.0	0.0	2.3	1.2	2.2	14.5	1.0
Science										
Any science (1.00)	97.7	98.6	95.9	97.1	98.4	98.7	98.7	98.5	99.4	98.6
Biology (1.00)	80.1	75.3	73.2	83.5	65.5	89.2	86.2	85.4	91.5	88.8
AP/honors biology (1.00)	7.5	4.5	3.5	13.1	5.1	2.8	1.5	1.6	4.3	0.9
Chemistry (1.00)	34.7	22.5	16.7	51.9	34.1	47.7	29.8	29.4	69.9	30.1
AP/honors chemistry (1.00)	2.9	1.6	1.3	5.8	0.9	3.5	1.2	2.3	13.9	0.8
Physics (1.00)	15.3	6.8	5.5	35.8	6.9	20.9	10.1	9.8	47.1	11.5
AP/honors physics (1.00)	0.9	0.8	0.4	3.5	0.0	1.7	0.4	0.8	5.7	1.8
Engineering (1.00)	0.2	0.2	0.1	0.0	0.0	0.1	0.4	0.1	0.4	0.0
Astronomy (0.50)	0.2	0.2	0.3	0.0	0.0	0.9	0.3	0.8	0.7	0.7
Geology (0.50)	12.0	8.7	9.6	7.9	9.1	14.4	18.8	11.8	13.3	13.4
Biology and chemistry (2.00)	31.6	20.2	15.2	47.2	19.1	46.0	28.6	28.2	66.0	27.8
Biology, chemistry, and physics (3.00)	11.2	4.7	3.7	28.6	4.7	17.9	8.8	8.2	42.4	8.4
1990										
Mathematics and science courses (credits)										
Mathematics										
Any mathematics (1.00)	99.7	98.7	99.8	99.9	100.0	99.7	99.1	99.8	100.0	100.0
Remedial/below grade level math (1.00)	20.0	35.4	38.3	19.9	37.7	14.6	30.9	24.2	14.5	35.2
Algebra I (1.00)	77.2	77.6	81.4	71.6	72.2	79.6	78.0	84.4	71.9	80.8
Algebra II (0.50)	52.4	39.0	38.6	59.5	47.3	59.2	40.9	46.9	60.8	42.1
Geometry (1.00)	67.2	56.3	54.4	72.1	54.5	72.6	60.4	62.9	77.1	53.6
Trigonometry (0.50)	19.6	14.1	11.0	35.2	15.6	22.5	13.0	15.2	31.3	10.0
Analysis/pre-calculus (0.50)	15.0	6.2	7.3	25.5	8.5	17.9	12.6	10.6	33.9	3.0
Calculus (1.00)	7.0	2.8	3.9	18.6	6.1	10.7	6.9	4.7	20.1	1.4
AP calculus (1.00)	4.3	1.2	3.0	15.6	4.2	5.8	2.5	2.2	16.1	1.3
Algebra II and geometry (1.50)	47.2	32.9	34.5	53.2	37.8	53.1	35.0	41.9	55.5	35.7
Algebra II, geometry, and trigonometry (2.0)	13.6	8.1	8.6	21.5	10.3	15.9	6.8	10.9	18.2	5.9
Algebra II, geometry, trigonometry, and calculus (3.00)	2.3	1.1	1.5	6.5	3.2	3.0	0.9	1.2	5.4	0.6
Science										
Any science (1.00)	99.5	99.0	99.3	99.8	99.5	99.5	100.0	99.7	100.0	100.0
Biology (1.00)	92.0	91.0	90.3	90.5	91.1	93.5	92.2	91.2	93.4	84.5
AP/honors biology (1.00)	5.1	3.8	2.4	6.4	3.2	6.5	3.2	2.4	6.8	5.0
Chemistry (1.00)	52.3	40.3	38.8	64.1	38.6	58.0	45.9	42.6	67.4	32.9
AP/honors chemistry (1.00)	3.8	2.5	1.2	7.7	4.8	4.2	2.3	2.5	9.1	1.8
Physics (1.00)	23.1	14.5	13.0	38.4	18.9	25.9	17.6	15.7	41.6	13.3
AP/honors physics (1.00)	2.1	0.7	1.0	5.9	2.7	2.9	1.4	2.4	9.2	0.6
Engineering (1.00)	0.1	0.1	0.0	0.0	0.0	0.3	0.2	0.1	0.5	0.0
Astronomy (0.50)	1.4	0.4	1.1	0.7	2.2	1.0	0.1	0.1	0.1	0.0
Geology (0.50)	28.3	15.8	14.2	15.6	30.6	19.3	17.6	11.5	16.6	29.7
Biology and chemistry (2.00)	50.9	39.6	36.8	60.5	37.6	56.5	44.2	40.5	65.4	31.2
Biology, chemistry, and physics (3.00)	20.7	12.1	10.2	33.8	16.0	22.6	15.5	12.8	38.2	10.8

*Due to the use of a different editing procedure, the statistics shown for 1982 differ slightly from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *The 1990 High School Transcript Study Tabulations, 1993* (based on the 1987 and 1990 NAEP High School Transcript Studies), High School and Beyond Transcript Study, and the National Education Longitudinal Study Transcripts, 1992.

Table 25-3 Percentage of high school graduates taking selected mathematics and science courses, by control of school: 1982, 1987, 1990, and 1992

Mathematics and science courses (credits)	1982*		1987		1990		1992	
	Public	Private	Public	Private	Public	Private	Public	Private
Mathematics								
Any mathematics (1.00)	98.9	99.8	99.3	99.9	99.5	99.8	99.6	100.0
Remedial/below grade level math (1.00)	34.5	18.4	26.8	7.1	25.0	9.8	18.3	9.4
Algebra I (1.00)	66.5	76.0	75.5	84.0	76.4	85.7	79.0	83.6
Algebra II (0.50)	34.9	52.1	45.0	67.5	47.8	63.1	54.5	71.2
Geometry (1.00)	44.9	71.0	58.9	85.8	62.5	85.5	68.6	86.6
Trigonometry (0.50)	11.1	19.0	18.0	28.4	17.5	27.3	19.5	36.2
Analysis/pre-calculus (0.50)	5.1	11.3	11.7	23.4	12.3	25.4	15.1	37.2
Calculus (1.00)	3.6	18.6	5.7	11.1	6.3	9.7	8.8	21.3
AP calculus (1.00)	1.2	6.2	3.2	5.6	3.9	7.1	5.2	8.7
Algebra II and geometry (1.50)	26.7	45.6	40.2	63.4	42.5	58.6	48.7	62.9
Algebra II, geometry, and trigonometry (2.00)	6.9	12.8	14.2	19.0	12.4	14.1	13.8	21.4
Algebra II, geometry, trigonometry, and calculus (3.00)	0.7	4.2	2.5	1.6	2.3	1.0	2.8	1.4
Science								
Any science (1.00)	97.4	99.3	98.6	99.9	99.4	99.9	99.5	100.0
Biology (1.00)	77.1	90.9	87.5	96.4	91.1	97.0	92.5	97.7
AP/honors biology (1.00)	6.6	9.2	2.2	8.1	5.1	3.9	4.9	13.8
Chemistry (1.00)	29.6	42.2	42.0	70.9	47.9	67.0	53.1	78.6
AP/honors chemistry (1.00)	2.5	5.2	3.2	5.0	3.7	2.1	4.0	3.9
Physics (1.00)	12.7	21.9	18.5	29.2	20.4	31.6	22.4	46.3
AP/honors physics (1.00)	0.8	0.3	1.4	4.7	1.9	3.2	2.6	5.7
Engineering (1.00)	0.2	0.0	0.1	0.0	0.1	0.1	0.3	0.0
Astronomy (0.50)	0.3	0.0	1.1	0.3	1.3	0.7	0.8	0.7
Geology (0.50)	12.0	11.0	15.2	11.6	25.6	22.1	19.1	11.3
Biology and chemistry (2.00)	26.5	38.7	40.2	69.3	46.5	65.3	51.4	77.3
Biology, chemistry, and physics (3.00)	9.1	15.3	15.9	25.2	17.9	28.3	19.3	43.4

*Due to the use of a different editing procedure, the statistics shown for 1982 differ slightly from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *The 1990 High School Transcript Study Tabulations, 1993* (based on the 1987 and 1990 NAEP High School Transcript Studies), 1992 High School and Beyond Transcript Study, and the National Education Longitudinal Study Transcripts, 1992.

Table 25-4 Percentage of high school graduates taking selected mathematics and science courses, by urbanicity of school: 1982 and 1992

Mathematics and science courses (credits)	1982			1992		
	Urban	Suburban	Rural	Urban	Suburban	Rural
Mathematics						
Any mathematics (1.00)	98.6	99.2	99.0	99.7	99.5	99.8
Remedial/below grade math (1.00)	36.1	29.1	35.8	17.8	15.8	19.3
Algebra I (1.00)	67.6	70.1	66.4	78.6	79.2	80.5
Algebra II (0.50)	36.2	38.8	34.2	56.7	56.0	55.7
Geometry (1.00)	47.0	52.7	42.6	74.9	72.6	63.6
Trigonometry (0.50)	11.8	14.8	8.5	24.5	21.5	17.7
Analysis/pre-calculus (0.50)	4.7	7.3	4.1	22.4	18.1	11.8
Calculus (1.00)	3.5	5.2	3.4	10.8	11.6	7.3
AP calculus (1.00)	1.0	1.9	0.9	7.3	6.1	3.2
Algebra II and geometry (1.50)	27.6	31.6	26.0	51.9	50.5	48.1
Algebra II, geometry, and trigonometry (2.00)	6.9	8.6	5.8	15.5	14.0	14.4
Algebra II, geometry, trigonometry, and calculus (3.00)	0.3	1.0	0.7	1.9	2.7	3.3
Science						
Any science (1.00)	97.7	97.2	98.0	99.4	99.8	99.4
Biology (1.00)	78.2	78.6	79.1	92.7	92.6	93.8
AP/honors biology (1.00)	5.2	7.5	6.4	5.3	6.8	4.7
Chemistry (1.00)	28.5	34.1	29.6	60.0	58.3	48.0
AP/honors chemistry (1.00)	2.9	2.8	2.1	4.7	3.7	3.9
Physics (1.00)	13.5	14.6	11.6	28.8	25.0	20.9
AP/honors physics (1.00)	0.9	1.1	0.6	3.9	3.3	1.7
Engineering (1.00)	0.1	0.2	0.2	0.2	0.4	0.3
Astronomy (0.50)	0.3	0.3	0.0	0.6	0.4	1.4
Geology (0.50)	11.1	12.0	10.6	15.6	21.7	16.2
Biology and chemistry (2.00)	26.1	30.8	26.7	58.7	56.3	46.7
Biology, chemistry, and physics (3.00)	9.7	10.5	8.8	26.2	21.9	17.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992 High School and Beyond Transcript Study and the National Education Longitudinal Study Transcripts, 1992.

Table 25-5 Percentage of high school graduates taking selected mathematics and science courses, by parents' highest education level: 1982 and 1992

Mathematics and science courses (credits)	1982				1992			
	Didn't finish high school	High school graduate	Some college	College graduate	Didn't finish high school	High school graduate	Some college	College graduate
Mathematics								
Any mathematics (1.00)	98.6	100.0	99.3	99.5	99.8	99.6	99.6	99.6
Remedial/below level grade math (1.00)	38.6	34.3	26.5	17.2	19.9	17.2	16.3	17.8
Algebra I (1.00)	65.8	66.6	71.9	74.9	76.9	80.3	79.9	79.4
Algebra II (0.50)	28.1	33.4	44.1	53.1	52.1	55.2	55.8	58.6
Geometry (1.00)	38.9	47.2	56.7	69.1	68.2	69.3	69.8	72.7
Trigonometry (0.50)	7.8	13.0	16.0	20.3	20.1	20.6	21.4	21.9
Analysis/ pre-calculus (0.50)	3.2	5.4	7.4	12.5	19.1	15.4	16.0	18.9
Calculus (1.00)	2.1	1.8	5.7	8.0	9.9	9.4	9.7	10.5
AP calculus (1.00)	0.8	0.2	1.9	2.9	7.1	4.9	5.5	5.3
Algebra II and geometry (1.50)	21.0	26.2	35.5	45.1	47.0	49.0	49.8	52.3
Algebra II, geometry, and trigonometry (2.0)	4.0	8.7	10.0	12.3	13.7	14.0	14.7	15.3
Algebra II, geometry, trigonometry, and calculus (3.00)	0.3	0.0	1.3	0.7	2.5	3.0	3.0	2.2
Science								
Any science (1.00)	96.3	98.7	98.5	99.3	99.1	99.7	99.9	99.4
Biology (1.00)	76.1	73.6	82.0	87.0	91.7	93.6	92.5	93.6
AP/honors biology (1.00)	5.4	7.6	7.7	9.3	5.3	6.4	4.3	7.3
Chemistry (1.00)	22.0	25.7	38.2	52.1	53.1	54.3	55.1	57.7
AP/honors chemistry (1.00)	1.8	1.5	2.7	5.6	3.2	3.7	4.7	3.7
Physics (1.00)	8.2	13.1	16.9	23.5	23.4	23.9	23.7	26.7
AP/honors physics (1.00)	0.5	0.4	1.0	1.8	1.7	2.6	3.3	3.2
Engineering (1.00)	0.0	0.0	0.2	0.1	0.3	0.4	0.4	0.2
Astronomy (0.50)	0.1	0.0	0.3	0.2	1.6	1.0	0.6	0.5
Geology (0.50)	12.6	9.7	10.4	10.9	16.0	20.4	18.5	17.6
Biology and chemistry (2.00)	20.1	24.1	34.4	48.0	50.9	53.1	53.6	56.1
Biology, chemistry, and physics (3.00)	5.5	8.0	13.0	17.9	20.5	21.0	21.1	22.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992 High School and Beyond Transcript Study and the National Education Longitudinal Study Transcripts, 1992.

Note on high school transcript studies

Indicators 23, 24, 25, and 26 contain data from high school transcript studies conducted by the National Center for Education Statistics (NCES). Average course credits, or Carnegie units, for high school graduates are from the following studies: 1992 data are from the 1988 National Education Longitudinal Study (NELS) Second Follow-up High School Transcript Study; 1990 and 1987 data are from the 1990 and 1987 NAEP High School Transcript Studies; and 1982 data are from the High School and Beyond Transcript Study. A brief description of these studies, including descriptions of the sampled populations, follows.

The 1988 National Education Longitudinal Study (NELS) Second Follow-up High School Transcript Study was conducted for NCES by the National Opinion Research Council (NORC). Transcripts were collected for 17,281 students selected to be in the second follow-up study. From this sample, a subsample was created which is nationally representative of 1992 high school graduates. These data have not been published before.

The 1990 NAEP High School Transcript Study was conducted using methodology and techniques nearly identical to those used in the 1987 NAEP High School Transcript Study. In the spring of 1991, Westat Inc., a contractor of the U.S. Department of Education, collected transcripts from 21,607 students who graduated from high school in 1990. These students attended 330 schools that had previously been sampled for the National Assessment of Educational Progress (NAEP). The sample of schools was a nationally representative sample of schools teaching grade 12 or having 17-year-old students and was a representative sample of graduating seniors from each school.

Since the focus of the 1990 and 1987 Transcript Studies were high school graduates, schools with 17-year-olds but without 12th grade were not included in the subsample used in these analyses. Of the remaining schools, only those students who graduated were selected.

Like the 1990 study, the sample of schools for

the 1987 High School Transcript Study consisted of a nationally representative sample of 471 secondary schools selected for the 1986 NAEP for grade 11, age 17 students, of which 433 schools participated. The 1987 study was restricted to students who were in grade 11 in 1985-86. Data for 1990 and 1987 in Indicators 24 and 25 are from the NCES publication *The 1990 High School Transcript Study Tabulations*.

High School and Beyond (HS&B) was conducted for NCES by NORC. In 1982, high school transcripts were collected for members of the sophomore cohort who were selected to be in the second follow-up survey (about 12,000 transcripts). As in the 1987 and 1990 High School Transcript Studies, records were obtained from all types of high schools. However, because the 1982 High School and Beyond Study (HS&B) used a different method of identifying handicapped students than the 1990 and 1987 High School Transcript Studies, students having participated in a special education program were excluded from the tabulations in order to make the figures consistent. In order to better match the selection rules used to create the NELS Transcripts subsample, the 1982 HS&B data in Indicators 24 and 25 are based on original runs and differ slightly for data published in *The 1990 High School Transcript Study Tabulations*.

Each of the transcript studies employed the taxonomy of Classification of Secondary School Courses (CSSC), which contains approximately 1,800 course codes used to define course content and level. These studies also included additional course and student information, such as grade and credit received, grade level, graduation status, age, gender, and race/ethnicity.

SOURCE: United States Department of Education, National Center for Education Statistics, *The 1990 High School Transcript Study Tabulations*, 1993.

Table 26-1 Foreign language course units earned by all high school graduates, by student and school characteristics: 1982 and 1992

Student and school characteristics	1982					1992				
	Average number of course units	Percentage of graduates earning various number of course units				Average number of course units	Percentage of graduates earning various number of course units			
		1	2	3	4		1	2	3	4
All graduates	1.1	49.8	33.7	14.4	5.2	1.8	73.9	58.2	26.6	10.6
Sex										
Male	0.9	42.7	28.8	11.1	3.5	1.5	67.6	51.4	22.6	6.5
Female	1.2	56.5	38.4	17.4	6.8	2.0	80.3	65.1	30.6	14.7
Race/ethnicity										
White	1.2	52.2	36.6	15.9	6.0	1.8	74.4	58.9	27.9	11.5
Black	0.8	40.6	21.7	6.8	1.4	1.3	62.8	45.6	15.0	3.9
Hispanic	0.8	41.4	23.9	10.1	3.4	1.8	80.1	62.6	23.1	7.1
Asian	1.9	76.2	61.8	34.3	11.2	2.4	85.7	76.6	44.4	19.7
American Indian	0.4	22.4	14.0	4.4	1.4	0.9	49.7	34.0	6.2	1.0
SES* quartile										
Lowest	0.6	32.3	15.8	5.6	1.5	1.2	59.2	40.0	13.0	4.7
Middle	1.0	47.7	31.6	12.2	4.1	1.6	71.8	55.3	22.5	7.4
Highest	1.7	70.7	55.1	27.4	11.3	2.4	90.1	78.5	43.8	19.9
Control of school										
Public	1.0	46.1	29.6	11.9	4.0	1.7	71.7	55.8	24.4	9.9
Catholic	2.0	83.2	70.0	32.5	12.8	2.6	94.3	87.3	49.6	19.1
Other private	2.1	73.9	61.5	39.2	18.7	2.4	95.0	71.9	45.8	13.9
Urbanicity of public school										
Urban	1.2	55.2	36.5	14.8	4.0	2.0	80.2	66.4	32.5	12.0
Suburban	1.2	54.6	38.8	17.6	7.0	1.9	76.8	62.6	31.2	12.9
Rural	0.8	38.9	24.0	9.1	3.1	1.4	64.7	45.5	15.4	6.2

*Socioeconomic status.

NOTE: Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1982 High School and Beyond Transcript Study, and the National Education Longitudinal Study Transcripts, 1992.

Table 26-2 Foreign language course units earned by high school graduates who projected an educational attainment of two years of college or less in their sophomore year, by selected student and school characteristics: 1982 and 1992

Student and school characteristics	1982					1992				
	Average number of course units	Percentage of graduates earning various number of course units				Average number of course units	Percentage of graduates earning various number of course units			
		1	2	3	4		1	2	3	4
All graduates expecting to attend two years of college or less	0.6	31.9	17.1	5.3	1.6	1.0	52.5	32.8	10.4	2.9
Sex										
Male	0.4	24.0	12.7	3.6	0.8	0.9	46.3	28.3	9.4	1.9
Female	0.7	39.2	21.2	7.0	2.3	1.2	59.8	38.1	11.5	4.0
Race/ethnicity										
White	0.6	32.8	18.4	5.8	1.8	1.0	50.5	30.4	10.1	2.6
Black	0.4	25.4	11.2	1.9	0.1	0.8	44.3	26.8	6.6	2.9
Hispanic	0.6	30.8	13.5	5.0	1.6	1.5	73.2	51.2	15.4	3.2
Asian	1.2	53.7	36.1	17.3	2.3	1.5	61.8	49.2	17.0	9.5
American Indian	0.4	24.1	9.2	0.0	0.0	0.6	33.3	17.7	1.7	0.0
SES* quartile										
Lowest	0.4	25.9	10.7	3.1	0.8	1.0	50.7	32.3	9.0	3.1
Middle	0.6	32.4	19.1	5.7	1.8	1.0	52.7	32.8	11.1	2.0
Highest	0.9	45.3	27.8	9.9	2.8	1.3	63.9	42.7	12.8	5.9
Control of school										
Public	0.5	29.4	14.9	4.8	1.4	1.0	51.7	31.8	10.1	2.8
Catholic	1.4	67.1	48.4	12.9	4.6	1.8	81.8	70.8	21.3	6.0
Other private	1.0	48.6	30.0	8.8	4.0	1.2	65.0	42.1	10.8	1.9
Urbanicity of public school										
Urban	0.7	39.1	20.4	7.7	1.4	1.3	58.1	42.9	14.1	4.9
Suburban	0.7	35.7	20.2	6.0	2.1	1.1	55.0	34.9	13.0	2.6
Rural	0.4	23.4	11.4	3.4	1.0	0.8	46.5	24.6	5.4	2.0

*Socioeconomic status.

NOTE: Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1982 High School and Beyond Transcript Study and the National Education Longitudinal Study Transcripts, 1992.

Table 26-3 Foreign language course units earned by high school graduates who projected an educational attainment of a bachelor's degree or higher in their sophomore year, by selected student and school characteristics: 1982 and 1992

Student and school characteristics	1982					1992				
	Average number of course units	Percentage of graduates earning various number of course units				Average number of course units	Percentage of graduates earning various number of course units			
		1	2	3	4		1	2	3	4
All graduates expecting to attain at least a bachelor's degree	1.7	72.5	55.0	25.2	9.4	2.2	87.1	73.1	35.6	14.5
Sex										
Male	1.5	67.1	50.3	19.9	6.6	2.0	83.0	67.3	31.4	9.1
Female	1.9	77.1	59.2	29.9	11.9	2.4	90.8	78.4	39.3	19.4
Race/ethnicity										
White	1.8	74.8	58.0	26.9	10.5	2.3	88.1	74.5	37.3	15.9
Black	1.2	61.1	37.0	13.3	2.9	1.7	76.4	59.3	21.0	4.1
Hispanic	1.5	64.7	45.9	19.4	6.6	2.0	86.8	71.7	27.1	9.6
Asian	2.3	84.4	74.5	43.3	16.3	2.8	96.6	87.7	56.0	23.6
American Indian	0.8	33.3	28.2	14.4	4.6	1.5	73.2	55.3	13.5	2.5
SES* quartile										
Low	1.1	55.6	35.3	13.8	4.1	1.5	71.6	51.9	18.2	5.4
Middle	1.5	69.4	50.4	20.9	7.0	2.0	84.9	69.5	29.0	10.7
High	2.0	80.6	65.4	33.1	14.1	2.6	94.1	84.2	48.6	21.8
Control of school										
Public	1.5	69.2	50.3	21.4	7.5	2.1	85.6	71.5	32.9	13.8
Catholic	2.4	92.6	83.2	44.0	17.6	2.7	96.2	90.9	55.5	21.9
Other private	2.4	83.4	72.6	49.6	24.0	2.5	97.9	73.6	50.0	14.6
Urbanicity of public school										
Urban	1.6	73.0	54.2	21.3	5.7	2.4	91.3	77.6	41.5	15.7
Suburban	1.9	77.1	60.5	30.3	12.3	2.3	88.6	77.3	39.9	17.1
Rural	1.4	63.2	45.0	18.4	6.7	1.8	80.6	62.4	23.1	9.4

*Socioeconomic status.

NOTE: Course units refer to Carnegie units, which are a standard of measurement that represent one credit for the completion of a 1-hour per day 1-year course.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1982 High School and Beyond Transcript Study and the National Education Longitudinal Study Transcripts, 1992.

Table 27-1 Percentage distribution of field of major among students in bachelor's degree programs, by family background characteristics: Academic year 1989-90

Family background characteristics	Field of major									
	Total	Humanities	Social and behavioral sciences	Natural sciences	Com-puter science	Engineer-ing	Education	Business	Health	Other ¹
All bachelor's degree students	100.0	14.6	11.8	7.3	3.7	8.1	9.3	23.7	9.8	11.7
Parents' highest education ²										
High school graduate or less	100.0	11.5	10.1	6.2	4.0	8.4	11.1	26.7	10.8	11.2
Trade/vocational school	100.0	12.5	11.9	6.2	4.6	9.6	10.9	23.5	10.2	10.6
Some college	100.0	14.8	11.1	6.9	3.2	8.0	10.4	21.5	11.0	13.2
Bachelor's degree	100.0	14.9	12.2	7.9	3.6	8.8	7.6	25.4	8.6	11.0
Advanced degree	100.0	18.4	15.7	9.6	2.6	9.1	7.4	19.3	7.2	10.7
Father's occupation										
Professional	100.0	17.0	13.7	10.0	3.5	10.6	8.2	18.0	8.4	10.7
Executive	100.0	14.9	13.6	6.6	3.4	7.9	7.0	27.2	8.2	11.3
Marketing/sales	100.0	17.0	11.6	7.0	1.7	6.5	9.5	28.3	8.6	9.8
Administrative support	100.0	15.1	10.8	8.0	4.1	10.0	10.0	20.9	9.2	11.9
Technical	100.0	11.5	11.8	7.7	5.0	7.9	11.6	21.6	9.6	13.3
Service	100.0	10.4	14.0	7.8	4.2	9.4	9.0	23.7	10.4	11.1
Blue collar	100.0	11.5	10.5	6.4	4.0	8.6	11.7	24.2	11.3	11.9
Mother's occupation										
Professional	100.0	17.3	13.3	8.6	3.2	8.7	8.9	19.3	9.6	11.3
Executive	100.0	15.7	13.9	7.3	2.5	10.0	8.2	24.1	7.4	11.0
Marketing/sales	100.0	14.5	12.1	5.9	3.1	8.1	10.2	25.0	9.1	12.1
Administrative support	100.0	13.1	11.5	7.3	3.5	7.5	10.0	25.3	9.5	12.4
Technical	100.0	19.5	10.3	9.7	2.2	13.7	4.8	19.2	5.8	14.8
Service	100.0	13.6	10.9	8.1	4.2	8.8	10.5	22.9	9.6	11.5
Blue collar	100.0	11.7	11.2	5.5	3.5	8.0	9.3	26.5	12.5	11.9
1988 family income (dependent students) ³										
Low	100.0	14.8	11.5	8.3	4.7	8.4	9.4	22.6	8.1	12.2
Lower middle	100.0	15.7	11.5	8.3	4.0	7.9	8.3	22.7	8.8	12.8
Middle	100.0	15.4	12.0	8.7	3.2	10.0	10.9	20.2	8.0	11.6
Upper middle	100.0	15.0	10.8	8.6	3.2	8.8	8.7	23.7	9.2	12.1
Upper	100.0	16.5	16.2	8.0	2.2	7.6	5.9	23.1	7.7	12.9

¹Agriculture, architecture, journalism, communications, home economics, law, mechanic technology, social work, protective service, transportation, construction.

²Highest level attained by either parent.

³1988 adjusted gross family in quintiles. The cut-points for the quintiles are: \$0, \$16,200, \$30,100, \$43,900, and \$60,100.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table 28-1 Percentage of 1985–86 bachelor's degree recipients who took one or more courses in different subjects, by sex and race/ethnicity

Subject	Sex			Race/ethnicity				
	Total	Men	Women	White	Black	Hispanic	Asian	American Indian
Humanities	94.8	94.7	94.6	94.7	96.8	94.2	92.8	90.7
Arts	63.1	59.0	67.4	63.6	63.3	59.0	59.1	64.1
English literature/letters	86.8	87.2	86.7	87.1	85.5	89.4	83.9	78.5
Foreign language	36.1	31.9	40.2	35.6	34.4	49.8	39.2	32.4
Philosophy and religion	52.6	53.0	52.5	53.1	53.6	46.6	50.4	57.6
Area and ethnic studies	9.0	6.7	10.2	8.0	13.5	8.2	19.3	6.1
Social/behavioral sciences	95.1	94.8	95.3	95.2	97.2	93.3	89.0	96.2
Psychology	65.3	60.3	71.5	66.3	72.3	60.6	55.9	63.6
Social sciences	92.5	92.3	92.4	92.8	90.5	90.4	83.5	92.4
Economics	52.8	59.9	45.7	52.9	54.1	49.7	48.1	47.6
Geography	14.2	14.6	14.3	14.8	9.7	10.9	17.7	19.3
Political science	40.6	43.1	37.4	40.3	41.8	42.8	30.5	45.0
Sociology/anthropology	61.0	55.6	65.9	61.4	61.8	57.4	47.5	53.5
History	63.2	64.7	62.8	64.2	64.6	63.3	49.2	55.5
Social science, other	15.6	14.6	16.6	15.3	24.2	15.2	11.1	19.0
Natural sciences	91.7	93.0	90.9	92.1	88.8	88.6	92.9	93.2
Life sciences	52.9	46.6	59.9	53.9	55.7	49.1	43.8	45.5
Physical sciences	66.9	72.4	62.4	68.2	55.3	56.5	76.8	62.8
Mathematics	78.1	82.8	74.0	78.4	78.1	77.3	78.5	76.2
Calculus	37.7	48.4	28.3	38.6	26.4	32.5	52.9	30.8
Other mathematics	70.2	73.9	67.0	70.2	74.7	70.2	70.0	72.1
Computer sciences and engineering	50.7	61.0	41.8	51.3	46.9	48.4	61.2	44.8
Computer and information sciences	42.1	48.1	37.6	42.9	40.2	40.3	46.3	35.5
Engineering	17.7	27.0	8.6	17.4	14.7	16.5	32.2	18.7
Technical/professional	89.3	86.7	92.2	89.5	95.1	90.5	82.4	87.3
Education	36.3	29.5	43.6	36.8	44.2	36.5	24.1	30.2
Business/management	53.7	58.1	49.6	53.8	60.8	51.4	43.7	56.0
Other technical/professional	68.2	65.5	71.1	69.1	67.6	63.8	56.6	66.3

NOTE: This table only includes courses for which the degree-granting institution accepted or granted credits, including transferred credits.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 Survey of Recent College Graduates (Transcript Data File).

Table 28-2 Average credit hours earned in different subjects by 1985-86 bachelor's degree recipients who took one or more courses in those subjects, by sex and race/ethnicity

Subject	Sex			Race/ethnicity				
	Total	Men	Women	White	Black	Hispanic	Asian	American Indian
Total credit hours ¹	121.8	124.6	119.7	122.3	120.9	120.4	122.9	115.2
Humanities	26.8	24.8	28.7	26.8	24.7	28.5	25.8	25.0
Arts	10.3	8.5	11.4	10.2	6.8	9.4	10.1	11.1
English literature/letters	11.8	10.8	12.5	11.6	13.3	11.6	11.1	10.6
Foreign language	10.3	9.6	10.7	10.1	8.3	12.8	10.1	9.4
Philosophy and religion	8.5	10.6	7.3	9.1	8.0	8.7	7.1	6.1
Area and ethnic studies	5.6	5.1	5.5	5.0	8.1	5.4	6.1	²
Social/behavioral sciences	24.4	24.2	24.4	24.3	24.6	25.8	19.4	25.6
Psychology	8.4	7.1	9.1	8.3	7.5	9.3	6.1	7.2
Social sciences	19.1	20.2	18.1	19.1	20.5	20.4	16.6	21.7
Economics	8.5	9.1	7.9	8.5	8.1	9.8	9.0	8.4
Geography	5.1	5.8	4.5	5.2	3.7	3.6	5.7	²
Political science	7.0	7.4	6.6	7.0	7.4	7.2	5.3	9.4
Sociology/anthropology	7.2	6.6	7.5	7.0	8.2	7.8	7.2	10.0
History	7.0	7.4	6.7	7.1	7.0	7.6	6.0	8.0
Social science, other	5.3	5.2	5.3	5.3	4.8	5.6	5.1	²
Natural sciences	23.9	27.3	20.8	24.0	21.4	22.1	32.9	19.3
Life sciences	10.4	10.7	10.1	10.3	9.3	11.3	13.9	8.7
Physical sciences	12.3	14.5	10.0	12.4	10.3	11.5	15.9	10.7
Mathematics	10.5	12.1	9.0	10.5	10.6	9.7	15.7	9.7
Calculus	7.7	8.4	6.9	7.8	8.3	7.1	9.5	²
Other mathematics	7.6	8.0	7.0	7.4	8.1	7.4	10.4	7.4
Computer sciences and engineering	20.3	26.0	12.0	19.8	17.4	18.8	37.2	18.2
Computer and information sciences	9.1	9.9	8.2	8.8	11.0	8.9	17.0	8.6
Engineering	36.4	41.1	22.7	36.7	25.9	33.5	46.3	²
Technical/professional	40.4	36.9	43.9	40.7	42.0	40.1	29.5	43.9
Education	16.2	10.4	20.7	16.9	14.8	16.1	10.1	16.9
Business/management	30.4	30.3	30.4	30.1	32.9	33.1	29.3	29.1
Other technical/professional	20.4	17.4	23.2	20.4	20.0	21.0	16.0	25.3

¹Total credit hours includes credits in basic skills and uncodable subjects which are not shown separately.

²Too few cases for a reliable estimate.

NOTE: Average credit hours in a subject are computed for those students who took one or more courses in that subject. This table only includes credits accepted or granted by the degree-granting institution, including transferred credits. Credit hours are standardized to the semester system.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 Survey of Recent College Graduates (Transcript Data File).

Table 28-3 Average credit hours earned in different subjects by all 1985–86 bachelor's degree recipients, by sex and race/ethnicity

Subject	Sex			Race/ethnicity				
	Total	Men	Women	White	Black	Hispanic	Asian	American Indian
Total credit hours*	121.8	124.6	119.7	122.3	120.9	120.4	122.9	115.2
Humanities	25.4	23.5	27.2	25.4	23.9	26.8	24.0	22.7
Arts	6.5	5.0	7.6	6.5	4.3	5.6	5.9	7.1
English literature/letters	10.2	9.4	10.9	10.1	11.3	10.4	9.3	8.3
Foreign language	3.7	3.1	4.3	3.6	2.8	6.4	4.0	3.0
Philosophy and religion	4.5	5.6	3.8	4.8	4.3	4.1	3.6	3.5
Area and ethnic studies	0.5	0.3	0.6	0.4	1.1	0.4	1.2	0.8
Social/behavioral sciences	23.2	22.9	23.2	23.2	23.9	24.1	17.3	24.6
Psychology	5.5	4.3	6.5	5.5	5.4	5.7	3.4	4.6
Social sciences	17.7	18.6	16.7	17.7	18.5	18.4	13.9	20.1
Economics	4.5	5.4	3.6	4.5	4.4	4.8	4.3	4.0
Geography	0.7	0.9	0.6	0.8	0.4	0.4	1.0	1.0
Political science	2.9	3.2	2.5	2.8	3.1	3.1	1.6	4.2
Sociology/anthropology	4.4	3.7	4.9	4.3	5.0	4.4	3.4	5.4
History	4.4	4.8	4.2	4.5	4.5	4.8	2.9	4.4
Social science, other	0.8	0.8	0.9	0.8	1.2	0.8	0.6	1.1
Natural sciences	21.9	25.3	18.9	22.2	19.0	19.5	30.6	18.0
Life sciences	5.5	4.9	6.1	5.5	5.1	5.5	6.1	3.9
Physical sciences	8.2	10.5	6.2	8.4	5.7	6.5	12.2	6.7
Mathematics	8.2	10.0	6.7	8.2	8.3	7.5	12.3	7.4
Calculus	2.9	4.1	2.0	3.0	2.2	2.3	5.0	2.0
Other mathematics	5.3	5.9	4.7	5.2	6.1	5.2	7.3	5.3
Computer sciences and engineering	10.3	15.8	5.0	10.2	8.2	9.1	22.8	8.1
Computer and information sciences	3.8	4.7	3.1	3.8	4.4	3.6	7.9	3.1
Engineering	6.4	11.1	1.9	6.4	3.7	5.5	14.9	5.1
Technical/professional	36.0	32.0	40.4	36.4	39.8	36.3	24.3	38.0
Education	5.9	3.1	9.0	6.2	6.4	5.9	2.4	5.0
Business/management	16.3	17.6	15.0	16.2	20.0	17.0	12.8	16.3
Other technical/professional	13.9	11.4	16.4	14.1	13.4	13.4	9.1	16.8

*Total average credit hours includes credits in basic skills and uncodable subjects which are not shown separately.

NOTE: Average credit hours in a subject are computed for all students, both those who took courses in that subject and those who did not. This table only includes credits accepted or granted by the degree-granting institution, including transferred credits. Credit hours are standardized to the semester system.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 Survey of Recent College Graduates (Transcript Data File).

Table 29-1 Percentage distribution of associate's degrees conferred, by race/ethnicity, sex, and field of study: Academic year ending 1991

Sex, field of study, and dissimilarity index	White	Black	Hispanic	Asian	American Indian
	Both sexes				
Number	376,069	37,659	24,255	13,729	3,675
Total percent	100.0	100.0	100.0	100.0	100.0
Arts and sciences	34.0	31.4	40.0	34.9	35.5
Liberal/general studies	29.5	27.8	35.7	30.2	30.2
Other arts and sciences ¹	4.5	3.5	4.3	4.7	5.3
Technical/professional	66.0	68.6	60.0	65.1	64.5
Business	21.4	28.0	22.9	24.3	20.7
Business and management	10.7	11.2	8.5	11.5	9.4
Business administrative support	8.2	13.0	10.4	9.7	9.8
Marketing and distribution	2.5	3.8	4.0	3.2	1.5
Health	16.1	14.5	9.8	10.7	12.7
Allied health	5.6	5.3	4.3	3.7	4.4
Health sciences	10.5	9.2	5.5	7.0	8.3
Technological	11.1	10.7	10.8	14.8	9.1
Computer and information sciences	1.5	2.5	1.6	2.4	2.2
Engineering	0.5	0.4	0.4	1.1	0.6
Engineering technologies	8.8	7.7	8.4	11.0	6.0
Science technologies	0.2	0.2	0.3	0.2	0.3
Trade and industrial	4.8	3.2	4.2	6.8	5.5
Construction trades	0.4	0.3	0.3	0.7	0.9
Mechanics and repairers	1.7	1.2	1.6	2.7	2.4
Precision production	2.2	1.3	1.7	3.0	1.7
Transportation and material moving	0.6	0.4	0.5	0.5	0.5
Community services	5.4	5.9	6.0	2.5	9.2
Education	1.7	1.7	2.1	0.7	4.2
Protective services	3.0	3.0	3.2	1.2	2.7
Other community services ²	0.7	1.3	0.7	0.6	2.3
Other technical/professional	7.3	6.3	6.3	6.0	7.2
Agriculture	1.2	0.1	0.3	0.2	1.6
Home economics	2.3	3.0	2.5	3.1	1.7
Visual and performing arts	1.1	0.8	1.0	1.2	1.5
Other technical/professional ³	2.7	2.5	2.5	1.5	2.3
Dissimilarity index ⁴	—	7.2	8.2	9.6	6.1

Table 29-1 Percentage distribution of associate's degrees conferred, by race/ethnicity, sex, and field of study: Academic year ending 1991—Continued

Sex, field of study, and dissimilarity index	White	Black	Hispanic	Asian	American Indian
	Men				
Number	155,320	13,720	10,213	6,444	1,374
Total percent	100.0	100.0	100.0	100.0	100.0
Arts and sciences	33.6	34.2	38.6	33.4	34.1
Liberal/general studies	28.9	29.9	34.3	28.4	29.3
Other arts and sciences ¹	4.6	4.4	4.3	5.1	4.7
Technical/professional	66.4	65.8	61.4	66.6	65.9
Business	15.7	20.5	15.2	16.5	13.2
Business and management	10.3	11.3	8.4	9.6	8.4
Business administrative support	3.8	6.3	4.6	5.0	3.2
Marketing and distribution	1.5	2.9	2.2	1.8	1.6
Health	4.9	4.9	5.2	4.9	4.6
Allied health	2.5	3.2	3.2	2.8	2.7
Health sciences	2.4	1.6	2.0	2.1	1.9
Technological	22.6	21.7	21.2	26.1	17.6
Computer and information sciences	2.0	2.5	1.9	2.7	1.7
Engineering	1.1	0.8	0.9	2.1	1.4
Engineering technologies	19.1	18.1	17.9	21.0	14.0
Science technologies	0.3	0.3	0.4	0.2	0.4
Trade and industrial	9.4	6.9	8.3	12.0	12.4
Construction trades	0.9	0.7	0.8	1.4	2.0
Mechanics and repairers	3.8	2.9	3.6	5.4	6.1
Precision production	3.5	2.5	2.9	4.4	3.1
Transportation and material moving	1.2	0.9	1.0	0.8	1.2
Community services	7.0	6.9	7.0	3.0	9.7
Education	1.1	1.7	1.3	0.5	3.2
Protective services	5.5	4.4	5.3	2.1	4.9
Other community services ²	0.4	0.8	0.4	0.4	1.5
Other technical/professional	6.9	5.0	4.4	4.1	8.4
Agriculture	2.0	0.1	0.4	0.1	3.2
Home economics	1.7	1.5	0.9	1.7	0.9
Visual and performing arts	1.2	1.3	1.4	1.2	2.3
Other technical/professional ³	1.9	2.1	1.8	1.1	2.1
Dissimilarity index ⁴	—	5.5	5.4	6.9	7.8

Table 29-1 Percentage distribution of associate's degrees conferred, by race/ethnicity, sex, and field of study: Academic year ending 1991—Continued

Sex, field of study, and dissimilarity index	White	Black	Hispanic	Asian	American Indian
			Women		
Number	220,749	23,939	14,042	7,285	2,301
Total percent	100.0	100.0	100.0	100.0	100.0
Arts and sciences	34.3	29.7	41.1	36.2	36.4
Liberal/general studies	29.9	26.7	36.7	31.8	30.8
Other arts and sciences ¹	4.4	3.0	4.4	4.4	5.6
Technical/professional	65.7	70.3	58.9	63.8	63.6
Business	25.4	32.4	28.5	31.3	25.2
Business and management	10.9	11.2	8.6	13.2	10.1
Business administrative support	11.2	16.8	14.6	13.8	13.7
Marketing and distribution	3.3	4.3	5.3	4.3	1.4
Health	24.0	19.9	13.2	15.8	17.6
Allied health	7.7	6.4	5.1	4.5	5.4
Health sciences	16.2	13.5	8.1	11.3	12.2
Technological	3.0	4.5	3.2	4.8	4.0
Computer and information sciences	1.2	2.5	1.4	2.2	2.5
Engineering	0.1	0.1	0.1	0.3	0.1
Engineering technologies	1.5	1.8	1.4	2.1	1.2
Science technologies	0.1	0.1	0.3	0.2	0.2
Trade and industrial	1.6	1.0	1.1	2.2	1.3
Construction trades	0.0	0.0	0.0	0.1	0.2
Mechanics and repairers	0.1	0.2	0.1	0.3	0.2
Precision production	1.2	0.7	0.8	1.7	0.9
Transportation and material moving	0.2	0.2	0.2	0.2	0.1
Community services	4.2	5.4	5.3	2.1	9.0
Education	2.1	1.7	2.6	0.9	4.7
Protective services	1.3	2.1	1.6	0.4	1.4
Other community services ²	0.9	1.6	1.0	0.8	2.8
Other technical/professional	7.6	7.1	7.7	7.6	6.4
Agriculture	0.7	0.1	0.2	0.2	0.7
Home economics	2.6	3.8	3.7	4.3	2.2
Visual and performing arts	1.1	0.6	0.8	1.2	1.1
Other technical/professional ³	3.3	2.7	3.0	1.9	2.4
Dissimilarity index ⁴	—	9.6	11.3	10.3	8.0

—Not applicable.

¹Area and ethnic studies; foreign languages; letters; life sciences; mathematics, multi/interdisciplinary studies; philosophy and religion; theology; physical science; psychology; and social sciences.

²Library science; parks and recreation; and public affairs/social services.

³Architecture and environmental design; communications; consumer and personal services; law; and military sciences.

⁴The dissimilarity index represents the percentage of students in a minority group who would have to change majors in order for the group to have the identical field distribution as white students of the same sex. It is calculated as the sum of the absolute differences between the percentage of minority and white students majoring in each field divided by 2. The fields used to derive the index are: arts and sciences, business, health, technological, trade and industrial, community services, and other technical/professional.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 252 (based on IPEDS/HEGIS surveys of degrees conferred).

Table 29-2 Percentage distribution of associate's degrees conferred, by race/ethnicity, sex, and field of study: Academic year ending 1987

Sex, field of study, and dissimilarity index	White	Black	Hispanic	Asian	American Indian
	Both sexes				
Number	361,819	35,466	19,345	11,794	3,196
Total percent	100.0	100.0	100.0	100.0	100.0
Arts and sciences	28.8	25.3	34.1	28.3	30.3
Liberal/general studies	24.7	22.2	30.2	23.1	25.4
Other arts and sciences ¹	4.1	3.1	3.9	5.2	4.9
Technical/professional	71.2	74.7	65.9	71.7	69.7
Business	25.8	32.6	24.1	23.9	25.3
Business and management	11.3	13.3	9.1	10.2	10.5
Business administrative support	10.6	14.9	11.7	11.7	11.8
Marketing and distribution	3.9	4.4	3.3	1.9	3.0
Health	14.9	13.8	10.6	8.7	12.6
Allied health	5.5	5.2	4.5	3.5	5.1
Health sciences	9.4	8.6	6.1	5.2	7.5
Technological	13.4	12.2	14.4	24.3	9.2
Computer and information sciences	2.0	2.7	2.1	3.4	1.5
Engineering	0.9	0.7	1.7	3.3	0.9
Engineering technologies	10.3	8.6	10.3	17.3	6.8
Science technologies	0.2	0.1	0.2	0.2	0.1
Trade and industrial	5.3	4.2	4.6	7.9	6.3
Construction trades	0.5	0.3	0.5	0.7	1.2
Mechanics and repairers	2.5	2.4	1.8	3.9	2.4
Precision production	2.1	1.3	2.0	3.0	2.4
Transportation and material moving	0.3	0.2	0.2	0.2	0.2
Community services	5.0	6.2	6.8	2.7	8.5
Education	1.6	1.8	2.1	1.1	4.2
Protective services	2.7	3.2	4.1	1.1	2.5
Other community services ²	0.6	1.2	0.6	0.5	1.7
Other technical/professional	6.8	5.7	5.3	4.3	7.9
Agriculture	1.4	0.2	0.6	0.2	1.6
Home economics	2.1	2.7	2.1	1.8	1.7
Visual and performing arts	1.3	0.9	1.0	0.9	3.4
Other technical/professional ³	2.0	1.9	1.6	1.4	1.2
Dissimilarity index ⁴	—	8.0	8.2	13.4	7.1

Table 29-2 Percentage distribution of associate's degrees conferred, by race/ethnicity, sex, and field of study: Academic year ending 1987—Continued

Sex, field of study, and dissimilarity index	White	Black	Hispanic	Asian	American Indian
			Men		
Number	158,126	13,956	8,764	6,172	1,263
Total percent	100.0	100.0	100.0	100.0	100.0
Arts and sciences	28.5	26.9	32.7	25.6	32.5
Liberal/general studies	24.1	23.3	29.0	20.5	27.8
Other arts and sciences ¹	4.4	3.6	3.7	5.1	4.7
Technical/professional	71.5	73.1	67.3	74.4	67.5
Business	19.0	24.5	15.6	16.0	15.9
Business and management	11.1	13.8	9.0	8.4	9.2
Business administrative support	5.3	7.2	4.9	6.4	5.0
Marketing and distribution	2.7	3.5	1.8	1.1	1.7
Health	3.8	4.3	4.3	2.8	4.1
Allied health	2.1	2.6	2.7	1.8	2.6
Health sciences	1.6	1.7	1.5	1.0	1.5
Technological	26.0	23.5	26.8	37.2	18.4
Computer and information sciences	2.4	3.0	2.4	3.2	1.6
Engineering	1.9	1.6	3.5	5.4	1.8
Engineering technologies	21.3	18.8	20.6	28.4	14.9
Science technologies	0.3	0.1	0.3	0.2	0.2
Trade and industrial	10.2	9.2	8.6	12.7	13.8
Construction trades	1.0	0.8	1.1	1.3	2.9
Mechanics and repairers	5.4	5.6	3.9	6.7	5.7
Precision production	3.2	2.4	3.2	4.4	4.9
Transportation and material moving	0.6	0.4	0.4	0.2	0.2
Community services	6.0	7.1	8.6	2.9	7.1
Education	1.0	1.6	1.4	0.9	2.6
Protective services	4.6	4.7	6.6	1.8	3.7
Other community services ²	0.4	0.8	0.6	0.2	0.9
Other technical/professional	6.4	4.6	3.4	2.9	8.1
Agriculture	2.2	0.3	0.7	0.3	2.9
Home economics	1.6	1.0	0.5	1.1	1.3
Visual and performing arts	1.1	1.0	0.8	0.5	2.7
Other technical/professional ³	1.6	2.3	1.3	0.9	1.2
Dissimilarity index ⁴	—	7.1	8.1	13.6	10.7

Table 30-1 Number of bachelor's degrees conferred, by race/ethnicity and field of study: Selected academic years ending 1977-91

Race/ethnicity and field of study	1977	1979	1981	1985	1987	1989	1990	1991
White								
Total degrees	805,186	799,617	807,319	826,106	841,820	859,699	884,372	904,061
Humanities and social/behavioral sciences	271,490	249,100	238,522	224,152	237,293	262,603	283,700	301,301
Humanities	130,327	120,305	118,286	113,084	118,620	129,701	138,485	147,675
Social and behavioral sciences	141,163	128,795	120,236	111,068	118,673	132,902	145,215	153,626
Natural and computer sciences and engineering	127,177	132,701	141,380	172,388	165,533	144,772	137,615	134,410
Natural sciences	80,313	73,523	67,967	64,629	61,994	55,845	54,935	56,402
Life sciences	47,623	42,705	37,276	31,807	31,279	28,874	29,551	30,994
Physical sciences	20,189	20,650	21,246	20,660	17,159	14,492	13,410	13,500
Mathematics	12,501	10,168	9,445	12,162	13,556	12,479	11,974	11,908
Computer sciences and engineering	46,864	59,178	73,413	107,759	103,539	88,927	82,680	78,008
Computer and information sciences	5,473	7,384	12,565	31,321	30,251	22,366	19,674	17,903
Engineering	41,391	51,794	60,848	76,438	73,288	66,561	63,006	60,105
Technical/professional	406,519	417,816	427,417	429,566	438,994	452,324	463,057	468,350
Education	125,148	108,949	93,724	77,531	78,216	88,276	95,816	100,325
Business and management	132,814	150,759	174,198	196,915	205,118	208,325	209,497	206,856
Health sciences	51,513	55,746	56,790	55,501	55,410	51,053	49,756	50,041
Other technical/professional	97,044	102,362	102,705	99,619	100,250	104,670	107,988	111,128
Black								
Total degrees	58,515	60,130	60,673	57,473	56,555	58,065	61,065	65,338
Humanities and social/behavioral sciences	20,107	19,266	18,045	15,272	15,060	16,384	18,202	20,165
Humanities	6,567	7,014	6,608	6,505	6,583	7,022	7,714	8,280
Social and behavioral sciences	13,540	12,252	11,437	8,767	8,477	9,362	10,488	11,885
Natural and computer sciences and engineering	5,514	6,091	6,994	8,942	10,051	9,199	8,990	9,296
Natural sciences	3,785	3,830	3,759	3,640	3,622	3,447	3,416	3,751
Life sciences	2,413	2,487	2,269	2,045	1,932	1,942	2,017	2,154
Physical sciences	665	691	906	829	844	704	674	772
Mathematics	707	652	584	766	846	801	725	825
Computer sciences and engineering	1,729	2,261	3,235	5,302	6,429	5,752	5,574	5,545
Computer and information sciences	361	505	786	2,143	2,928	2,533	2,325	2,063
Engineering	1,368	1,756	2,449	3,159	3,501	3,219	3,249	3,482
Technical/professional	32,894	34,773	35,634	33,259	31,444	32,482	33,873	35,877
Education	12,922	11,509	9,494	5,456	4,253	4,245	4,396	4,825
Business and management	9,976	11,430	13,400	14,999	14,686	15,105	15,753	16,689
Health sciences	3,135	3,380	3,603	3,836	3,822	3,981	4,134	4,220
Other technical/professional	6,861	8,454	9,137	8,968	8,683	9,151	9,590	10,143
Hispanic								
Total degrees	18,663	20,029	21,832	25,874	26,990	29,910	32,846	36,612
Humanities and social/behavioral sciences	7,764	7,594	7,754	8,049	8,468	10,412	11,914	13,420
Humanities	3,537	3,469	3,561	3,872	4,184	4,950	5,744	6,360
Social and behavioral sciences	4,227	4,125	4,193	4,177	4,284	5,462	6,170	7,060
Natural and computer sciences and engineering	2,514	2,914	3,469	4,983	5,581	5,299	5,449	5,830
Natural sciences	1,534	1,642	1,734	1,915	1,951	1,956	1,997	2,273
Life sciences	981	1,109	1,144	1,241	1,259	1,258	1,290	1,503
Physical sciences	332	339	405	417	423	386	350	390
Mathematics	221	194	185	257	269	312	357	380
Computer sciences and engineering	980	1,272	1,735	3,068	3,630	3,343	3,452	3,557
Computer and information sciences	93	155	302	826	1,077	896	863	917
Engineering	887	1,117	1,433	2,242	2,553	2,447	2,589	2,640
Technical/professional	8,385	9,521	10,609	12,842	12,941	14,199	15,483	17,362
Education	3,050	3,029	2,847	2,533	2,223	2,281	2,868	3,510
Business and management	2,588	3,196	4,114	5,771	6,397	7,017	7,223	7,852
Health sciences	863	1,066	1,153	1,550	1,332	1,397	1,606	1,715
Other technical/professional	1,884	2,230	2,495	2,988	2,989	3,504	3,786	4,285

Table 30-1 Number of bachelor's degrees conferred, by race/ethnicity and field of study: Selected academic years ending 1977-91 — Continued

Race/ethnicity and field of study	1977	1979	1981	1985	1987	1989	1990	1991
Asian								
Total degrees	13,745	15,336	18,794	25,395	32,618	37,686	39,247	39,726
Humanities and social/behavioral sciences	4,442	4,400	4,807	5,618	7,895	10,108	11,009	10,108
Humanities	1,993	2,032	2,323	2,754	3,765	4,572	4,993	5,446
Social and behavioral sciences	2,449	2,368	2,484	2,864	4,130	5,536	6,016	6,558
Natural and computer sciences and engineering	3,358	4,303	6,211	10,650	13,631	14,178	14,359	14,777
Natural sciences	1,996	2,204	2,476	3,593	4,588	4,914	5,191	5,564
Life sciences	1,314	1,458	1,489	1,950	2,620	2,954	3,335	3,634
Physical sciences	367	425	596	763	918	931	970	1,004
Mathematics	315	321	391	880	1,050	1,029	886	926
Computer sciences and engineering	1,362	2,099	3,735	7,057	9,043	9,264	9,168	9,213
Computer and information sciences	163	262	669	2,044	2,546	2,361	2,253	2,075
Engineering	1,199	1,837	3,066	5,013	6,497	6,903	6,915	7,138
Technical/professional	5,945	6,633	7,776	9,127	11,092	13,400	13,879	14,841
Education	894	785	723	770	1,092	1,106	928	891
Business and management	2,596	3,135	3,943	5,274	6,002	7,973	8,411	9,115
Health sciences	1,018	1,087	1,312	1,310	1,577	1,710	1,888	2,028
Other technical/professional	1,437	1,626	1,798	1,773	2,421	2,611	2,652	2,807
American Indian/Alaskan Native								
Total degrees	3,319	3,404	3,593	4,246	3,971	3,954	4,393	4,513
Humanities and social/behavioral sciences	1,143	1,144	1,211	1,260	1,246	1,237	1,482	1,495
Humanities	504	470	541	612	596	611	736	734
Social and behavioral sciences	639	674	670	648	650	626	746	761
Natural and computer sciences and engineering	399	425	436	770	679	627	567	613
Natural sciences	250	252	220	318	274	259	257	295
Life sciences	157	148	137	161	147	146	133	180
Physical sciences	67	63	65	98	74	62	76	70
Mathematics	26	41	18	59	53	51	48	45
Computer sciences and engineering	149	173	216	452	405	368	310	318
Computer and information sciences	15	11	21	139	116	88	94	82
Engineering	134	162	195	313	289	280	216	236
Technical/professional	1,777	1,835	1,946	2,216	2,046	2,090	2,344	2,405
Education	707	645	569	483	452	533	596	619
Business and management	433	505	636	921	783	797	845	871
Health sciences	154	206	209	273	274	239	266	286
Other technical/professional	483	479	532	539	537	521	637	629

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1993*, table 255 (based on IPEDS/HEGIS surveys of degrees conferred).

Table 30-2 Percentage distribution of bachelor's degrees conferred, by race/ethnicity and field of study: Selected academic years ending 1977-91

Race/ethnicity and field of study	1977	1979	1981	1985	1987	1989	1990	1991
White								
Total degrees	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	33.7	31.2	29.5	27.1	28.2	30.5	32.1	33.3
Humanities	16.2	15.0	14.7	13.7	14.1	15.1	15.7	16.3
Social and behavioral sciences	17.5	16.1	14.9	13.4	14.1	15.5	16.4	17.0
Natural and computer sciences and engineering	15.8	16.6	17.5	20.9	19.7	16.8	15.6	14.9
Natural sciences	10.0	9.2	8.4	7.8	7.4	6.5	6.2	6.2
Life sciences	5.9	5.3	4.6	3.9	3.7	3.4	3.3	3.4
Physical sciences	2.5	2.6	2.6	2.5	2.0	1.7	1.5	1.5
Mathematics	1.6	1.3	1.2	1.5	1.6	1.5	1.4	1.3
Computer sciences and engineering	5.8	7.4	9.1	13.0	12.3	10.3	9.3	8.6
Computer and information sciences	0.7	0.9	1.6	3.8	3.6	2.6	2.2	2.0
Engineering	5.1	6.5	7.5	9.3	8.7	7.7	7.1	6.6
Technical/professional	50.5	52.3	52.9	52.0	52.1	52.6	52.4	51.8
Education	15.5	13.6	11.6	9.4	9.3	10.3	10.8	11.1
Business and management	16.5	18.9	21.6	23.8	24.4	24.2	23.7	22.9
Health sciences	6.4	7.0	7.0	6.7	6.6	5.9	5.6	5.5
Other technical/professional	12.1	12.8	12.7	12.1	11.9	12.2	12.2	12.3
Black								
Total degrees	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	34.4	32.0	29.7	26.6	26.6	28.2	29.8	30.9
Humanities	11.2	11.7	10.9	11.3	11.6	12.1	12.6	12.7
Social and behavioral sciences	23.1	20.4	18.9	15.3	15.0	16.1	17.2	18.2
Natural and computer sciences and engineering	9.4	10.1	11.5	15.6	17.8	15.8	14.7	14.2
Natural sciences	6.5	6.4	6.2	6.3	6.4	5.9	5.6	5.7
Life sciences	4.1	4.1	3.7	3.6	3.4	3.3	3.3	3.3
Physical sciences	1.1	1.1	1.5	1.4	1.5	1.2	1.1	1.2
Mathematics	1.2	1.1	1.0	1.3	1.5	1.4	1.2	1.3
Computer sciences and engineering	3.0	3.8	5.3	9.2	11.4	9.9	9.1	8.5
Computer and information sciences	0.6	0.8	1.3	3.7	5.2	4.4	3.8	3.2
Engineering	2.3	2.9	4.0	5.5	6.2	5.5	5.3	5.3
Technical/professional	56.2	57.8	58.7	57.9	55.6	55.9	55.5	54.9
Education	22.1	19.1	15.6	9.5	7.5	7.3	7.2	7.4
Business and management	17.0	19.0	22.1	26.1	26.0	26.0	25.8	25.5
Health sciences	5.4	5.6	5.9	6.7	6.8	6.9	6.8	6.5
Other technical/professional	11.7	14.1	15.1	15.6	15.4	15.8	15.7	15.5
Dissimilarity index*	12.7	11.2	10.8	7.7	7.7	8.7	9.1	9.2
Hispanic								
Total degrees	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	41.6	37.9	35.5	31.1	31.4	34.8	36.3	36.7
Humanities	19.0	17.3	16.3	15.0	15.5	16.5	17.5	17.4
Social and behavioral sciences	22.6	20.6	19.2	16.1	15.9	18.3	18.8	19.3
Natural and computer sciences and engineering	13.5	14.5	15.9	19.3	20.7	17.7	16.6	15.9
Natural sciences	8.2	8.2	7.9	7.4	7.2	6.5	6.1	6.2
Life sciences	5.3	5.5	5.2	4.8	4.7	4.2	3.9	4.1
Physical sciences	1.8	1.7	1.9	1.6	1.6	1.3	1.1	1.1
Mathematics	1.2	1.0	0.8	1.0	1.0	1.0	1.1	1.0
Computer sciences and engineering	5.3	6.4	7.9	11.9	13.4	11.2	10.5	9.7
Computer and information sciences	0.5	0.8	1.4	3.2	4.0	3.0	2.6	2.5
Engineering	4.8	5.6	6.6	8.7	9.5	8.2	7.9	7.2
Technical/professional	44.9	47.5	48.6	49.6	47.9	47.5	47.1	47.4
Education	16.3	15.1	13.0	9.8	8.2	7.6	8.7	9.6
Business and management	13.9	16.0	18.8	22.3	23.7	23.5	22.0	21.4
Health sciences	4.6	5.3	5.3	6.0	4.9	4.7	4.9	4.7
Other technical/professional	10.1	11.1	11.4	11.5	11.1	11.7	11.5	11.7
Dissimilarity index*	8.7	8.5	8.0	5.3	5.3	5.9	5.9	5.1

Table 30-2 Percentage distribution of bachelor's degrees conferred, by race/ethnicity and field of study: Selected academic years ending 1977-91— Continued

Race/ethnicity and field of study	1977	1979	1981	1985	1987	1989	1990	1991
Asian								
Total degrees	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	32.3	28.7	25.6	22.1	24.2	26.8	28.1	25.4
Humanities	14.5	13.2	12.4	10.8	11.5	12.1	12.7	13.7
Social and behavioral sciences	17.8	15.4	13.2	11.3	12.7	14.7	15.3	16.5
Natural and computer sciences and engineering	24.4	28.1	33.0	41.9	41.8	37.6	36.6	37.2
Natural sciences	14.5	14.4	13.2	14.1	14.1	13.0	13.2	14.0
Life sciences	9.6	9.5	7.9	7.7	8.0	7.8	8.5	9.1
Physical sciences	2.7	2.8	3.2	3.0	2.8	2.5	2.5	2.5
Mathematics	2.3	2.1	2.1	3.5	3.2	2.7	2.3	2.3
Computer sciences and engineering	9.9	13.7	19.9	27.8	27.7	24.6	23.4	23.2
Computer and information sciences	1.2	1.7	3.6	8.0	7.8	6.3	5.7	5.2
Engineering	8.7	12.0	16.3	19.7	19.9	18.3	17.6	18.0
Technical/professional	43.3	43.3	41.4	35.9	34.0	35.6	35.4	37.4
Education	6.5	5.1	3.8	3.0	3.3	2.9	2.4	2.2
Business and management	18.9	20.4	21.0	20.8	18.4	21.2	21.4	22.9
Health sciences	7.4	7.1	7.0	5.2	4.8	4.5	4.8	5.1
Other technical/professional	10.5	10.6	9.6	7.0	7.4	6.9	6.8	7.1
Dissimilarity index*	13.1	13.8	16.1	21.8	22.9	21.5	21.7	20.7
American Indian/Alaskan Native								
Total degrees	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	34.4	33.6	33.7	29.7	31.4	31.3	33.7	33.1
Humanities	15.2	13.8	15.1	14.4	15.0	15.5	16.8	16.3
Social and behavioral sciences	19.3	19.8	18.6	15.3	16.4	15.8	17.0	16.9
Natural and computer sciences and engineering	12.0	12.5	12.1	18.1	17.1	15.9	12.9	13.6
Natural sciences	7.5	7.4	6.1	7.5	6.9	6.6	5.9	6.5
Life sciences	4.7	4.3	3.8	3.8	3.7	3.7	3.0	4.0
Physical sciences	2.0	1.9	1.8	2.3	1.9	1.6	1.7	1.6
Mathematics	0.8	1.2	0.5	1.4	1.3	1.3	1.1	1.0
Computer sciences and engineering	4.5	5.1	6.0	10.6	10.2	9.3	7.1	7.0
Computer and information sciences	0.5	0.3	0.6	3.3	2.9	2.2	2.1	1.8
Engineering	4.0	4.8	5.4	7.4	7.3	7.1	4.9	5.2
Technical/professional	53.5	53.9	54.2	52.2	51.5	52.9	53.4	53.3
Education	21.3	18.9	15.8	11.4	11.4	13.5	13.6	13.7
Business and management	13.0	14.8	17.7	21.7	19.7	20.2	19.2	19.3
Health sciences	4.6	6.1	5.8	6.4	6.9	6.0	6.1	6.3
Other technical/professional	14.6	14.1	14.8	12.7	13.5	13.2	14.5	13.9
Dissimilarity index*	10.0	10.3	10.5	5.2	7.2	5.4	7.3	5.7

*The dissimilarity index represents the percentage of students in a minority group who would have to change fields in order for the group to have the identical field distribution as white students. It is calculated as the sum of the absolute differences between the percentage of minority and white students majoring in each of the fields divided by 2.

NOTE: Distributions for 1985 and later years include degrees for which missing race/ethnicity data could be imputed. The number of degrees reported in 1977 and 1979 exclude those conferred by U.S. Service Schools (0.4 percent or less of degrees).

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 255 (based on IPEDS/HEGIS surveys of degrees conferred).

Table 30-3 Minority field concentration ratio at the bachelor's degree level, by race/ethnicity and field of study: Selected academic years ending 1977-91

Race/ethnicity and field of study	1977	1979	1981	1985	1987	1989	1990	1991
Black concentration ratio								
Humanities and social/behavioral sciences	1.02	1.03	1.01	0.98	0.94	0.92	0.93	0.93
Humanities	0.69	0.78	0.74	0.83	0.83	0.80	0.81	0.78
Social and behavioral sciences	1.32	1.27	1.27	1.13	1.06	1.04	1.05	1.07
Natural and computer sciences and engineering	0.60	0.61	0.66	0.75	0.90	0.94	0.95	0.96
Natural sciences	0.65	0.69	0.74	0.81	0.87	0.91	0.90	0.92
Life sciences	0.70	0.77	0.81	0.92	0.92	1.00	0.99	0.96
Physical sciences	0.45	0.44	0.57	0.58	0.73	0.72	0.73	0.79
Mathematics	0.78	0.85	0.82	0.91	0.93	0.95	0.88	0.96
Computer sciences and engineering	0.51	0.51	0.59	0.71	0.92	0.96	0.98	0.98
Computer and information sciences	0.91	0.91	0.83	0.98	1.44	1.68	1.71	1.59
Engineering	0.45	0.45	0.54	0.59	0.71	0.72	0.75	0.80
Technical/professional	1.11	1.11	1.11	1.11	1.07	1.06	1.06	1.06
Education	1.42	1.40	1.35	1.01	0.81	0.71	0.66	0.67
Business and management	1.03	1.01	1.02	1.09	1.07	1.07	1.09	1.12
Health sciences	0.84	0.81	0.84	0.99	1.03	1.15	1.20	1.17
Other technical/professional	0.97	1.10	1.18	1.29	1.29	1.29	1.29	1.26
Hispanic concentration ratio								
Humanities and social/behavioral sciences	1.23	1.22	1.20	1.15	1.11	1.14	1.13	1.10
Humanities	1.17	1.15	1.11	1.09	1.10	1.10	1.12	1.06
Social and behavioral sciences	1.29	1.28	1.29	1.20	1.13	1.18	1.14	1.13
Natural and computer sciences and engineering	0.85	0.88	0.91	0.92	1.05	1.05	1.07	1.07
Natural sciences	0.82	0.89	0.94	0.95	0.98	1.01	0.98	1.00
Life sciences	0.89	1.04	1.13	1.25	1.26	1.25	1.18	1.20
Physical sciences	0.71	0.66	0.70	0.64	0.77	0.77	0.70	0.71
Mathematics	0.76	0.76	0.72	0.67	0.62	0.72	0.80	0.79
Computer sciences and engineering	0.90	0.86	0.87	0.91	1.09	1.08	1.12	1.13
Computer and information sciences	0.73	0.84	0.89	0.84	1.11	1.15	1.18	1.26
Engineering	0.92	0.86	0.87	0.94	1.09	1.06	1.11	1.08
Technical/professional	0.89	0.91	0.92	0.95	0.92	0.90	0.90	0.92
Education	1.05	1.11	1.12	1.04	0.89	0.74	0.81	0.86
Business and management	0.84	0.85	0.87	0.94	0.97	0.97	0.93	0.94
Health sciences	0.72	0.76	0.75	0.89	0.75	0.79	0.87	0.85
Other technical/professional	0.84	0.87	0.90	0.96	0.93	0.96	0.94	0.95

Table 30-3 Minority field concentration ratio at the bachelor's degree level, by race/ethnicity and field of study: Selected academic years ending 1977-91—Continued

Race/ethnicity and field of study	1977	1979	1981	1985	1987	1989	1990	1991
Asian concentration ratio								
Humanities and social/behavioral sciences	0.96	0.92	0.87	0.82	0.86	0.88	0.87	0.76
Humanities	0.90	0.88	0.84	0.79	0.82	0.80	0.81	0.84
Social and behavioral sciences	1.02	0.96	0.89	0.84	0.90	0.95	0.93	0.97
Natural and computer sciences and engineering	1.55	1.69	1.89	2.01	2.13	2.23	2.35	2.50
Natural sciences	1.46	1.56	1.56	1.81	1.91	2.01	2.13	2.24
Life sciences	1.62	1.78	1.72	1.99	2.16	2.33	2.54	2.67
Physical sciences	1.06	1.07	1.21	1.20	1.38	1.47	1.63	1.69
Mathematics	1.48	1.65	1.78	2.35	2.00	1.88	1.67	1.77
Computer sciences and engineering	1.70	1.85	2.19	2.13	2.25	2.38	2.50	2.69
Computer and information sciences	1.74	1.85	2.29	2.12	2.17	2.41	2.58	2.64
Engineering	1.70	1.85	2.16	2.13	2.29	2.37	2.47	2.70
Technical/professional	0.86	0.83	0.78	0.69	0.65	0.68	0.68	0.72
Education	0.42	0.38	0.33	0.32	0.36	0.29	0.22	0.20
Business and management	1.15	1.08	0.97	0.87	0.76	0.87	0.90	1.00
Health sciences	1.16	1.02	0.99	0.77	0.73	0.76	0.86	0.92
Other technical/professional	0.87	0.83	0.75	0.58	0.62	0.57	0.55	0.57
American Indian/Alaskan Native concentration ratio								
Humanities and social/behavioral sciences	1.02	1.08	1.14	1.09	1.11	1.02	1.05	0.99
Humanities	0.94	0.92	1.03	1.05	1.07	1.02	1.07	1.00
Social and behavioral sciences	1.10	1.23	1.25	1.14	1.16	1.02	1.03	0.99
Natural and computer sciences and engineering	0.76	0.75	0.69	0.87	0.87	0.94	0.83	0.91
Natural sciences	0.76	0.81	0.73	0.96	0.94	1.01	0.94	1.05
Life sciences	0.80	0.81	0.83	0.98	1.00	1.10	0.91	1.16
Physical sciences	0.81	0.72	0.69	0.92	0.91	0.93	1.14	1.04
Mathematics	0.50	0.95	0.43	0.94	0.83	0.89	0.81	0.76
Computer sciences and engineering	0.77	0.69	0.66	0.82	0.83	0.90	0.75	0.82
Computer and information sciences	0.66	0.35	0.38	0.86	0.81	0.86	0.96	0.92
Engineering	0.79	0.73	0.72	0.80	0.84	0.91	0.69	0.79
Technical/professional	1.06	1.03	1.02	1.00	0.99	1.00	1.02	1.03
Education	1.37	1.39	1.36	1.21	1.23	1.31	1.25	1.24
Business and management	0.79	0.79	0.82	0.91	0.81	0.83	0.81	0.84
Health sciences	0.73	0.87	0.83	0.96	1.05	1.02	1.08	1.14
Other technical professional	1.21	1.10	1.16	1.05	1.14	1.08	1.19	1.13

NOTE: The minority field concentration ratio is calculated as the percent of a minority group earning bachelor's degrees who majored in a selected field divided by the percent of whites earning bachelor's degrees who majored in the same field.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 255 (based on IPEDS/HEGIS surveys of degrees conferred).

**Table 31-1 Number of degrees conferred, by sex, degree level, and race/ethnicity:
Selected academic years ending 1977-91**

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990	1991
Men								
Associate's degrees								
White	178,236	156,671	151,242	157,278	158,126	150,950	154,719	155,320
Black	15,330	14,425	14,290	14,184	13,947	12,913	13,161	13,720
Hispanic	9,105	8,135	8,327	8,561	8,764	9,212	9,869	10,213
Asian or Pacific Islander	3,630	4,058	4,557	5,492	6,172	6,375	6,478	6,444
American Indian/Alaskan Native	1,216	1,069	1,108	1,198	1,263	1,325	1,434	1,374
Bachelor's degrees								
White	438,161	418,215	406,173	405,085	406,751	407,142	413,571	415,506
Black	25,147	24,659	24,511	23,018	22,499	22,363	23,264	24,326
Hispanic	10,318	10,418	10,810	12,402	12,864	13,947	14,941	16,157
Asian or Pacific Islander	7,638	8,261	10,107	13,554	17,249	19,271	19,719	20,681
American Indian/Alaskan Native	1,804	1,736	1,700	1,998	1,819	1,731	1,861	1,901
Advanced degrees*								
White	207,019	190,614	180,501	163,706	161,535	163,648	165,833	186,119
Black	10,308	9,587	8,624	7,384	7,474	7,283	7,744	9,864
Hispanic	4,544	4,069	4,493	4,729	5,072	5,052	5,461	6,581
Asian or Pacific Islander	4,439	4,831	5,419	6,796	7,453	8,815	8,836	11,061
American Indian/Alaskan Native	747	714	730	823	758	674	645	778
Master's degrees								
White	139,210	124,058	115,562	106,059	105,573	109,709	112,879	111,228
Black	7,781	7,070	6,158	5,200	5,151	5,175	5,539	5,707
Hispanic	3,268	2,786	3,085	3,059	3,330	3,328	3,588	3,667
Asian or Pacific Islander	3,123	3,325	3,773	4,842	5,238	6,050	6,002	6,319
American Indian/Alaskan Native	521	495	501	583	517	476	461	459
Doctor's degrees								
White	20,032	18,433	17,310	15,017	14,813	14,540	15,104	14,564
Black	766	734	694	561	488	490	533	582
Hispanic	383	294	277	431	439	350	423	387
Asian or Pacific Islander	540	646	655	802	795	946	871	987
American Indian/Alaskan Native	67	69	95	64	58	50	49	58
First-professional degrees								
White	47,777	48,123	47,629	42,630	41,149	39,399	37,850	37,348
Black	1,761	1,783	1,772	1,623	1,835	1,618	1,672	1,672
Hispanic	893	989	1,131	1,239	1,303	1,374	1,450	1,506
Asian or Pacific Islander	776	860	991	1,152	1,420	1,819	1,963	2,178
American Indian/Alaskan Native	159	150	134	176	183	148	135	144

**Table 31-1 Number of degrees conferred, by sex, degree level, and race/ethnicity:
Selected academic years ending 1977-91—Continued**

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990	1991
	Women							
Associate's degrees								
White	164,054	174,421	187,925	198,065	203,693	203,863	214,827	220,749
Black	17,829	20,554	21,040	21,607	21,510	21,809	22,180	23,939
Hispanic	7,531	8,134	9,473	10,846	10,581	11,169	12,347	14,042
Asian or Pacific Islander	3,414	3,460	4,093	4,422	5,622	6,156	7,000	7,285
American Indian/Alaskan Native	1,282	1,267	1,476	1,755	1,933	2,010	2,096	2,301
Bachelor's degrees								
White	369,527	384,327	401,146	421,021	435,069	452,557	470,801	488,555
Black	33,489	35,587	36,162	34,455	34,506	35,702	37,801	41,012
Hispanic	8,425	9,678	11,022	13,472	14,126	15,963	17,905	20,455
Asian or Pacific Islander	6,155	7,146	8,687	11,841	15,369	18,415	19,528	20,941
American Indian/Alaskan Native	1,522	1,674	1,893	2,248	2,152	2,223	2,532	2,612
Advanced degrees*								
White	144,315	147,314	151,174	147,075	154,458	165,204	171,976	177,801
Black	14,519	13,935	12,705	10,738	10,873	11,026	12,264	12,962
Hispanic	3,125	3,208	3,965	4,696	4,773	5,127	5,708	6,081
Asian or Pacific Islander	2,362	2,681	3,196	3,908	4,472	5,821	6,339	6,909
American Indian/Alaskan Native	511	605	626	800	754	761	810	838
Master's degrees								
White	126,851	125,302	125,654	117,569	123,297	133,047	138,810	144,058
Black	13,256	12,348	10,975	8,739	8,716	8,921	9,907	10,429
Hispanic	2,803	2,769	3,376	3,805	3,714	3,954	4,366	4,715
Asian or Pacific Islander	1,999	2,171	2,509	2,940	3,320	4,286	4,576	4,861
American Indian/Alaskan Native	446	504	533	673	587	610	638	677
Doctor's degrees								
White	6,819	7,705	8,598	8,917	9,622	10,342	10,776	10,764
Black	487	534	571	593	572	575	619	630
Hispanic	139	145	179	246	311	278	365	345
Asian or Pacific Islander	118	165	222	304	302	378	364	471
American Indian/Alaskan Native	28	35	35	55	46	35	50	44
First-professional degrees								
White	10,645	14,307	16,922	20,589	21,539	21,815	22,390	22,979
Black	776	1,053	1,159	1,406	1,585	1,530	1,738	1,903
Hispanic	183	294	410	645	748	895	977	1,021
Asian or Pacific Islander	245	345	465	664	850	1,157	1,399	1,577
American Indian/Alaskan Native	37	66	58	72	121	116	122	117

*Advanced degrees refer to master's, doctor's, and first-professional degrees.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 252, 255, 258, 261, and 264 (for 1977-1991 data) and *Race/Ethnicity Trends in Degrees Conferred by Institutions of Higher Education: 1980-81 through 1989-90*, tables 3-7 (for 1989 and 1990 data) (based on IPEDS/HEGIS surveys of degrees conferred).

Table 31-2 Index of number of degrees conferred (1981=100), by sex, degree level, and race/ethnicity: Selected academic years ending 1977-91

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990	1991
Men								
Associate's degrees								
White	117.8	103.6	100.0	104.0	104.6	99.8	102.3	102.7
Black	107.3	100.9	100.0	99.3	97.6	90.4	92.1	96.0
Hispanic	109.3	97.7	100.0	102.8	105.2	110.6	118.5	122.6
Asian or Pacific Islander	79.7	89.0	100.0	120.5	135.4	139.9	142.2	141.4
American Indian/Alaskan Native	109.7	96.5	100.0	108.1	114.0	119.6	129.4	124.0
Bachelor's degrees								
White	107.9	103.0	100.0	99.7	100.1	100.2	101.8	102.3
Black	102.6	100.6	100.0	93.9	91.8	91.2	94.9	99.2
Hispanic	95.4	96.4	100.0	114.7	119.0	129.0	138.2	149.5
Asian or Pacific Islander	75.6	81.7	100.0	134.1	170.7	190.7	195.1	204.6
American Indian/Alaskan Native	106.1	102.1	100.0	117.5	107.0	101.8	109.5	111.8
Advanced degrees*								
White	114.7	105.6	100.0	90.7	89.5	90.7	91.9	103.1
Black	119.5	111.2	100.0	85.6	86.7	84.5	89.8	114.4
Hispanic	101.1	90.6	100.0	105.3	112.9	112.4	121.5	146.5
Asian or Pacific Islander	81.9	89.1	100.0	125.4	137.5	162.7	163.1	204.1
American Indian/Alaskan Native	102.3	97.8	100.0	112.7	103.8	92.3	88.4	106.6
Master's degrees								
White	120.5	107.4	100.0	91.8	91.4	94.9	97.7	96.2
Black	126.4	114.8	100.0	84.4	83.6	84.0	89.9	92.7
Hispanic	105.9	90.3	100.0	99.2	107.9	107.9	116.3	118.9
Asian or Pacific Islander	82.8	88.1	100.0	128.3	138.8	160.3	159.1	167.5
American Indian/Alaskan Native	104.0	98.8	100.0	116.4	103.2	95.0	92.0	91.6
Doctor's degrees								
White	115.7	106.5	100.0	86.8	85.6	84.0	87.3	84.1
Black	110.4	105.8	100.0	80.8	70.3	70.6	76.8	83.9
Hispanic	138.3	106.1	100.0	155.6	158.5	126.4	152.7	139.7
Asian or Pacific Islander	82.4	98.6	100.0	122.4	121.4	144.4	133.0	150.7
American Indian/Alaskan Native	70.5	72.6	100.0	67.4	61.1	52.6	51.6	61.1
First-professional degrees								
White	100.3	101.0	100.0	89.5	86.4	82.7	79.5	78.4
Black	99.4	100.6	100.0	91.6	103.6	91.3	94.4	94.4
Hispanic	79.0	87.4	100.0	109.5	115.2	121.5	128.2	133.2
Asian or Pacific Islander	78.3	86.8	100.0	116.2	143.3	183.6	198.1	219.8
American Indian/Alaskan Native	118.7	111.9	100.0	131.3	136.6	110.4	100.7	107.5

Table 31-2 Index of number of degrees conferred (1981=100), by sex, degree level, and race/ethnicity: Selected academic years ending 1977-91—Continued

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990	1991
	Women							
Associate's degrees								
White	87.3	92.8	100.0	105.4	108.4	108.5	114.3	117.5
Black	84.7	97.7	100.0	102.7	102.2	103.7	105.4	113.8
Hispanic	79.5	85.9	100.0	114.5	111.7	117.9	130.3	148.2
Asian or Pacific Islander	83.4	84.5	100.0	108.0	137.4	150.4	171.0	178.0
American Indian/Alaskan Native	86.9	85.8	100.0	118.9	131.0	136.2	142.0	155.9
Bachelor's degrees								
White	92.1	95.8	100.0	105.0	108.5	112.8	117.4	121.8
Black	92.6	98.4	100.0	95.3	94.2	98.7	104.5	113.4
Hispanic	76.4	87.8	100.0	122.2	128.2	144.8	162.4	185.6
Asian or Pacific Islander	70.9	82.3	100.0	136.3	176.9	212.0	224.8	241.1
American Indian/Alaskan Native	80.4	88.4	100.0	118.8	113.7	117.4	133.8	138.0
Advanced degrees*								
White	95.5	97.4	100.0	97.3	102.2	109.3	113.8	117.6
Black	114.3	109.7	100.0	84.5	85.6	86.8	96.5	102.0
Hispanic	78.8	80.9	100.0	118.4	120.4	129.3	144.0	153.4
Asian or Pacific Islander	73.9	83.9	100.0	122.3	139.9	182.1	198.3	216.2
American Indian/Alaskan Native	81.6	96.6	100.0	127.8	120.4	121.6	129.4	133.9
Master's degrees								
White	101.0	99.7	100.0	93.6	98.1	105.9	110.5	114.6
Black	120.8	112.5	100.0	79.6	79.4	81.3	90.3	95.0
Hispanic	83.0	82.0	100.0	112.7	110.0	117.1	129.3	139.7
Asian or Pacific Islander	79.7	86.5	100.0	117.2	132.3	170.8	182.4	193.7
American Indian/Alaskan Native	83.7	94.6	100.0	126.3	110.1	114.4	119.7	127.0
Doctor's degrees								
White	79.3	89.6	100.0	103.7	111.9	120.3	125.3	125.2
Black	85.3	93.5	100.0	103.9	100.2	100.7	108.4	110.3
Hispanic	77.7	81.0	100.0	137.4	173.7	155.3	203.9	192.7
Asian or Pacific Islander	53.2	74.3	100.0	136.9	136.0	170.3	164.0	212.2
American Indian/Alaskan Native	80.0	100.0	100.0	157.1	131.4	100.0	142.9	125.7
First-professional degrees								
White	62.9	84.5	100.0	121.7	127.3	128.9	132.3	135.8
Black	67.0	90.9	100.0	121.3	136.8	132.0	150.0	164.2
Hispanic	44.6	71.7	100.0	157.3	182.4	218.3	238.3	249.0
Asian or Pacific Islander	52.7	74.2	100.0	142.8	182.8	248.8	300.9	339.1
American Indian/Alaskan Native	63.8	113.8	100.0	124.1	208.6	200.0	210.3	201.7

*Advanced degrees refer to master's, doctor's, and first-professional degrees.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 252, 255, 258, 261, and 264 (for 1977-1991 data) and *Race/Ethnicity Trends in Degrees Conferred by Institutions of Higher Education: 1980-81 through 1989-90*, tables 3-7 (for 1989 and 1990 data) (based on IPEDS/HEGIS surveys of degrees conferred).

Table 31-3 High school graduates, by race/ethnicity: 1974-91

Year	Number in thousands			Index of number (1981=100)		
	White	Black	Hispanic	White	Black	Hispanic
1974	2,637	3,171	1,240	105.2	88.1	82.8
1975	2,604	3,059	1,351	103.9	84.9	90.3
1976	2,604	3,056	1,466	103.9	84.9	97.9
1977	2,575	3,199	1,472	102.8	88.8	98.4
1978	2,621	3,293	1,483	104.6	91.4	99.1
1979	2,599	3,376	1,399	103.7	93.7	93.5
1980	2,558	3,392	1,438	102.1	94.2	96.1
1981	2,506	3,602	1,496	100.0	100.0	100.0
1982	2,442	3,735	1,522	97.5	103.7	101.7
1983	2,389	4,014	1,657	95.3	111.4	110.7
1984	2,266	3,847	1,551	90.4	106.8	103.6
1985	2,194	3,809	1,655	87.5	105.8	110.6
1986	2,097	3,477	1,618	83.7	96.5	108.1
1987	2,066	3,633	1,744	82.5	100.9	116.5
1988	1,980	3,478	1,741	79.0	96.6	116.4
1989	1,907	3,468	1,558	76.1	96.3	104.1
1990	1,812	3,241	1,475	72.3	90.0	98.6
1991	1,757	3,315	1,573	70.1	92.0	105.1

NOTE: High school graduates are those who completed 4 years of high school and include those who received either a diploma or a GED credential. The number of high school graduates reported here is a 3-year moving average. It differs from that reported in *Indicator 40* because of differences in definition and surveys used.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 32-1 Rates of labor force participation, employment, and unemployment of recent high school graduates not enrolled in college, by sex: 1960-92

October	Both sexes			Male			Female		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1960	76.7	65.0	15.2	88.5	75.3	14.9	69.5	58.8	15.3
1961	79.7	65.4	17.9	86.1	70.1	18.5	75.8	62.5	17.6
1962	79.5	68.3	14.1	90.8	77.8	14.3	71.4	61.5	13.8
1963	78.9	64.7	18.0	89.7	72.6	19.1	71.8	59.5	17.1
1964	77.9	63.4	18.7	90.9	79.2	12.9	69.8	53.5	23.4
1965	82.1	71.9	12.4	91.0	84.3	7.4	75.8	63.2	16.6
1966	75.7	64.9	14.2	87.3	79.7	8.7	68.4	55.8	18.5
1967	78.7	65.9	16.2	86.6	78.3	9.5	73.5	57.7	21.4
1968	77.8	67.3	13.5	88.1	79.1	10.2	71.6	60.2	16.0
1969	79.1	70.1	11.4	90.0	83.1	7.6	71.6	61.1	14.7
1970	77.2	63.2	18.1	87.4	76.1	12.9	68.8	52.6	23.6
1971	78.7	65.1	17.2	90.0	77.5	13.9	69.9	55.6	20.5
1972	82.2	70.1	14.7	91.2	80.1	12.2	74.9	62.1	17.1
1973	80.6	70.7	12.3	90.4	81.8	9.5	72.9	61.9	15.1
1974	83.3	69.1	17.0	89.8	76.0	15.4	77.5	63.1	18.6
1975	81.3	65.1	19.9	91.5	74.1	19.1	72.6	57.5	20.8
1976	84.0	68.9	18.1	91.3	75.9	16.8	76.8	61.7	19.6
1977	85.3	71.9	15.7	90.8	77.7	14.4	80.9	67.1	17.0
1978	86.2	74.0	14.1	91.7	81.4	11.2	81.3	67.5	17.0
1979	86.8	72.4	16.5	92.0	79.1	14.0	82.3	66.7	18.9
1980	85.0	68.9	19.0	89.7	72.6	19.1	80.9	65.8	18.6
1981	83.9	65.9	21.4	86.9	70.0	19.5	81.0	62.1	23.4
1982	82.0	60.4	26.3	85.8	64.9	24.4	78.2	56.0	28.5
1983	84.5	62.9	25.5	88.8	66.1	25.6	80.5	60.0	25.4
1984	83.0	64.0	22.9	89.7	69.0	23.0	77.1	59.6	22.7
1985	82.3	62.0	24.6	86.1	65.0	24.5	78.8	59.3	24.7
1986	81.4	65.2	19.9	86.2	69.5	19.4	77.3	61.6	20.3
1987	83.8	68.9	17.8	89.1	76.9	13.7	79.1	61.8	21.9
1988	84.7	71.9	15.1	88.5	74.1	16.2	80.4	69.4	13.7
1989	84.4	71.9	14.7	89.3	77.8	12.9	79.1	65.7	16.9
1990	83.4	67.5	19.0	89.5	74.1	17.2	76.7	60.3	21.4
1991	79.6	59.6	25.2	84.2	62.3	26.0	74.0	56.0	24.3
1992	77.4	62.7	19.0	84.8	68.8	18.9	68.6	55.7	18.8

NOTE: The labor force participation rate is the percent of the population either employed or *unemployed. The employment rate is the percent of the population employed. The unemployment rate is the percent of the labor force unemployed. The unemployed are those without a job and looking for work. See the supplemental note for a comparison of these labor force statistics.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived from the Current Population Survey: 1940-1992*, and tabulations based on the October Current Population Surveys.

Table 32-2 Rates of labor force participation, employment, and unemployment of recent school dropouts, by sex: 1960-92

October	Both sexes			Male			Female		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1960	62.2	50.9	18.2	76.4	61.8	19.0	49.2	40.8	17.0
1961	67.5	49.4	26.8	83.8	60.3	28.0	50.9	38.3	24.7
1962	56.5	40.4	28.6	84.9	61.9	27.1	34.0	23.3	31.5
1963	65.9	45.1	31.7	83.3	64.4	22.7	49.6	27.0	45.7
1964	55.3	41.6	24.8	76.6	63.0	17.7	37.8	24.0	36.5
1965	61.0	47.9	21.4	82.8	66.8	19.4	36.4	26.8	26.5
1966	62.3	51.4	17.4	80.3	69.4	13.6	44.4	33.6	24.4
1967	63.7	50.3	21.0	80.3	65.0	19.1	45.6	34.4	24.6
1968	63.9	50.0	21.8	80.3	65.5	18.5	47.0	34.0	27.7
1969	61.3	51.0	16.8	81.8	69.8	14.7	39.4	30.9	21.4
1970	60.0	44.7	25.5	78.9	56.5	28.4	39.5	31.9	19.3
1971	63.6	46.8	26.4	80.8	59.3	26.6	42.9	31.7	26.2
1972	62.7	46.0	26.5	82.3	63.2	23.2	42.3	28.5	32.7
1973	66.2	51.5	22.2	81.1	61.5	24.2	47.4	38.7	18.3
1974	67.0	48.1	28.3	82.4	62.2	24.6	48.8	31.2	36.1
1975	62.7	41.4	34.0	82.4	54.1	34.3	43.4	29.0	33.3
1976	62.9	43.5	30.8	77.6	55.7	28.2	44.1	28.0	36.6
1977	68.5	50.2	26.7	81.0	60.9	24.8	54.0	38.0	29.5
1978	68.7	49.7	27.6	80.2	61.0	24.0	53.1	34.7	34.6
1979	65.9	48.8	26.0	79.0	64.0	19.0	53.4	34.0	36.4
1980	63.9	43.7	31.5	72.9	50.7	30.4	52.3	34.7	33.5
1981	63.5	40.5	36.2	74.1	52.6	29.0	52.6	28.0	46.7
1982	63.0	36.8	41.6	76.6	43.4	43.4	47.6	29.4	38.3
1983	63.1	43.2	31.6	75.4	50.8	32.7	48.1	34.0	29.5
1984	64.4	42.9	33.3	77.7	51.7	33.5	49.1	32.9	33.1
1985	67.5	43.5	35.6	81.3	50.8	37.5	52.2	35.4	32.2
1986	63.9	46.1	27.9	72.0	56.0	22.2	54.6	34.7	36.4
1987	66.3	41.2	37.8	73.7	45.6	38.1	57.5	36.0	37.4
1988	59.2	43.5	26.6	74.6	53.4	28.4	40.0	31.0	22.4
1989	65.5	47.1	28.1	74.5	52.3	29.8	54.7	40.9	25.2
1990	68.9	46.7	32.3	80.5	51.2	36.4	56.3	41.6	26.2
1991	61.7	36.9	40.2	75.0	48.9	34.8	48.7	25.1	48.4
1992	59.2	36.1	38.9	68.6	44.7	34.9	50.5	28.7	43.1

NOTE: See the note to table 32-1. See the supplemental note to *Indicator 32* for a comparison of labor force statistics.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived from the Current Population Survey: 1940-1992*, and unpublished tabulations from the October Current Population Surveys.

Table 32-3 Rates of labor force participation, employment, and unemployment of recent high school graduates not enrolled in college, by race/ethnicity: 1973–92

October	White			Black			Hispanic		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	83.2	74.9	10.0	69.9	49.8	28.8	(*)	(*)	(*)
1974	84.8	72.9	14.1	75.0	45.9	38.8	(*)	(*)	(*)
1975	82.4	68.9	16.4	69.3	36.9	46.7	(*)	(*)	(*)
1976	86.4	73.2	15.3	72.7	38.5	47.0	(*)	(*)	(*)
1977	87.3	76.1	12.8	74.4	43.3	41.8	81.6	65.8	(*)
1978	88.0	79.1	10.2	75.7	45.9	39.3	83.3	69.2	(*)
1979	88.9	76.4	14.0	71.8	44.1	38.5	82.4	69.4	(*)
1980	87.6	74.6	14.8	72.0	35.0	51.4	(*)	(*)	(*)
1981	87.4	73.0	16.4	69.0	31.5	54.3	(*)	(*)	(*)
1982	85.5	68.5	19.9	69.4	29.4	57.6	75.5	43.9	(*)
1983	85.9	69.8	18.8	75.9	34.9	54.1	(*)	(*)	(*)
1984	86.2	70.7	18.0	73.2	44.8	38.7	78.8	49.0	37.8
1985	85.0	71.0	16.5	76.6	34.4	55.1	(*)	(*)	(*)
1986	85.3	71.5	16.2	67.4	41.0	39.1	81.9	64.9	20.8
1987	87.8	75.3	14.3	73.8	46.9	36.4	69.2	53.8	22.2
1988	88.1	78.2	11.3	73.5	55.5	24.5	81.8	57.1	(*)
1989	88.3	77.6	12.1	71.0	53.5	24.5	74.7	49.3	(*)
1990	88.2	75.1	14.8	69.9	44.9	35.8	(*)	(*)	(*)
1991	84.4	67.1	20.6	67.5	32.5	51.8	(*)	(*)	(*)
1992	83.1	71.9	13.5	61.2	37.2	39.3	70.8	53.9	(*)

*Too few sample observations for a reliable estimate.

NOTE: See the note to table 32-1. See the supplemental note to *Indicator 32* for a comparison of labor force statistics.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 32-4 Rates of labor force participation, employment, and unemployment of recent school dropouts, by race/ethnicity: 1973–92

October	White			Black			Hispanic		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	71.0	55.1	22.4	59.4	43.9	26.1	(*)	(*)	(*)
1974	73.8	53.9	27.0	58.1	35.9	38.1	(*)	(*)	(*)
1975	65.4	46.2	29.3	56.1	22.0	(*)	59.5	46.8	(*)
1976	68.9	49.7	27.9	44.8	20.8	(*)	(*)	(*)	(*)
1977	74.8	56.6	24.3	58.6	34.5	41.2	(*)	(*)	(*)
1978	75.2	54.2	27.9	59.5	41.1	30.9	70.7	50.7	(*)
1979	70.5	54.2	23.0	51.7	27.6	46.7	(*)	(*)	(*)
1980	69.8	51.2	26.7	51.5	20.8	(*)	66.3	47.7	(*)
1981	71.2	51.2	28.0	46.8	11.5	(*)	76.8	50.0	(*)
1982	69.5	44.5	36.0	58.2	16.4	(*)	(*)	(*)	(*)
1983	65.4	49.4	24.4	59.8	26.5	(*)	(*)	(*)	(*)
1984	71.9	51.3	28.6	55.4	23.8	(*)	53.6	35.7	(*)
1985	74.4	50.0	32.8	53.7	29.3	(*)	68.8	37.6	(*)
1986	69.6	50.5	27.4	60.5	31.6	(*)	60.8	46.4	23.7
1987	69.9	48.1	31.1	61.3	26.1	(*)	(*)	(*)	(*)
1988	65.1	47.6	27.0	35.7	17.3	(*)	64.4	55.4	(*)
1989	74.4	57.6	22.6	51.8	26.3	(*)	(*)	(*)	(*)
1990	74.8	56.2	24.9	65.9	30.5	(*)	(*)	(*)	(*)
1991	61.6	38.4	37.6	49.5	24.7	(*)	(*)	(*)	(*)
1992	62.6	43.2	30.9	50.8	(*)	(*)	50.0	28.8	(*)

*Too few sample observations for a reliable estimate.

NOTE: See the note to table 32-1. See the supplemental note to *Indicator 32* for a comparison of labor force statistics.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 32-5 Rates of labor force participation, employment, and unemployment of recent high school graduates not enrolled in college, by family income: 1973-92

October	Low income			Middle income			High income		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	66.2	54.2	18.0	82.7	72.5	12.3	85.2	77.5	9.0
1975	68.8	51.7	24.8	82.5	65.7	20.4	86.0	72.0	16.3
1976	74.3	50.3	32.3	84.5	69.7	17.5	87.2	74.6	14.4
1977	75.4	56.3	25.4	86.4	72.1	16.5	89.7	81.7	8.9
1978	80.9	59.5	26.4	85.7	74.3	13.3	90.0	80.9	10.1
1979	84.7	67.9	19.8	85.6	69.8	18.5	90.1	80.5	10.7
1980	81.6	56.6	30.6	85.0	70.2	17.4	87.3	74.0	15.2
1981	72.4	53.2	26.5	84.8	64.5	23.9	87.9	76.9	12.5
1982	71.4	44.4	37.7	84.7	61.3	27.6	81.8	70.0	14.5
1983	79.6	48.8	38.7	85.2	65.6	23.0	86.1	65.3	24.1
1984	71.0	51.7	27.2	85.1	65.4	23.2	87.9	72.0	18.1
1985	79.2	47.4	40.1	82.3	61.7	25.0	84.4	74.7	11.5
1986	77.3	57.2	26.0	81.0	63.9	21.2	86.5	77.3	10.7
1987	74.1	56.7	23.5	84.0	67.6	19.6	92.2	83.7	9.3
1988	75.4	55.8	26.0	85.3	73.2	14.2	90.9	82.3	9.5
1989	78.8	60.0	23.9	84.1	72.2	14.1	89.2	78.3	12.1
1990	77.9	49.0	37.1	85.0	71.3	16.1	87.9	72.1	17.9
1991	71.8	48.6	32.3	81.7	59.0	27.8	82.4	73.3	11.0
1992	60.5	44.2	27.0	82.5	67.7	18.0	79.5	67.5	15.0

NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent of family income in-between. See the supplemental note to *Indicator 32* for a comparison of labor force statistics.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 32-6 Rates of labor force participation, employment, and unemployment of recent school dropouts, by family income: 1973-92

October	Low income			Middle income			High income		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	58.9	46.9	20.3	69.0	53.6	22.3	(*)	(*)	(*)
1975	51.5	33.3	35.3	66.9	45.3	32.2	72.0	46.2	(*)
1976	56.0	33.5	40.2	66.7	47.7	28.4	71.1	55.3	(*)
1977	65.8	44.4	32.6	71.9	53.4	25.7	84.0	67.9	(*)
1978	61.9	42.6	31.1	71.9	52.9	26.4	87.6	59.3	32.3
1979	50.0	26.3	47.5	69.7	54.4	22.0	84.8	70.4	17.0
1980	52.3	29.8	43.0	68.0	47.8	29.7	84.8	65.2	23.1
1981	58.0	27.6	52.4	68.2	43.8	35.8	75.3	64.0	(*)
1982	57.2	27.9	51.2	70.4	40.8	42.1	(*)	(*)	(*)
1983	47.9	28.2	41.2	69.3	46.1	33.5	(*)	(*)	(*)
1984	55.4	29.2	47.3	68.4	47.8	30.1	(*)	(*)	(*)
1985	58.9	29.2	50.4	74.7	51.0	31.7	(*)	(*)	(*)
1986	62.0	39.6	36.2	68.3	50.7	25.9	(*)	(*)	(*)
1987	60.5	24.7	59.2	69.6	47.8	31.4	(*)	(*)	(*)
1988	51.2	36.6	28.4	63.8	45.8	28.1	(*)	(*)	(*)
1989	58.6	35.9	38.8	68.8	51.7	24.9	(*)	(*)	(*)
1990	61.1	30.6	50.0	70.5	53.5	24.1	(*)	(*)	(*)
1991	51.1	27.0	(*)	65.7	42.3	35.7	(*)	(*)	(*)
1992	41.5	20.4	(*)	68.9	42.5	38.2	(*)	(*)	(*)

*Too few sample observations for a reliable estimate.

NOTE: See the notes to tables 32-1 and 32-5. See the supplemental note to *Indicator 32* for a comparison of labor force statistics.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Note on labor force statistics

The Bureau of Labor Statistics uses three categories to classify the labor force status of an individual: employed, unemployed, and not in the labor force.

An *employed* individual is someone with a job and working. Also included are those not working but with jobs from which they are temporarily absent because of illness, vacation, labor-management disputes, bad weather, and personal reasons. Those in the military are also counted as employed. An *unemployed* individual is someone without a job, available for work, and who has made specific efforts to find employment some time during the prior 4 weeks. Also included are persons waiting to be recalled to a job from which they had been laid off or are waiting to report to a new job within 30 days. Individuals who are neither employed nor unemployed are *not in the labor force*.

The *labor force* comprises all persons classified as employed or unemployed. The *unemployment rate* represents the number unemployed as a percent of the labor force. The *labor force participation rate* is the ratio of the labor force to the population. The *employment-population ratio* is the percentage of employed individuals in the population. We refer to the last statistic as the *employment rate* in *Indicator 30*.

Each of these statistics is typically reported in two forms, one that includes the military and one that excludes them. For instance, the *civilian employment-population ratio* is the percentage of all employed civilians in the civilian non-institutional population. The *civilian labor force participation rate* is the ratio of the civilian labor force to the civilian non-institutional population. The labor force statistics reported in *Indicator 30* and its associated supplemental tables are all for the civilian non-institutional population. *Indicator 30* reports the form that excludes the military.

Each of these measures can be computed for groups classified by age, sex, race, Hispanic origin, and so on.

Further elaboration on these labor force statistics is available in the explanatory notes of *Employment and Earnings*, published monthly by the Bureau of Labor Statistics of the U.S. Department of Labor.

Table 34-1 Ratio of median annual earnings of male wage and salary workers 25 to 34 years old with 9–11, 13–15, and 16 or more years of school to those with 12 years of school, by race/ethnicity: 1970–92

Year	9–11 years of school				13–15 years of school				16 or more years of school			
	All	White	Black	Hispanic	All	White	Black	Hispanic	All	White	Black	Hispanic
All wage and salary workers												
1970	0.84	0.87	0.78	0.91	1.10	1.07	1.32	(*)	1.24	1.21	(*)	(*)
1971	0.85	0.86	0.78	0.84	1.06	1.04	1.18	(*)	1.23	1.20	1.45	(*)
1972	0.80	0.85	0.75	0.79	1.04	1.01	1.16	1.00	1.19	1.16	1.43	(*)
1973	0.84	0.88	0.76	0.78	1.01	0.99	1.03	1.05	1.17	1.14	1.25	(*)
1974	0.81	0.85	0.75	0.74	1.02	1.02	1.01	0.98	1.14	1.14	1.11	(*)
1975	0.78	0.82	0.67	0.75	1.07	1.07	1.08	1.02	1.17	1.15	1.24	(*)
1976	0.78	0.80	0.80	0.89	1.03	1.03	1.08	0.98	1.19	1.16	1.47	(*)
1977	0.77	0.80	0.77	0.86	1.02	1.01	1.14	0.96	1.18	1.13	1.39	(*)
1978	0.77	0.79	0.74	0.81	1.05	1.01	1.33	1.00	1.18	1.13	1.46	1.26
1979	0.76	0.79	0.78	0.82	1.06	1.03	1.18	1.16	1.16	1.11	1.34	1.23
1980	0.73	0.77	0.76	0.92	1.04	1.03	1.17	1.22	1.19	1.16	1.35	1.29
1981	0.73	0.75	0.69	0.91	1.07	1.06	1.13	1.15	1.29	1.26	1.40	1.23
1982	0.71	0.72	0.77	0.74	1.12	1.12	1.04	1.13	1.34	1.30	1.51	1.46
1983	0.70	0.73	0.65	0.72	1.13	1.11	1.31	1.13	1.35	1.30	1.48	1.33
1984	0.63	0.62	0.65	0.77	1.15	1.11	1.22	1.12	1.36	1.30	1.64	1.28
1985	0.70	0.72	0.69	0.84	1.19	1.15	1.12	1.27	1.50	1.41	1.75	1.82
1986	0.69	0.69	0.87	0.83	1.18	1.15	1.32	1.27	1.50	1.43	1.69	1.79
1987	0.72	0.74	0.86	0.74	1.13	1.08	1.29	1.14	1.49	1.43	1.49	1.57
1988	0.68	0.73	0.56	0.70	1.10	1.08	1.11	1.10	1.42	1.42	1.37	1.30
1989	0.70	0.74	0.61	0.75	1.12	1.11	1.20	1.23	1.45	1.44	1.41	1.29
1990	0.71	0.73	0.72	0.77	1.14	1.13	1.26	1.31	1.48	1.42	1.66	1.67
1991	0.64	0.70	0.68	0.76	1.14	1.15	1.16	1.31	1.53	1.46	1.53	1.59
1992	0.68	0.73	0.65	0.72	1.13	1.12	1.30	1.20	1.60	1.55	1.83	1.55
Year-round, full-time wage and salary workers												
1970	0.86	0.89	0.81	0.92	1.11	1.10	1.25	(*)	1.27	1.25	(*)	(*)
1971	0.85	0.89	0.84	0.79	1.09	1.08	1.23	(*)	1.25	1.23	(*)	(*)
1972	0.85	0.88	0.82	0.87	1.07	1.06	1.16	(*)	1.22	1.20	1.41	(*)
1973	0.86	0.91	0.76	(*)	1.03	1.03	1.07	1.07	1.21	1.20	1.24	(*)
1974	0.87	0.89	0.80	(*)	1.04	1.04	1.01	0.99	1.20	1.20	1.14	(*)
1975	0.86	0.89	0.73	(*)	1.08	1.10	1.02	1.05	1.19	1.18	1.10	(*)
1976	0.85	0.88	0.80	0.90	1.08	1.08	1.09	1.09	1.21	1.19	1.31	(*)
1977	0.82	0.89	0.73	(*)	1.05	1.10	1.02	1.05	1.17	1.18	1.10	(*)
1978	0.78	0.82	0.73	0.78	1.03	1.02	1.19	0.93	1.14	1.12	1.26	(*)
1979	0.81	0.86	0.78	0.83	1.05	1.04	1.08	1.17	1.15	1.12	1.37	(*)
1980	0.79	0.87	0.68	0.92	1.05	1.05	1.07	1.18	1.19	1.18	1.21	1.24
1981	0.81	0.84	0.70	0.93	1.08	1.08	1.03	1.24	1.25	1.22	1.29	1.36
1982	0.81	0.83	0.78	0.77	1.11	1.09	1.04	1.07	1.25	1.21	1.34	1.34
1983	0.76	0.78	0.75	0.81	1.10	1.07	1.22	1.11	1.29	1.25	1.50	1.28
1984	0.74	0.78	0.75	0.86	1.08	1.08	1.24	1.08	1.27	1.23	1.49	1.26
1985	0.78	0.79	0.71	0.89	1.13	1.13	1.07	1.38	1.37	1.32	1.61	1.68
1986	0.78	0.80	0.75	0.85	1.14	1.15	1.17	1.13	1.43	1.39	1.46	1.60
1987	0.81	0.83	0.89	0.75	1.10	1.09	1.16	1.15	1.43	1.40	1.47	1.44
1988	0.78	0.82	0.82	0.77	1.15	1.15	1.24	1.08	1.42	1.39	1.31	1.30
1989	0.80	0.83	0.75	0.85	1.16	1.15	1.14	1.17	1.46	1.44	1.28	1.38
1990	0.79	0.81	0.80	0.87	1.18	1.13	1.32	1.25	1.44	1.35	1.58	1.67
1991	0.79	0.83	0.79	0.82	1.18	1.13	1.26	1.26	1.56	1.49	1.59	1.61
1992	0.77	0.85	0.90	0.73	1.17	1.12	1.39	1.21	1.57	1.51	1.76	1.44

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Table 34-2 Ratio of median annual earnings of female wage and salary workers 25 to 34 years old with 9–11, 13–15, and 16 or more years of school to those with 12 years of school, by race/ethnicity: 1970–92

Year	9–11 years of school				13–15 years of school				16 or more years of school			
	All	White	Black	Hispanic	All	White	Black	Hispanic	All	White	Black	Hispanic
All wage and salary workers												
1970	0.69	0.60	0.52	(*)	1.19	1.13	1.31	(*)	1.68	1.81	2.08	(*)
1971	0.73	0.64	0.64	(*)	1.15	1.09	1.44	(*)	1.67	1.84	2.13	(*)
1972	0.70	0.56	0.79	(*)	1.16	1.15	1.25	(*)	1.63	1.74	2.03	(*)
1973	0.71	0.69	0.70	(*)	1.22	1.25	1.38	(*)	1.64	1.80	1.84	(*)
1974	0.62	0.60	0.62	0.60	1.19	1.19	1.27	(*)	1.74	1.77	1.69	(*)
1975	0.64	0.64	0.60	(*)	1.24	1.24	1.28	(*)	1.72	1.75	1.69	(*)
1976	0.61	0.57	0.58	0.84	1.14	1.15	1.16	1.12	1.58	1.61	1.59	(*)
1977	0.63	0.59	0.63	0.76	1.23	1.24	1.20	1.13	1.53	1.53	1.63	(*)
1978	0.54	0.56	0.48	0.50	1.17	1.17	1.21	1.08	1.55	1.58	1.39	(*)
1979	0.70	0.71	0.65	0.67	1.19	1.21	1.24	1.14	1.55	1.57	1.50	(*)
1980	0.65	0.61	0.72	0.71	1.24	1.25	1.24	1.11	1.52	1.50	1.64	(*)
1981	0.61	0.60	0.56	0.75	1.23	1.24	1.22	1.25	1.54	1.55	1.57	1.53
1982	0.66	0.64	0.69	0.80	1.21	1.20	1.21	1.28	1.63	1.63	1.65	1.54
1983	0.66	0.65	0.65	0.69	1.24	1.26	1.10	1.35	1.67	1.68	1.59	1.72
1984	0.56	0.57	0.53	0.61	1.21	1.20	1.26	1.24	1.61	1.61	1.69	1.57
1985	0.63	0.60	0.65	0.73	1.18	1.19	1.17	1.11	1.69	1.66	1.78	1.72
1986	0.65	0.62	0.78	0.56	1.21	1.21	1.29	1.26	1.78	1.75	1.96	1.67
1987	0.67	0.72	0.55	0.68	1.25	1.22	1.33	1.37	1.78	1.74	1.92	1.86
1988	0.56	0.51	0.62	0.64	1.31	1.30	1.32	1.14	1.81	1.78	1.93	1.70
1989	0.63	0.64	0.50	0.72	1.32	1.30	1.45	1.28	1.93	1.89	2.05	2.03
1990	0.58	0.56	0.44	0.72	1.34	1.33	1.30	1.46	1.92	1.89	2.09	1.90
1991	0.64	0.62	0.56	0.66	1.32	1.32	1.31	1.29	1.90	1.88	1.97	1.61
1992	0.76	0.77	0.68	0.80	1.34	1.32	1.30	1.37	2.00	1.94	2.13	1.98
Year-round, full-time wage and salary workers												
1970	0.79	0.81	0.80	(*)	1.12	1.11	1.27	(*)	1.45	1.41	(*)	(*)
1971	0.79	0.81	0.75	(*)	1.14	1.13	(*)	(*)	1.43	1.43	1.44	(*)
1972	0.80	0.83	0.78	(*)	1.16	1.17	(*)	(*)	1.42	1.41	1.45	(*)
1973	0.86	0.89	0.73	(*)	1.19	1.20	1.15	(*)	1.45	1.44	1.50	(*)
1974	0.78	0.80	0.69	(*)	1.14	1.14	1.11	(*)	1.38	1.39	1.28	(*)
1975	0.78	0.77	0.74	(*)	1.13	1.14	1.12	(*)	1.37	1.38	1.27	(*)
1976	0.78	0.84	0.73	(*)	1.12	1.12	1.10	(*)	1.36	1.35	1.41	(*)
1977	0.79	0.77	0.74	(*)	1.12	1.14	1.12	(*)	1.30	1.38	1.27	(*)
1978	0.83	0.84	0.78	(*)	1.09	1.08	1.13	(*)	1.29	1.27	1.24	(*)
1979	0.82	0.83	0.87	(*)	1.13	1.12	1.19	(*)	1.31	1.30	1.31	(*)
1980	0.78	0.79	0.82	(*)	1.09	1.09	1.08	1.13	1.34	1.33	1.37	(*)
1981	0.76	0.75	(*)	(*)	1.14	1.15	1.09	1.23	1.40	1.39	1.32	(*)
1982	0.82	0.81	0.93	(*)	1.18	1.19	1.20	1.08	1.41	1.41	1.37	(*)
1983	0.79	0.77	(*)	(*)	1.21	1.21	1.19	1.20	1.39	1.39	1.36	1.37
1984	0.80	0.82	0.71	(*)	1.16	1.14	1.16	1.15	1.43	1.40	1.54	1.49
1985	0.78	0.79	(*)	(*)	1.16	1.16	1.15	1.18	1.47	1.46	1.49	1.48
1986	0.80	0.82	0.86	(*)	1.15	1.16	1.19	1.05	1.52	1.50	1.63	1.30
1987	0.78	0.77	(*)	(*)	1.17	1.15	1.29	1.17	1.47	1.46	1.54	1.50
1988	0.71	0.71	0.78	(*)	1.21	1.19	1.33	1.35	1.55	1.54	1.63	1.55
1989	0.75	0.75	(*)	0.70	1.19	1.20	1.22	1.21	1.60	1.59	1.60	1.64
1990	0.77	0.82	(*)	0.76	1.23	1.23	1.24	1.25	1.64	1.61	1.80	1.66
1991	0.69	0.70	0.66	(*)	1.19	1.19	1.18	1.24	1.56	1.54	1.49	1.44
1992	0.76	0.81	0.78	(*)	1.19	1.19	1.12	1.23	1.59	1.56	1.63	1.51

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Table 34-3 Median annual earnings of wage and salary workers 25 to 34 years old with 12 years of school, by sex and race/ethnicity: 1970-92 (constant 1993 dollars)

Year	Male				Female			
	All	White	Black	Hispanic	All	White	Black	Hispanic
All wage and salary workers								
1970	\$31,308	\$31,865	\$23,236	\$27,773	\$15,536	\$12,527	\$13,556	\$13,452
1971	31,673	32,062	23,809	26,483	15,893	13,176	12,702	12,692
1972	33,050	33,620	25,425	29,744	16,164	13,656	13,397	13,949
1973	33,638	33,946	27,198	27,676	15,809	13,131	13,976	14,559
1974	31,194	31,885	26,621	29,429	13,290	12,937	14,555	15,679
1975	28,837	29,629	24,257	26,125	13,285	12,848	15,009	14,134
1976	29,192	30,090	22,086	26,533	13,902	13,461	15,964	13,510
1977	29,383	30,861	22,352	25,048	14,134	13,882	15,447	13,998
1978	29,576	31,006	22,771	26,504	13,801	13,411	15,946	13,831
1979	29,018	30,505	21,960	23,776	13,936	13,824	14,672	14,009
1980	26,974	28,051	19,849	21,810	13,839	13,897	13,867	13,413
1981	25,123	26,134	19,627	21,098	13,491	13,352	13,748	14,137
1982	23,348	24,372	17,972	20,639	13,176	13,042	13,569	13,308
1983	23,482	24,703	17,095	21,380	13,325	13,154	14,442	12,685
1984	24,051	25,928	16,082	21,867	13,919	13,911	13,747	14,035
1985	23,139	24,878	18,267	18,963	13,964	14,194	12,834	13,700
1986	23,243	24,930	16,128	19,701	13,894	14,077	12,446	14,231
1987	23,598	25,505	16,224	20,510	14,228	14,432	13,434	14,010
1988	24,166	25,424	18,910	20,584	13,982	14,331	13,049	13,814
1989	23,562	24,741	17,943	19,111	13,461	13,763	12,146	13,349
1990	22,066	23,573	17,136	17,840	13,337	13,669	12,241	12,116
1991	21,481	22,920	16,294	17,154	13,057	13,438	11,527	13,110
1992	20,494	21,933	15,051	17,691	12,890	13,362	11,515	12,486
Year-round, full-time wage and salary workers								
1970	\$32,727	\$33,524	\$26,130	\$29,196	\$20,546	\$20,933	\$18,178	(*)
1971	33,075	33,751	26,571	29,865	20,287	20,339	19,850	(*)
1972	34,275	35,166	26,980	30,601	20,859	21,082	19,712	\$21,201
1973	34,730	35,379	29,613	30,792	20,341	20,421	20,159	20,858
1974	33,037	33,501	30,047	31,930	20,050	20,035	20,035	20,459
1975	31,732	32,227	28,833	28,664	20,123	20,048	20,587	19,466
1976	31,626	32,331	26,991	29,170	20,355	20,531	19,893	19,627
1977	32,496	28,616	25,602	25,452	20,675	17,801	18,280	17,285
1978	33,397	33,913	28,440	31,235	20,420	20,677	19,803	19,622
1979	31,983	32,943	25,910	27,430	19,778	20,073	18,466	18,443
1980	29,695	30,428	24,118	25,390	19,509	19,740	18,557	18,790
1981	28,447	29,379	24,597	24,440	18,706	18,900	18,380	17,568
1982	27,466	28,607	22,748	24,465	18,358	18,511	17,552	18,234
1983	27,669	29,013	20,571	24,396	18,542	18,851	17,676	17,868
1984	28,463	29,582	19,790	25,936	18,923	19,479	16,943	18,310
1985	26,986	28,447	21,458	22,099	19,179	19,711	16,464	18,672
1986	27,035	28,192	21,313	24,173	19,121	19,455	16,334	20,562
1987	27,094	28,235	20,278	24,750	19,351	19,732	17,309	18,921
1988	26,687	27,739	20,708	24,116	18,908	19,480	16,414	18,279
1989	25,600	26,792	21,260	22,175	18,786	18,998	17,384	18,269
1990	24,493	26,411	19,004	20,609	18,141	18,561	15,852	16,210
1991	23,901	25,550	18,369	20,964	18,544	18,976	16,804	17,918
1992	23,459	24,863	17,747	20,595	18,273	18,769	17,116	18,208

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Table 36-1 Percentage of persons 18 years of age and over who answered positively to a variety of health-related questions, by race/ethnicity and level of education: 1985 and 1990

Question	1985					1990				
	Total	White	Black	Hispanic	Other	Total	White	Black	Hispanic	Other
Aware high blood pressure increases chances of heart disease										
All education levels	97.3	97.6	95.1	95.7	94.5	95.9	96.3	93.5	91.8	90.6
1-3 years high school	95.6	96.0	94.5	96.7	87.2	94.1	95.0	91.0	90.8	86.5
4 years high school	97.2	97.6	94.0	95.8	94.3	95.8	96.3	93.6	91.7	87.4
1-3 years college	98.3	98.6	97.1	98.7	94.4	96.5	96.9	93.5	93.9	95.3
4 or more years college	98.8	99.0	96.2	97.8	97.6	97.3	97.7	96.5	95.8	91.3
Exercise or play sports regularly										
All education levels	40.0	40.5	37.3	35.7	36.0	40.7	41.5	34.3	34.9	42.0
1-3 years high school	28.3	27.7	30.2	32.5	37.0	29.7	29.8	28.1	34.0	38.6
4 years high school	37.7	37.8	38.9	41.4	29.9	37.0	37.0	36.2	35.2	40.6
1-3 years college	50.1	50.3	51.4	45.9	36.6	48.5	49.4	41.1	52.3	47.5
4 or more years college	55.8	56.5	52.3	46.5	46.0	55.8	57.0	45.8	47.0	45.5
Told more than once that they had high blood pressure										
All education levels	17.1	16.8	21.5	13.0	8.5	16.3	16.0	21.3	10.1	8.8
1-3 years high school	21.4	20.8	24.5	14.2	16.6	21.5	21.4	23.9	9.0	9.0
4 years high school	15.5	15.5	17.0	11.3	6.9	15.7	15.8	16.9	7.8	8.5
1-3 years college	13.2	13.3	13.9	11.4	7.5	12.8	12.7	15.6	7.1	7.1
4 or more years college	12.4	12.8	12.5	6.7	5.5	12.4	12.3	17.3	9.3	7.6
Aware cigarettes increase chances of heart disease										
All education levels	96.0	96.4	93.6	94.7	93.5	96.2	96.6	94.1	93.7	93.4
1-3 years high school	93.7	93.9	92.9	95.3	94.5	94.3	94.3	94.2	93.8	92.1
4 years high school	96.3	96.6	93.6	96.3	91.8	96.3	96.7	93.7	95.9	92.8
1-3 years college	97.2	97.5	95.5	93.5	92.7	96.9	97.2	94.1	94.9	96.4
4 or more years college	98.5	98.8	96.2	100.0	94.9	98.1	98.4	97.2	96.0	93.7
Smoke cigarettes daily										
All education levels	30.1	29.6	34.9	25.9	25.1	25.5	25.6	26.2	23.0	21.4
1-3 years high school	42.0	41.8	43.9	30.6	31.0	37.4	38.0	34.6	25.3	36.1
4 years high school	33.5	33.2	35.6	25.3	35.3	29.6	29.9	27.7	27.0	26.7
1-3 years college	27.3	27.3	29.3	26.1	21.4	23.0	23.2	22.1	15.7	20.8
4 or more years college	18.4	17.9	26.7	19.8	16.9	13.5	13.5	16.6	16.5	8.8

SOURCE: U.S. Department of Health and Human Services, Public Health Statistics, Centers for Disease Control, National Center for Health Statistics, National Health Interview Survey, 1990.

Table 36-2 Percentage of persons 18 years of age and over who answered positively to a variety of health-related questions, by sex and level of education: 1985 and 1990

Question	1985			1990		
	Total	Male	Female	Total	Male	Female
Aware high blood pressure increases chances of heart disease						
All education levels	97.3	97.1	97.5	95.9	95.7	96.0
1-3 years high school	95.6	95.6	95.5	94.1	94.3	94.0
4 years high school	97.2	96.4	97.8	95.8	95.7	95.9
1-3 years college	98.3	98.2	98.5	96.5	96.4	96.6
4 or more years college	98.8	98.8	98.7	97.3	97.0	97.7
Exercise or play sports regularly						
All education levels	40.0	42.7	37.6	40.7	44.0	37.7
1-3 years high school	28.3	31.8	25.4	29.7	34.6	25.6
4 years high school	37.7	40.4	35.7	37.0	40.3	34.4
1-3 years college	50.1	51.5	48.7	48.5	50.3	47.0
4 or more years college	55.8	57.2	54.0	55.8	57.9	53.2
Told more than once that they had high blood pressure						
All education levels	17.1	15.7	18.3	16.3	15.4	17.2
1-3 years high school	21.4	17.9	24.2	21.5	18.4	24.2
4 years high school	15.5	13.4	17.1	15.7	14.2	16.9
1-3 years college	13.2	13.9	12.7	12.8	14.0	11.7
4 or more years college	12.4	14.1	10.3	12.4	13.4	11.2
Aware cigarettes increase chances of heart disease						
All education levels	96.0	95.7	96.4	96.2	95.9	96.5
1-3 years high school	93.7	93.0	94.4	94.3	94.3	94.2
4 years high school	96.3	95.8	96.6	96.3	95.7	96.7
1-3 years college	97.2	96.8	97.6	96.9	96.8	96.9
4 or more years college	98.5	98.5	98.4	98.1	98.2	98.0
Smoke cigarettes daily						
All education levels	30.1	32.6	27.9	25.5	28.4	22.8
1-3 years high school	42.0	46.0	38.8	37.4	41.0	34.4
4 years high school	33.5	36.6	31.1	29.6	33.5	26.5
1-3 years college	27.3	29.9	25.0	23.0	26.2	20.2
4 or more years college	18.4	20.1	16.2	13.5	14.5	12.3

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, National Health Interview Survey, 1985 and 1990.

Table 36-3 Percentage of persons who answered positively to a variety of health-related questions, by sex, age, and level of education: 1990

Question	Both sexes				Male				Female			
	18 or older	25-29	30-44	45-64	18 or older	25-29	30-44	45-64	18 or older	25-29	30-44	45-64
Aware high blood pressure increases chances of heart disease												
All education levels	95.9	95.7	96.2	96.0	95.7	95.1	96.4	95.7	96.0	96.3	96.0	96.3
1-3 years high school	94.1	92.3	93.4	95.2	94.3	92.8	93.9	95.7	94.0	91.9	93.0	94.8
4 years high school	95.8	95.9	95.8	96.3	95.7	95.4	96.3	95.4	95.9	96.4	95.4	97.0
1-3 years college	96.5	97.0	96.9	96.4	96.4	97.0	96.8	96.9	96.6	97.0	96.9	95.8
4 or more years college	97.3	96.7	97.7	97.1	97.0	95.4	97.7	96.6	97.7	98.1	97.6	97.9
Exercise or play sports regularly												
All education levels	40.7	46.9	42.2	35.1	44.0	50.7	44.3	35.6	37.7	43.2	40.1	34.6
1-3 years high school	29.7	30.4	24.6	23.6	34.6	34.2	24.4	24.9	25.6	27.1	24.9	22.7
4 years high school	37.0	39.1	35.6	32.8	40.3	42.0	37.3	32.0	34.4	36.4	34.1	33.4
1-3 years college	48.5	55.5	45.6	40.1	50.3	60.8	46.5	37.5	47.0	50.2	44.8	42.5
4 or more years college	55.8	63.7	57.1	50.6	57.9	67.2	59.5	52.4	53.2	60.2	54.3	47.8
Told more than once that they had high blood pressure												
All education levels	16.3	4.9	8.9	24.9	15.4	5.4	9.8	24.6	17.2	4.5	8.1	25.2
1-3 years high school	21.5	6.5	13.4	32.8	18.4	7.0	13.3	31.7	24.2	6.1	13.5	33.7
4 years high school	15.7	4.3	8.7	25.2	14.2	3.8	9.9	24.7	16.9	4.7	7.7	25.6
1-3 years college	12.8	5.9	9.8	21.2	14.0	6.7	11.5	23.7	11.7	5.0	8.2	18.9
4 or more years college	12.4	4.0	6.9	19.6	13.4	5.5	8.1	20.6	11.2	2.4	5.5	18.2
Aware cigarettes increase chances of heart disease												
All education levels	96.2	96.7	96.9	95.8	95.9	96.3	96.7	95.2	96.5	97.1	97.1	96.3
1-3 years high school	94.3	94.8	94.6	94.2	94.3	93.4	94.1	93.5	94.2	96.1	95.1	94.8
4 years high school	96.3	96.8	96.6	95.7	95.7	96.5	95.8	94.8	96.7	97.0	97.3	96.4
1-3 years college	96.9	97.1	97.3	96.7	96.8	97.4	97.5	96.0	96.9	96.7	97.2	97.3
4 or more years college	98.1	98.2	98.4	97.9	98.2	98.0	98.6	97.6	98.0	98.4	98.1	98.2
Smoke cigarettes daily												
All education levels	25.5	29.8	29.6	27.0	28.4	31.0	33.6	29.3	22.8	28.7	25.8	24.8
1-3 years high school	37.4	54.1	52.0	37.0	41.0	53.9	55.8	40.0	34.4	54.3	48.3	34.6
4 years high school	29.6	37.7	36.2	28.3	33.5	40.8	40.9	32.3	26.5	34.9	32.1	25.5
1-3 years college	23.0	22.4	28.7	25.1	26.2	23.2	34.3	27.6	20.2	21.6	23.5	22.8
4 or more years college	13.5	10.1	13.7	17.8	14.5	9.8	16.0	17.5	12.3	10.4	11.1	18.1

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, National Health Interview Survey, 1990.

Table 36-4 Percentage of persons who answered positively to a variety of health-related questions, by race/ethnicity, age, and level of education: 1990

Question	White				Black				Hispanic			
	18 or older	25-29	30-44	45-64	18 or older	25-29	30-44	45-64	18 or older	25-29	30-44	45-64
Aware high blood pressure increases chances of heart disease												
All education levels	96.3	96.4	96.7	96.4	93.5	91.8	93.4	94.7	91.8	89.5	93.2	92.2
1-3 years high school	95.0	95.0	93.9	96.0	91.0	87.5	92.5	91.3	90.8	84.0	91.3	96.5
4 years high school	96.3	96.4	96.4	96.8	93.6	92.7	93.0	94.7	91.7	90.9	91.9	97.2
1-3 years college	96.9	97.6	97.4	96.4	93.5	92.7	92.9	96.2	93.9	95.5	96.2	90.2
4 or more years college	97.7	97.0	98.0	97.5	96.5	95.6	96.5	98.3	95.8	89.2	98.0	97.1
Exercise or play sports regularly												
All education levels	41.5	47.8	43.6	36.0	34.3	43.3	33.9	26.7	34.9	36.3	35.8	26.3
1-3 years high school	29.8	28.3	26.3	23.2	28.1	38.5	19.3	24.1	34.0	28.5	27.2	30.3
4 years high school	37.0	39.7	36.4	32.9	36.2	38.7	31.6	31.1	35.2	36.7	37.0	27.9
1-3 years college	49.4	56.0	46.8	41.2	41.1	52.0	39.2	27.4	52.3	52.6	50.4	43.6
4 or more years college	57.0	65.3	58.8	51.6	45.8	59.1	48.1	36.7	47.0	49.2	56.0	26.1
Told more than once that they had high blood pressure												
All education levels	16.0	4.8	8.2	23.4	21.3	6.4	14.6	40.1	10.1	4.7	7.2	21.1
1-3 years high school	21.4	7.4	12.4	30.7	23.9	4.9	18.3	44.0	9.0	4.6	9.5	25.3
4 years high school	15.8	4.3	8.0	24.0	16.9	4.5	14.5	36.2	7.8	2.3	6.9	20.3
1-3 years college	12.7	5.6	9.2	20.3	15.6	8.7	14.6	33.9	7.1	6.7	7.5	14.7
4 or more years college	12.3	3.4	6.4	19.5	17.3	9.8	11.7	31.6	9.3	8.6	2.5	21.5
Aware cigarettes increase chances of heart disease												
All education levels	96.6	97.3	97.3	96.3	94.1	93.7	94.9	92.6	93.7	91.4	94.2	94.2
1-3 years high school	94.3	95.7	94.6	94.3	94.2	92.9	94.5	94.3	93.8	91.5	97.6	98.6
4 years high school	96.7	97.4	97.0	96.4	93.7	92.6	94.3	90.3	95.9	93.0	94.6	97.3
1-3 years college	97.2	97.3	97.8	96.9	94.1	95.6	94.0	95.2	94.9	96.4	94.6	92.9
4 or more years college	98.4	98.8	98.7	98.1	97.2	96.8	97.1	98.7	96.0	90.8	98.4	96.1
Smoke cigarettes daily												
All education levels	25.6	30.1	29.5	27.0	26.2	30.8	32.4	28.9	23.0	27.0	26.7	23.6
1-3 years high school	38.0	56.1	54.3	38.0	34.6	49.0	42.8	33.3	25.3	35.7	31.4	15.5
4 years high school	29.9	38.6	36.4	28.5	27.7	34.6	35.3	27.9	27.0	31.5	31.7	30.3
1-3 years college	23.2	23.1	28.7	25.1	22.1	17.5	29.1	29.0	15.7	14.9	22.2	12.3
4 or more years college	13.5	10.4	13.5	17.9	16.6	7.1	18.8	22.9	16.5	14.1	15.3	26.2

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, National Health Interview Survey, 1985 and 1990.

Table 37-1 Percentage of preprimary students who are black and Hispanic, by level: 1970-92

Year	Pre-k			Kindergarten		
	Total	Black	Hispanic	Total	Black	Hispanic
1970	—	—	—	—	—	—
1971	—	—	—	—	—	—
1972	19.0	14.3	4.8	21.8	14.1	7.7
1973	20.6	15.5	5.1	19.2	13.7	5.6
1974	19.0	13.8	5.3	21.0	14.1	6.9
1975	20.6	15.7	4.9	20.6	13.7	6.9
1976	19.3	14.8	4.5	22.8	15.3	7.5
1977	19.9	15.3	4.6	22.3	15.4	6.9
1978	21.5	16.7	4.8	22.6	14.9	7.7
1979	—	—	—	—	—	—
1980	21.9	14.5	7.3	23.7	15.4	8.3
1981	20.2	13.8	6.4	24.6	15	9.7
1982	17.9	14.0	3.9	25.3	15.3	10.0
1983	18.4	13.9	4.6	24.0	14.1	10.0
1984	19.4	14.4	5.0	24.5	16	8.4
1985	20.1	13.3	6.7	25.7	16.2	9.5
1986	19.3	12.3	7.0	27.7	15.9	11.7
1987	19.4	10.7	8.7	28.0	17.1	10.9
1988	16.6	10.8	5.7	26.5	14.8	11.6
1989	18.7	12.6	6.0	25.7	15.7	10.1
1990	20.3	12.9	7.4	28.3	16.5	11.7
1991	19.3	12.3	7.0	29.4	16.3	13.2
1992	20.0	13.2	6.7	29.6	16.9	12.7

—Not available.

NOTE: Pre-k enrollment does not include those below 3 years of age.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 38-1 Enrollment in elementary and secondary schools, by control and level, with projections: Fall 1970 to Fall 2004 (in thousands)

Year	Public schools			Private schools ¹		
	Grades K-12 ²	Grades K-8 ²	Grades 9-12	Grades K-12 ²	Grades K-8 ²	Grades 9-12
1970	45,893	32,558	13,336	5,363	4,052	1,311
1971	46,071	32,318	13,753	³ 5,200	³ 3,900	³ 1,300
1972	45,726	31,879	13,848	³ 5,000	³ 3,700	³ 1,300
1973	45,444	31,401	14,044	³ 5,000	³ 3,700	³ 1,300
1974	45,073	30,971	14,103	³ 5,000	³ 3,700	³ 1,300
1975	44,819	30,515	14,304	³ 5,000	³ 3,700	³ 1,300
1976	44,310	29,997	14,314	5,167	3,825	1,342
1977	43,577	29,375	14,203	5,140	3,797	1,343
1978	42,550	28,463	14,088	5,086	3,732	1,353
1979	41,650	28,034	13,616	³ 5,000	³ 3,700	³ 1,300
1980	40,877	27,647	13,231	5,331	3,992	1,339
1981	40,044	27,280	12,764	³ 5,500	³ 4,100	³ 1,400
1982	39,565	27,161	12,405	³ 5,600	³ 4,200	³ 1,400
1983	39,252	26,981	12,271	5,715	4,315	1,400
1984	39,208	26,905	12,304	³ 5,700	³ 4,300	³ 1,400
1985	39,421	27,034	12,388	5,557	4,195	1,362
1986	39,753	27,420	12,333	³ 5,452	³ 4,116	³ 1,336
1987	40,008	27,933	12,076	³ 5,479	³ 4,232	³ 1,247
1988	40,188	28,501	11,687	³ 5,241	³ 4,036	³ 1,206
1989	40,542	29,152	11,390	³ 5,355	³ 4,162	³ 1,193
1990	41,217	29,878	11,338	³ 5,232	³ 4,095	³ 1,137
1991	42,036	30,498	11,538	5,199	4,074	1,125
1992 ⁴	42,735	30,997	11,738	5,375	4,212	1,163
1993 ⁴	43,353	31,374	11,979	5,471	4,280	1,191
			Projected			
1994	44,254	31,837	12,417	5,565	4,333	1,232
1995	45,049	32,275	12,774	5,660	4,393	1,267
1996	45,988	32,841	13,147	5,774	4,470	1,304
1997	46,835	33,395	13,440	5,879	4,545	1,333
1998	47,430	33,798	13,632	5,952	4,600	1,352
1999	47,927	34,145	13,782	6,015	4,648	1,367
2000	48,345	34,441	13,904	6,067	4,688	1,379
2001	48,705	34,670	14,035	6,111	4,719	1,392
2002	49,014	34,846	14,168	6,148	4,743	1,405
2003	49,280	34,955	14,325	6,179	4,758	1,421
2004	49,506	34,923	14,583	6,200	4,753	1,446

¹Beginning in Fall 1980, data include estimates for expanded universe for private schools.

²Includes kindergarten and some nursery school enrollment.

³Estimated.

⁴Estimates based on preliminary data.

NOTE: Projections are based on data through 1991. Because of rounding, details may not add up to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Historical Trends: State Education Facts, 1992; Common Core of Data; Digest of Education Statistics, 1993*, table 3; *Projections of Educational Statistics to 2004, 1993*, table 1; *Early Estimates for Public and Private Elementary and Secondary Education: School Year 1992-93*, *Public School Student, Staff, and Graduate Counts, by State: School Year 1992-93*.

Table 38-2 Enrollment in public elementary and secondary schools (in thousands), by region: Fall 1970-92

Fall	United States		Northeast		Midwest		South		West	
	Total number	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
1970	45,893	9,859	21.5	12,935	28.2	14,759	32.2	8,339	18.2	
1971	46,071	9,971	21.6	12,969	28.2	14,777	32.1	8,352	18.1	
1972	45,726	9,961	21.8	12,868	28.1	14,632	32.0	8,262	18.1	
1973	45,444	9,848	21.7	12,666	27.9	14,677	32.3	8,252	18.2	
1974	45,073	9,755	21.6	12,510	27.8	14,626	32.5	8,180	18.2	
1975	44,819	9,679	21.6	12,294	27.4	14,654	32.7	8,190	18.3	
1976	43,310	9,464	21.9	12,097	27.9	14,578	33.7	8,171	18.9	
1977	43,577	9,156	21.0	11,763	27.0	14,560	33.4	8,096	18.6	
1978	42,550	8,828	20.7	11,320	26.6	14,431	33.9	7,970	18.7	
1979	41,650	8,479	20.4	11,031	26.5	14,258	34.2	7,881	18.9	
1980	40,877	8,214	20.1	10,697	26.2	14,133	34.6	7,831	19.2	
1981	40,044	7,890	19.7	10,372	25.9	13,990	34.9	7,791	19.5	
1982	39,565	7,674	19.4	10,139	25.6	13,945	35.2	7,806	19.7	
1983	39,252	7,512	19.1	9,986	25.4	13,914	35.4	7,839	20.0	
1984	39,208	7,395	18.9	9,888	25.2	13,962	35.6	7,961	20.3	
1985	39,421	7,318	18.6	9,862	25.0	14,117	35.8	8,124	20.6	
1986	39,753	7,294	18.3	9,870	24.8	14,311	36.0	8,276	20.8	
1987	40,008	7,251	18.1	9,870	24.7	14,418	36.0	8,467	21.2	
1988	40,188	7,207	17.9	9,845	24.5	14,491	36.1	8,644	21.5	
1989	40,542	7,200	17.8	9,848	24.3	14,605	36.0	8,888	21.9	
1990	41,223	7,281	17.7	9,937	24.1	14,807	35.9	9,197	22.3	
1991	42,000	7,406	17.6	10,061	24.0	15,052	35.8	9,478	22.6	
1992	42,086	7,399	17.6	10,133	24.1	15,074	35.8	9,480	22.5	

NOTE: Enrollment includes a relatively small number of prekindergarten students. The regions of the country for this indicator differ from that listed in the Glossary. The regions are as follows:

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin.

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Historical Trends: State Education Facts 1969-1989*, 1992, table 1; *Statistics of Public Elementary and Secondary Day Schools*, various years; and Common Core of Data surveys.

Table 39-1 Total and full-time equivalent (FTE) enrollment in higher education, by type and control of institution: Fall 1972-92

Fall of year	All institutions	Public, 4-year	Public, 2-year	Private, 4-year	Private, 2-year
Total enrollment					
1972	9,214,860	4,429,696	2,640,939	2,028,978	115,247
1973	9,602,123	4,529,895	2,889,621	2,062,179	120,428
1974	10,223,729	4,703,018	3,285,482	2,116,717	118,512
1975	11,184,859	4,998,142	3,836,366	2,216,598	133,753
1976	11,012,137	4,901,691	3,751,786	2,227,125	131,535
1977	11,285,787	4,945,224	3,901,769	2,297,621	141,173
1978	11,260,092	4,912,203	3,873,690	2,319,748	154,451
1979	11,569,899	4,980,012	4,056,810	2,373,221	159,856
1980	12,096,895	5,128,612	4,328,782	2,441,996	197,505
1981	12,371,672	5,166,324	4,480,708	2,489,137	235,503
1982	12,425,780	5,176,434	4,519,653	2,477,640	252,053
1983	12,464,661	5,223,404	4,459,330	2,517,791	264,136
1984	12,241,940	5,198,273	4,279,097	2,512,894	251,676
1985	12,247,055	5,209,540	4,269,733	2,506,438	261,344
1986	12,503,511	5,300,202	4,413,691	2,523,761	265,857
1987	12,766,642	5,432,200	4,541,054	2,558,220	235,168
1988	13,055,337	5,545,901	4,615,487	2,634,281	259,668
1989	13,538,560	5,694,303	4,883,660	2,693,368	267,229
1990	13,819,522	5,848,245	4,996,471	2,731,197	243,609
1991	14,358,953	5,904,748	5,404,815	2,802,305	247,085
1992	14,491,226	5,902,213	5,485,512	2,865,769	237,732
Full-time equivalent (FTE) enrollment					
1972	7,253,739	3,706,239	1,746,609	1,700,582	100,309
1973	7,453,448	3,721,031	1,908,524	1,718,187	105,706
1974	7,805,453	3,847,550	2,097,254	1,758,699	101,950
1975	8,479,685	4,056,500	2,465,810	1,843,901	113,474
1976	8,312,502	3,998,450	2,351,453	1,849,551	113,048
1977	8,415,339	4,039,071	2,357,405	1,896,005	122,858
1978	8,348,482	3,996,126	2,283,073	1,936,447	132,836
1979	8,487,317	4,059,304	2,333,313	1,956,768	137,932
1980	8,819,013	4,158,267	2,484,027	2,003,105	173,614
1981	9,014,521	4,208,506	2,572,794	2,041,341	191,880
1982	9,091,648	4,220,648	2,629,941	2,028,275	212,784
1983	9,166,399	4,265,808	2,615,672	2,059,415	225,504
1984	8,951,695	4,237,895	2,446,769	2,054,816	212,215
1985	8,943,433	4,239,622	2,428,159	2,054,717	220,935
1986	9,064,168	4,295,495	2,482,551	2,064,829	221,293
1987	9,229,736	4,395,731	2,541,958	2,090,779	201,267
1988	9,466,878	4,505,501	2,591,571	2,159,770	210,036
1989	9,780,881	4,619,828	2,751,762	2,193,774	215,517
1990	9,983,927	4,740,051	2,817,931	2,228,450	197,495
1991	10,360,606	4,795,704	3,067,141	2,285,750	212,011
1992	10,440,335	4,799,572	3,115,569	2,331,686	193,508

NOTE: Increases in enrollments in private 2-year institutions in 1980 and 1981 reflect the addition of schools accredited by the National Association of Trade and Technical Schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 169 and 195 and unpublished tabulations (based on the IPEDS/HEGIS surveys of fall enrollment, various years).

Table 39-2 Index of total and full-time equivalent (FTE) enrollment (1981=100) in higher education, by type and control of institution: Fall 1972-92

Fall of year	All Institutions	Public, 4-year	Public, 2-year	Private, 4-year	Private, 2-year
Total enrollment					
1972	74.5	85.7	58.9	81.5	48.9
1973	77.6	87.7	64.5	82.8	51.1
1974	82.6	91.0	73.3	85.0	50.3
1975	90.4	96.7	85.6	89.1	56.8
1976	89.0	94.9	83.7	89.5	55.9
1977	91.2	95.7	87.1	92.3	59.9
1978	91.0	95.1	86.5	93.2	65.6
1979	93.5	96.4	90.5	95.3	67.9
1980	97.8	99.3	96.6	98.1	83.9
1981	100.0	100.0	100.0	100.0	100.0
1982	100.4	100.2	100.9	99.5	107.0
1983	100.8	101.1	99.5	101.2	112.2
1984	99.0	100.6	95.5	101.0	106.9
1985	99.0	100.8	95.3	100.7	111.0
1986	101.1	102.6	98.5	101.4	112.9
1987	103.2	105.1	101.3	102.8	99.9
1988	105.5	107.3	103.0	105.8	110.3
1989	109.4	110.2	109.0	108.2	113.5
1990	111.7	113.2	111.5	109.7	103.4
1991	116.1	114.3	120.6	112.6	104.9
1992	117.1	114.2	122.4	115.1	100.9
Full-time equivalent (FTE) enrollment					
1972	80.5	88.1	67.9	83.3	52.3
1973	82.7	88.4	74.2	84.2	55.1
1974	86.6	91.4	81.5	86.2	53.1
1975	94.1	96.4	95.8	90.3	59.1
1976	92.2	95.0	91.4	90.6	58.9
1977	93.4	96.0	91.6	92.9	64.0
1978	92.6	95.0	88.7	94.9	69.2
1979	94.2	96.5	90.7	95.9	71.9
1980	97.8	98.8	96.5	98.1	90.5
1981	100.0	100.0	100.0	100.0	100.0
1982	100.9	100.3	102.2	99.4	110.9
1983	101.7	101.4	101.7	100.9	117.5
1984	99.3	100.7	95.1	100.7	110.6
1985	99.2	100.7	94.4	100.7	115.1
1986	100.6	102.1	96.5	101.2	115.3
1987	102.4	104.4	98.8	102.4	104.9
1988	105.0	107.1	100.7	105.8	109.5
1989	108.5	109.8	107.0	107.5	112.3
1990	110.8	112.6	109.5	109.2	102.9
1991	114.9	114.0	119.2	112.0	110.5
1992	115.8	114.0	121.1	114.2	100.8

NOTE: Increases in enrollments in private 2-year institutions in 1980 and 1981 reflect the addition of schools accredited by the National Association of Trade and Technical Schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 169 and 195 and unpublished tabulations (based on the IPEDS/HEGIS surveys of fall enrollment, various years).

Table 39-3 Percentage distribution of total and full-time equivalent (FTE) enrollment in higher education, by type and control of institution: Fall 1972-92

Fall of year	All institutions	Public, 4-year	Public, 2-year	Private, 4-year	Private, 2-year
Total enrollment					
1972	100.0	48.1	28.7	22.0	1.3
1973	100.0	47.2	30.1	21.5	1.3
1974	100.0	46.0	32.1	20.7	1.2
1975	100.0	44.7	34.3	19.8	1.2
1976	100.0	44.5	34.1	20.2	1.2
1977	100.0	43.8	34.6	20.4	1.3
1978	100.0	43.6	34.4	20.6	1.4
1979	100.0	43.0	35.1	20.5	1.4
1980	100.0	42.4	35.8	20.2	1.6
1981	100.0	41.8	36.2	20.1	1.9
1982	100.0	41.7	36.4	19.9	2.0
1983	100.0	41.9	35.8	20.2	2.1
1984	100.0	42.5	35.0	20.5	2.1
1985	100.0	42.5	34.9	20.5	2.1
1986	100.0	42.4	35.3	20.2	2.1
1987	100.0	42.5	35.6	20.0	1.8
1988	100.0	42.5	35.4	20.2	2.0
1989	100.0	42.1	36.1	19.9	2.0
1990	100.0	42.3	36.2	19.8	1.8
1991	100.0	41.1	37.6	19.5	1.7
1992	100.0	40.7	37.9	19.8	1.6
Full-time equivalent (FTE) enrollment					
1972	100.0	51.1	24.1	23.4	1.4
1973	100.0	49.9	25.6	23.1	1.4
1974	100.0	49.3	26.9	22.5	1.3
1975	100.0	47.8	29.1	21.7	1.3
1976	100.0	48.1	28.3	22.3	1.4
1977	100.0	48.0	28.0	22.5	1.5
1978	100.0	47.9	27.3	23.2	1.6
1979	100.0	47.8	27.5	23.1	1.6
1980	100.0	47.2	28.2	22.7	2.0
1981	100.0	46.7	28.5	22.6	2.1
1982	100.0	46.4	28.9	22.3	2.3
1983	100.0	46.5	28.5	22.5	2.5
1984	100.0	47.3	27.3	23.0	2.4
1985	100.0	47.4	27.2	23.0	2.5
1986	100.0	47.4	27.4	22.8	2.4
1987	100.0	47.6	27.5	22.7	2.2
1988	100.0	47.6	27.4	22.8	2.2
1989	100.0	47.2	28.1	22.4	2.2
1990	100.0	47.5	28.2	22.3	2.0
1991	100.0	46.3	29.6	22.1	2.0
1992	100.0	46.0	29.8	22.3	1.9

NOTE: Increases in enrollments in private 2-year institutions in 1980 and 1981 reflect the addition of schools accredited by the National Association of Trade and Technical Schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 169 and 195 and unpublished tabulations (based on the IPEDS/HEGIS surveys of fall enrollment, various years).

Table 39-4 High school graduates, by age: 1972-92

Year	Number (in thousands)		Index (1981=100)	
	20-24	25-34	20-24	25-34
1972	14,256	20,459	81.6	63.1
1973	14,713	21,695	84.2	67.0
1974	14,932	23,195	85.4	71.6
1975	15,468	24,390	88.5	75.3
1976	15,825	25,774	90.6	79.6
1977	16,102	26,919	92.1	83.1
1978	16,403	27,822	93.9	85.9
1979	16,754	28,849	95.9	89.0
1980	17,333	31,259	99.2	96.5
1981	17,475	32,399	100.0	100.0
1982	17,667	33,397	101.1	103.1
1983	17,775	33,976	101.7	104.9
1984	17,750	34,757	101.6	107.3
1985	17,110	35,465	97.9	109.5
1986	16,855	36,510	96.5	112.7
1987	16,389	36,891	93.8	113.9
1988	16,055	37,118	91.9	114.6
1989	15,521	37,426	88.8	115.5
1990	15,168	37,282	86.8	115.1
1991	15,163	36,939	86.8	114.0
1992	15,143	36,744	86.7	113.4

NOTE: For 1991 and earlier years, high school graduates are those who reported they had completed 4 years of high school. For 1992, high school graduates are those who reported they had a high school diploma or equivalency certificate. See supplemental note to *Indicator 21* for more discussion of the measurement of educational attainment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, "Educational Attainment in the United States: March....," various years and unpublished tabulations (based on the March Current Population Survey).

Table 40-1 Number of degrees conferred, by level of degree, and number of high school completions: Academic years ending 1971-91

Year	Degrees					High school completions ²
	Associate's	Bachelor's	Master's	Doctor's	First-professional ¹	
1971	252,610	839,730	230,509	32,107	37,946	—
1972	292,119	887,273	251,633	33,363	43,411	—
1973	316,174	922,362	263,371	34,777	50,018	—
1974	343,924	945,776	277,033	33,816	53,816	3,367,000
1975	360,171	922,933	292,450	34,083	55,916	3,473,000
1976	391,454	925,746	311,771	34,064	62,649	3,481,000
1977	406,377	919,549	317,164	33,232	64,359	3,487,000
1978	412,246	921,204	311,620	32,131	66,581	3,508,000
1979	402,702	921,390	301,079	32,730	68,848	3,543,000
1980	400,910	929,417	298,081	32,615	70,131	3,522,000
1981	416,377	935,140	295,739	32,958	71,956	3,509,000
1982	434,515	952,998	295,546	32,707	72,032	3,481,000
1983	456,441	969,510	289,921	32,775	73,136	3,353,000
1984	452,416	974,309	284,263	33,209	74,407	3,194,000
1985	454,712	979,477	286,251	32,943	75,063	3,090,000
1986	446,047	987,823	288,567	33,653	73,910	3,071,000
1987	437,137	991,339	289,557	34,120	72,750	3,138,000
1988	435,085	994,829	299,317	34,870	70,735	3,210,000
1989	436,764	1,018,755	310,621	35,720	70,856	3,140,000
1990*	455,102	1,051,344	324,301	38,371	70,988	3,019,000
1991	481,720	1,094,538	337,168	39,294	71,948	2,967,000

—Not available.

*Revised from previously published figures.

¹The National Center for Education Statistics recognizes 10 first-professional degree fields: chiropractic, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

²High school completers are the graduates of regular public and private day school programs and the recipients of GED credentials. Data for GED recipients are not available before 1974.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 98, 100, and 235 (based on IPEDS/HEGIS surveys of degrees conferred and Common Core of Data; American Council of Education, annual GED survey).

Table 41-1 Number of bachelor's degrees conferred, by field of study: Academic years ending 1971-91

Field of study	1971	1972	1973	1974	1975	1976	1977
Total	839,730	887,273	922,362	945,776	922,933	925,746	919,549
Humanities and social/behavioral sciences	336,627	350,288	356,877	358,082	338,642	326,810	310,467
Humanities	143,511	149,158	153,260	155,963	152,489	150,615	146,215
Social and behavioral sciences	193,116	201,130	203,617	202,119	186,153	176,195	164,252
Natural sciences	81,956	81,751	85,996	91,153	90,700	91,724	90,298
Life sciences	35,743	37,293	42,233	48,340	51,741	54,275	53,605
Physical sciences	21,412	20,745	20,696	21,178	20,778	21,465	22,497
Mathematics	24,801	23,713	23,067	21,635	18,181	15,984	14,196
Computer sciences and engineering	52,434	54,566	55,569	55,042	51,885	51,983	55,690
Computer and information sciences	2,388	3,402	4,304	4,756	5,033	5,652	6,407
Engineering and engineering technologies	50,046	51,164	51,265	50,286	46,852	46,331	49,283
Engineering	44,898	45,392	45,411	42,840	39,388	38,388	40,936
Engineering technologies	5,148	5,772	4,854	7,445	7,464	7,943	8,347
Technical/professional	368,713	400,668	423,920	441,499	441,706	455,229	463,094
Education	176,614	191,220	194,229	185,225	167,015	154,807	143,722
Business and management	114,865	121,360	126,263	131,766	133,010	142,379	150,964
Health sciences	25,190	28,570	33,523	41,394	48,858	53,813	57,122
Other technical/professional	52,044	59,518	69,905	83,114	92,823	104,230	111,286
Not classified by field of study	0	0	0	0	0	0	0

Field of study	1978	1979	1980	1981	1982	1983	1984
Total	921,204	921,390	929,417	935,140	952,998	969,510	974,309
Humanities and social/behavioral sciences	300,553	288,332	281,592	275,179	276,138	268,662	266,912
Humanities	143,167	137,949	136,111	134,001	135,562	133,210	133,828
Social and behavioral sciences	157,386	150,383	145,481	141,178	140,576	135,452	133,084
Natural sciences	87,057	83,859	81,158	78,246	77,290	75,840	75,522
Life sciences	51,502	48,846	46,370	43,216	41,639	39,982	38,640
Physical sciences	22,986	23,207	23,410	23,952	24,052	23,405	23,671
Mathematics	12,569	11,806	11,378	11,078	11,599	12,453	13,211
Computer sciences and engineering	62,855	71,094	80,047	90,121	100,272	113,780	126,616
Computer and information sciences	7,201	8,719	11,154	15,121	20,267	24,510	32,172
Engineering and engineering technologies	55,654	62,375	68,893	75,000	80,005	89,270	94,444
Engineering	46,869	53,021	58,402	63,287	67,201	72,248	75,732
Engineering technologies	8,785	9,354	10,491	11,713	12,984	17,022	18,712
Technical/professional	470,739	478,105	486,620	491,594	499,298	511,228	505,259
Education	136,141	126,109	118,169	108,309	101,113	97,991	92,382
Business and management	160,187	171,764	185,361	199,338	214,001	226,893	230,031
Health sciences	59,168	61,819	63,607	63,348	63,385	64,614	64,338
Other technical/professional	115,243	118,413	119,483	120,599	120,799	121,730	118,508
Not classified by field of study	0	0	0	0	0	0	0

Table 41-1 Number of bachelor's degrees conferred, by field of study: Academic years ending 1971-91—Continued

Field of study	1985	1986	1987	1988	1989	1990*	1991
Total	979,477	987,823	991,339	994,829	1,018,755	1,051,344	1,094,538
Humanities and social/behavioral sciences	263,477	266,558	275,386	285,647	306,143	332,105	355,269
Humanities	132,205	132,334	136,333	140,356	149,492	160,456	171,925
Social and behavioral sciences	131,272	134,224	139,053	145,291	156,651	171,649	183,344
Natural sciences	77,323	76,561	74,577	70,465	68,463	67,779	70,535
Life sciences	38,445	38,524	38,114	36,755	36,059	37,204	39,530
Physical sciences	23,732	21,731	19,974	17,806	17,186	16,066	16,344
Mathematics	15,146	16,306	16,489	15,904	15,218	14,509	14,661
Computer sciences and engineering	134,983	137,842	132,738	123,229	115,679	108,855	103,947
Computer and information sciences	38,878	41,889	39,664	34,523	30,454	27,257	25,083
Engineering and engineering technologies	96,105	95,953	93,074	88,706	85,225	81,598	78,864
Engineering	77,154	76,333	73,797	69,461	66,221	63,700	61,632
Engineering technologies	18,951	19,620	19,277	19,245	19,004	17,898	17,232
Technical/professional	503,694	506,862	508,638	513,687	526,065	538,892	551,529
Education	88,161	87,221	87,115	91,287	97,082	105,267	111,010
Business and management	233,351	238,160	241,156	243,725	247,175	249,365	249,960
Health sciences	64,513	64,535	63,206	60,754	59,138	58,454	59,268
Other technical/professional	117,669	116,946	117,161	117,921	122,670	126,806	131,291
Not classified by field of study	0	0	0	1,801	2,405	2,713	13,258

*Revised from previously published figures.

NOTE: See Glossary for definitions of fields of study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1993, table 242 (based on IPEDS/HEGIS surveys of degrees conferred).

Table 41-2 Index of number of bachelor's degrees conferred (1981=100), by field of study: Academic years ending 1971-91

Field of study	1971	1972	1973	1974	1975	1976	1977
Total	89.8	94.9	98.6	101.1	98.7	99.0	98.3
Humanities and social/behavioral sciences	122.3	127.3	129.7	130.1	123.1	118.8	112.8
Humanities	107.1	111.3	114.4	116.4	113.8	112.4	109.1
Social and behavioral sciences	136.8	142.5	144.2	143.2	131.9	124.8	116.3
Natural sciences	104.7	104.5	109.9	116.5	115.9	117.2	115.4
Life sciences	82.7	86.3	97.7	111.9	119.7	125.6	124.0
Physical sciences	89.4	86.6	86.4	88.4	86.7	89.6	93.9
Mathematics	223.9	214.1	208.2	195.3	164.1	144.3	128.1
Computer sciences and engineering	58.2	60.5	61.7	61.1	57.6	57.7	61.8
Computer and information sciences	15.8	22.5	28.5	31.5	33.3	37.4	42.4
Engineering and engineering technologies	66.7	68.2	68.4	67.0	62.5	61.8	65.7
Engineering	70.9	71.7	71.8	67.7	62.2	60.7	64.7
Engineering technologies	44.0	49.3	41.4	63.6	63.7	67.8	71.3
Technical/professional	75.0	81.5	86.2	89.8	89.9	92.6	94.2
Education	163.1	176.6	179.3	171.0	154.2	142.9	132.7
Business and management	57.6	60.9	63.3	66.1	66.7	71.4	75.7
Health sciences	39.8	45.1	52.9	65.3	77.1	84.5	90.2
Other technical/professional	43.2	49.4	58.0	68.9	77.0	86.4	92.3
Not classified by field of study	—	—	—	—	—	—	—

Field of study	1978	1979	1980	1981	1982	1983	1984
Total	98.5	98.5	99.4	100.0	101.9	103.7	104.2
Humanities and social/behavioral sciences	109.2	104.8	102.3	100.0	100.3	97.6	97.0
Humanities	106.8	102.9	101.6	100.0	101.2	99.4	99.9
Social and behavioral sciences	111.5	106.5	103.0	100.0	99.6	95.9	94.3
Natural sciences	111.3	107.2	103.7	100.0	98.8	96.9	96.5
Life sciences	119.2	113.0	107.3	100.0	96.4	92.5	89.4
Physical sciences	96.0	96.9	97.7	100.0	100.4	97.7	98.8
Mathematics	113.5	106.6	102.7	100.0	104.7	112.4	119.3
Computer sciences and engineering	69.7	78.9	88.8	100.0	111.3	126.6	140.5
Computer and information sciences	47.6	57.7	73.8	100.0	134.0	162.1	212.8
Engineering and engineering technologies	74.2	83.2	91.9	100.0	106.7	119.0	125.9
Engineering	74.1	83.8	92.3	100.0	106.2	114.2	119.7
Engineering technologies	75.0	79.9	89.6	100.0	110.9	145.3	159.8
Technical/professional	95.8	97.3	99.0	100.0	101.6	104.0	102.8
Education	125.7	116.4	109.1	100.0	93.4	90.5	85.3
Business and management	80.4	86.2	93.0	100.0	107.4	113.8	115.4
Health sciences	93.4	97.6	100.4	100.0	100.1	102.0	101.6
Other technical/professional	95.6	98.2	99.1	100.0	100.2	100.9	98.3
Not classified by field of study	—	—	—	—	—	—	—

Table 41-2 Index of number of bachelor's degrees conferred (1981=100), by field of study: Academic years ending 1971-91—Continued

Field of study	1985	1986	1987	1988	1989	1990*	1991
Total	104.7	105.6	106.0	106.4	108.9	112.4	117.0
Humanities and social/behavioral sciences	95.7	96.9	100.1	103.8	111.3	120.7	129.1
Humanities	98.7	98.8	101.7	104.7	111.6	119.7	128.3
Social and behavioral sciences	93.0	95.1	98.5	102.9	111.0	121.6	129.9
Natural sciences	98.8	97.8	95.3	90.1	87.5	86.6	90.1
Life sciences	89.0	89.1	88.2	85.0	83.4	86.1	91.5
Physical sciences	99.1	90.7	83.4	74.3	71.8	67.1	68.2
Mathematics	136.7	147.2	148.8	143.6	137.4	131.0	132.3
Computer sciences and engineering	149.8	153.0	147.3	136.7	128.4	120.8	115.3
Computer and information sciences	257.1	277.0	262.3	228.3	201.4	180.3	165.9
Engineering and engineering technologies	128.1	127.9	124.1	118.3	113.6	108.8	105.2
Engineering	121.9	120.6	116.6	109.8	104.6	100.7	97.4
Engineering technologies	161.8	167.5	164.6	164.3	162.2	152.8	147.1
Technical/professional	102.5	103.1	103.5	104.5	107.0	97.9	112.2
Education	81.4	80.5	80.4	84.3	89.6	97.2	102.5
Business and management	117.1	119.5	121.0	122.3	124.0	125.1	125.4
Health sciences	101.8	101.9	99.8	95.9	93.4	92.3	93.6
Other technical/professional	97.6	97.0	97.1	97.8	101.7	105.1	108.9
Not classified by field of study	—	—	—	—	—	—	—

—Not applicable.

*Revised from previously published figures.

NOTE: See Glossary for definitions of field of study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 242 (based on IPEDS/HEGIS surveys of degrees conferred).

**Table 41-3 Percentage distribution of bachelor's degrees conferred, by field of study:
Academic years ending 1971-91**

Field of study	1971	1972	1973	1974	1975	1976	1977
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	40.1	39.5	38.7	37.9	36.7	35.3	33.8
Humanities	17.1	16.8	16.6	16.5	16.5	16.3	15.9
Social and behavioral sciences	23.0	22.7	22.1	21.4	20.2	19.0	17.9
Natural sciences	9.8	9.2	9.3	9.6	9.8	9.9	9.8
Life sciences	4.3	4.2	4.6	5.1	5.6	5.9	5.8
Physical sciences	2.5	2.3	2.2	2.2	2.3	2.3	2.4
Mathematics	3.0	2.7	2.5	2.3	2.0	1.7	1.5
Computer sciences and engineering	6.2	6.1	6.0	5.8	5.6	5.6	6.1
Computer and information sciences	0.3	0.4	0.5	0.5	0.5	0.6	0.7
Engineering and engineering technologies	6.0	5.8	5.6	5.3	5.1	5.0	5.4
Engineering	5.3	5.1	4.9	4.5	4.3	4.1	4.5
Engineering technologies	0.6	0.7	0.5	0.8	0.8	0.9	0.9
Technical/professional	43.9	45.2	46.0	46.7	47.9	49.2	50.4
Education	21.0	21.6	21.1	19.6	18.1	16.7	15.6
Business and management	13.7	13.7	13.7	13.9	14.4	15.4	16.4
Health sciences	3.0	3.2	3.6	4.4	5.3	5.8	6.2
Other technical/professional	6.2	6.7	7.6	8.8	10.1	11.3	12.1
Not classified by field of study	—	—	—	—	—	—	—

Field of study	1978	1979	1980	1981	1982	1983	1984
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	32.6	31.3	0.3	29.4	29.0	27.7	27.4
Humanities	15.5	15.0	14.6	14.3	14.2	13.7	13.7
Social and behavioral sciences	17.1	16.3	15.7	15.1	14.8	14.0	13.7
Natural sciences	9.5	9.1	8.7	8.4	8.1	7.8	7.8
Life sciences	5.6	5.3	5.0	4.6	4.4	4.1	4.0
Physical sciences	2.5	2.5	2.5	2.6	2.5	2.4	2.4
Mathematics	1.4	1.3	1.2	1.2	1.2	1.3	1.4
Computer sciences and engineering	6.8	7.7	8.6	9.6	10.5	11.7	13.0
Computer and information sciences	0.8	0.9	1.2	1.6	2.1	2.5	3.3
Engineering and engineering technologies	6.0	6.8	7.4	8.0	8.4	9.2	9.7
Engineering	5.1	5.8	6.3	6.8	7.1	7.5	7.8
Engineering technologies	1.0	1.0	1.1	1.3	1.4	1.8	1.9
Technical/professional	51.1	51.9	52.4	52.6	52.4	52.7	51.9
Education	14.8	13.7	12.7	11.6	10.6	10.1	9.5
Business and management	17.4	18.6	19.9	21.3	22.5	23.4	23.6
Health sciences	6.4	6.7	6.8	6.8	6.7	6.7	6.6
Other technical/professional	12.5	12.9	12.9	12.9	12.7	12.6	12.2
Not classified by field of study	—	—	—	—	—	—	—

Table 41-3 Percentage distribution of bachelor's degrees conferred, by field of study:
Academic years ending 1971-91—Continued

Field of study	1985	1986	1987	1988	1989	1990*	1991
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral science	26.9	27.0	27.8	28.7	30.1	31.6	32.5
Humanities	13.5	13.4	13.8	14.1	14.7	15.3	15.7
Social and behavioral sciences	13.4	13.6	14.0	14.6	15.4	16.3	16.8
Natural sciences	7.9	7.8	7.5	7.1	6.7	6.4	6.4
Life sciences	3.9	3.9	3.8	3.7	3.5	3.5	3.6
Physical sciences	2.4	2.2	2.0	1.8	1.7	1.5	1.5
Mathematics	1.5	1.7	1.7	1.6	1.5	1.4	1.3
Computer sciences and engineering	13.8	14.0	13.4	12.4	11.4	10.4	9.5
Computer and information sciences	4.0	4.2	4.0	3.5	3.0	2.6	2.3
Engineering and engineering technologies	9.8	9.7	9.4	8.9	8.4	7.8	7.2
Engineering	7.9	7.7	7.4	7.0	6.5	6.1	5.6
Engineering technologies	1.9	2.0	1.9	1.9	1.9	1.7	1.6
Technical/professional	51.4	51.3	51.3	51.6	51.8	51.3	50.4
Education	9.0	8.8	8.8	9.2	9.6	10.0	10.1
Business and management	23.8	24.1	24.3	24.5	24.3	23.7	22.8
Health sciences	6.6	6.5	6.4	6.1	5.8	5.6	5.4
Other technical/professional	12.0	11.8	11.8	11.9	12.0	12.1	12.0
Not classified by field of study	—	—	—	0.2	0.2	0.3	1.2

—Not applicable.

*Revised from previously published figures.

NOTE: See Glossary for definitions of fields of study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 242 (based on IPEDS/HEGIS surveys of degrees conferred).

Table 42-1 Percentage of students in grades 1 through 12 who are black or Hispanic by control of school and metropolitan status: 1970-92

Year	Public schools			Private schools
	Total	Central cities	Other metropolitan	
1970	—	—	—	—
1971	—	—	—	—
1972	20.5	42.0	10.6	9.9
1973	20.3	41.8	10.1	10.6
1974	21.5	44.0	10.9	11.5
1975	22.0	44.5	12.0	10.9
1976	22.4	44.9	13.4	11.0
1977	21.9	47.0	12.6	13.1
1978	22.3	47.4	13.3	11.1
1979	22.7	49.5	14.1	13.0
1980	—	—	—	—
1981	24.6	51.4	15.6	13.9
1982	24.7	51.0	15.5	13.9
1983	25.2	51.5	16.6	13.7
1984	—	—	—	12.1
1985	26.8	56.7	18.1	11.5
1986	27.1	52.4	16.5	13.8
1987	27.1	51.7	17.5	14.3
1988	27.4	51.1	18.6	14.8
1989	27.8	51.8	20.0	14.1
1990	27.8	52.1	19.5	14.3
1991	28.1	52.9	19.6	14.3
1992	28.3	52.6	20.4	14.9

—Not available.

NOTE: Because a small number of students (less than 1 percent) are both black and Hispanic, the percentages in this table are slightly smaller than the sum of the "percent black" and "percent Hispanic" columns shown in the text table of *Indicator 42*.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, Series P-20, "School Enrollment ..."* various years; October Current Population Surveys.

Table 42-2 Enrollment in public elementary and secondary schools, by race/ethnicity: 1976, 1984, 1986, 1988, and 1990

Race/ethnicity	1976	1984	1986	1988	1990	1976-90
(In thousands)						
Total	43,714	39,452	41,156	40,484	40,848	-6.6
White, non-Hispanic	33,229	28,106	28,957	28,628	27,727	-16.6
Total minority	10,485	11,346	12,200	11,857	13,121	25.1
Black, non-Hispanic	6,774	6,389	6,622	6,158	6,616	-2.3
Hispanic	2,807	3,599	4,064	4,071	4,716	68.0
Asian/Pacific Islander	535	994	1,158	1,267	1,380	157.9
American Indian/Alaskan Native	368	364	356	361	409	11.1
(Percent)						
Total	100.0	100.0	100.0	100.0	100.0	—
White, non-Hispanic	76.0	71.2	70.4	70.7	67.8	-8.1
Total minority	24.0	28.8	29.6	29.3	32.1	8.1
Black, non-Hispanic	15.5	16.2	16.1	15.2	16.2	0.7
Hispanic	6.4	9.1	9.9	10.1	11.5	5.1
Asian/Pacific Islander	1.2	2.5	2.8	3.1	3.4	2.2
American Indian/Alaskan Native	0.8	0.9	0.9	0.9	1.0	0.2

—Not applicable.

NOTE: Enrollment includes kindergarten and a small number of prekindergarten students.

SOURCE: U.S. Department of Education, Office for Civil Rights, Elementary and Secondary School Civil Rights Survey, 1986, 1988, and 1990.

Table 43-1 Percentage of 8th grade students who report various types of parent involvement, by parents' highest education level and percentage of students in school who receive free school lunch: 1988

Type of involvement	Parents' highest education level				Percent who receive free school lunch			
	No high school diploma	High school diploma	Some college	College degree(s)	0-5	6-20	21-50	50 or more
Talked about:								
selecting courses	75	83	86	91	86	88	85	80
school activity	83	88	92	95	93	92	91	87
class studies	81	85	89	94	90	89	88	85
Checked homework	89	89	91	91	89	91	91	90
Limited T.V. viewing	56	54	63	74	69	62	60	62
Limited going out with friends	86	88	89	89	88	90	88	87
Spoke with teacher/counselor	52	56	60	65	62	59	59	59
Visited classes	25	26	29	31	30	26	26	36

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year Student Survey.

Table 43-2 Percentage of 8th grade students who report various types of parent involvement, by number of misbehavior incidents: 1988

Type of involvement	Number of misbehavior incidents*		
	0	1 or 2	3 or more
Talked about:			
selecting courses	88	82	73
school activity	93	90	82
class studies	91	86	76
Checked homework	91	91	85
Limited T.V. viewing	67	61	44
Limited going out with friends	90	88	82
Spoke with teacher/counselor	54	68	77
Visited classes	28	30	25

*Misbehavior incidents represent the number of times students reported that they were sent to the office because of behavior problems.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year Student Survey.

Table 45-1 Number of children served in federally supported programs for students with disabilities, by type of disability: School years ending 1977-92

Type of disability	1977	1978	1979	1980	1981	1982	1983	1984
	Number served (in thousands) ¹							
All conditions	3,692	3,751	3,889	4,005	4,142	4,198	4,255	4,298
Learning disabilities	796	964	1,130	1,276	1,462	1,622	1,741	1,806
Speech impairments	1,302	1,223	1,214	1,186	1,168	1,135	1,131	1,128
Mental retardation	959	933	901	869	829	786	757	727
Serious emotional disturbance	283	288	300	329	346	339	352	361
Hearing impairments	87	85	85	80	79	75	73	72
Orthopedic impairments	87	87	70	66	58	58	57	56
Other health impairments	141	135	105	106	98	79	50	53
Visual impairments	38	35	32	31	31	29	28	29
Multiple disabilities	—	—	50	60	68	71	63	65
Deaf-blindness	—	—	2	2	3	2	2	2
Preschool ²	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)

Type of disability	1985	1986	1987	1988	1989	1990	1991	1992
	Number served (in thousands) ¹							
All conditions	4,315	4,317	4,374	4,447	4,544	4,641	4,771	4,983
Learning disabilities	1,832	1,862	1,914	1,928	1,987	2,050	2,130	2,244
Speech impairments	1,126	1,125	1,136	953	976	973	987	998
Mental retardation	694	660	643	582	564	548	536	552
Serious emotional disturbance	372	375	383	373	376	381	391	400
Hearing impairments	69	66	65	56	56	57	58	60
Orthopedic impairments	56	57	57	47	47	48	49	51
Other health impairments	68	57	5	45	43	52	55	58
Visual impairments	28	27	26	22	23	22	23	24
Multiple disabilities	69	86	97	77	85	86	96	98
Deaf-blindness	2	2	2	1	2	2	1	1
Preschool ²	(3)	(3)	(3)	363	394	422	445	497

—Not available.

¹Includes students served under Chapter 1 of the Education Consolidation and Improvement Act (ECIA) and the Individuals with Disabilities Education Act (IDEA), formerly the Education of the Handicapped Act.

²Includes preschool children ages 3-5 years and 0-5 years served under Chapter 1 and IDEA, respectively.

³Prior to 1987-88, these students were included in the counts by disability. Beginning in 1987-88, states are no longer required to report preschool students (0-5 years) by disability.

NOTE: Counts are based on reports from the 50 states and District of Columbia only (i.e., figures from the U.S. territories are not included). Because of rounding, detail may not add to totals.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, various years.

Table 45-2 Percentage distribution of children served in federally supported programs for students with disabilities, by type of disability: School years ending 1977-92

Type of disability	1977	1978	1979	1980	1981	1982	1983	1984
All conditions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Learning disabilities	21.6	25.7	29.1	31.9	35.3	38.6	40.9	42.0
Speech impairments	35.3	32.6	31.2	29.6	28.2	27.0	26.6	26.2
Mental retardation	26.0	24.9	23.2	21.7	20.0	18.7	17.8	16.9
Serious emotional disturbance	7.7	7.7	7.7	8.2	8.4	8.1	8.3	8.4
Hearing impairments	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.7
Orthopedic impairments	2.4	2.3	1.8	1.6	1.4	1.4	1.3	1.3
Other health impairments	3.8	3.6	2.7	2.6	2.4	1.9	1.2	1.2
Visual impairments	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7
Multiple disabilities	—	—	1.3	1.5	1.6	1.7	1.5	1.5
Deaf-blindness	—	—	0.1	(1)	0.1	(1)	(1)	(1)
Preschool ²	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)

Type of disability	1985	1986	1987	1988	1989	1990	1991	1992
All conditions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Learning disabilities	42.5	43.1	43.8	43.4	43.7	44.2	44.6	45.0
Speech impairments	26.1	26.1	26.0	21.4	21.5	21.0	20.7	20.0
Mental retardation	16.1	15.3	14.7	13.1	12.4	11.8	11.2	11.1
Serious emotional disturbance	8.6	8.7	8.8	8.4	8.3	8.2	8.2	8.0
Hearing impairments	1.6	1.5	1.5	1.3	1.2	1.2	1.2	1.2
Orthopedic impairments	1.3	1.3	1.3	1.1	1.0	1.0	1.0	1.0
Other health impairments	1.6	1.3	1.2	1.0	0.9	1.1	1.2	1.2
Visual impairments	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
Multiple disabilities	1.6	2.0	2.2	1.7	1.9	1.9	2.0	2.0
Deaf-blindness	0.05	0.05	0.05	(1)	(1)	(1)	(1)	(1)
Preschool ²	(3)	(3)	(3)	8.2	8.7	9.1	9.3	10.0

—Not available.

¹Less than 0.05.

²Includes preschool children ages 3-5 years and 0-5 years served under Chapter 1 of ECIA and IDEA, respectively.

³Prior to 1987-88, these students were included in the counts by type of disability. Beginning in 1987-88, states are no longer required to report preschool students (0-5 years) with disabilities by type of disability.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, various years.

Table 45-3 Children served in federally supported programs for students with disabilities, as a percentage of public K-12 enrollment, by type of disability: School years ending 1977-92

Type of disability	1977	1978	1979	1980	1981	1982	1983	1984
All conditions	8.5	8.8	9.3	9.8	10.3	10.6	10.8	11.0
Learning disabilities	1.8	2.3	2.7	3.1	3.7	4.1	4.4	4.6
Speech impairments	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Mental retardation	2.2	2.2	2.2	2.1	2.1	2.0	1.9	1.9
Serious emotional disturbance	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.9
Hearing impairments	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Orthopedic impairments	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Other health impairments	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1
Visual impairments	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Multiple disabilities	—	—	0.1	0.1	0.2	0.2	0.2	0.2
Deaf-blindness	—	—	(1)	(1)	(1)	(1)	(1)	(1)
Preschool ²	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)

Type of disability	1985	1986	1987	1988	1989	1990	1991	1992
All conditions	10.9	10.9	10.9	11.1	11.2	11.3	11.4	11.7
Learning disabilities	4.6	4.7	4.8	4.8	4.9	5.0	5.1	5.3
Speech impairments	2.9	2.8	2.8	2.4	2.4	2.4	2.4	2.3
Mental retardation	1.8	1.7	1.6	1.4	1.4	1.3	1.3	1.3
Serious emotional disturbance	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.9
Hearing impairments	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Orthopedic impairments	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other health impairments	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Visual impairments	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Multiple disabilities	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Deaf-blindness	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Preschool ²	(3)	(3)	(3)	0.9	1.0	1.0	1.1	1.2

— Not available.

¹Less than 0.05.

²Includes preschool children ages 3-5 years and 0-5 years served under Chapter 1 of ECIA and IDEA, respectively.

³Prior to 1987-88, these students were included in the counts by type of disability. Beginning in 1987-88, states are no longer required to report preschool students (0-5 years) with disabilities by type of disability.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, various years.

Table 45-4 Distribution of students in special education programs, by type of disability, sex, and race/ethnicity of student: School years ending 1986, 1988, and 1990

Type of disability, sex, and race/ethnicity	1986	1988	1990
Total			
All conditions	100.0	100.0	100.0
Learning disabilities	46.6	47.5	48.6
Speech impairments	27.5	27.5	26.5
Mental retardation*	14.1	14.3	13.6
Serious emotional disturbance	6.9	5.9	6.7
Male			
All conditions	63.8	64.7	64.2
Learning disabilities	32.9	33.9	34.0
Speech impairments	17.4	17.4	16.8
Mental retardation*	8.2	8.7	8.1
Serious emotional disturbance	5.3	4.7	5.3
Female			
All conditions	31.3	31.6	31.1
Learning disabilities	13.8	14.2	14.7
Speech impairments	10.1	10.3	9.5
Mental retardation*	5.9	5.9	5.5
Serious emotional disturbance	1.5	1.2	1.4
White			
All conditions	66.0	66.7	65.1
Learning disabilities	33.1	34.3	34.0
Speech impairments	20.2	20.5	19.2
Mental retardation*	8.2	7.7	7.2
Serious emotional disturbance	4.4	4.2	4.7
Black			
All conditions	18.8	17.5	18.4
Learning disabilities	7.8	7.3	8.1
Speech impairments	4.4	4.0	4.2
Mental retardation*	4.7	4.9	4.6
Seriously emotionally disturbed	1.8	1.3	1.5
Hispanic			
All conditions	8.1	8.8	9.6
Learning disabilities	4.7	4.8	5.4
Speech impairments	2.1	2.1	2.3
Mental retardation*	0.8	1.5	1.5
Serious emotional disturbance	0.5	0.3	0.4

*Includes both those students classified as Educably Mentally Retarded (EMR) and Trainably Mentally Retarded (TMR).

SOURCE: U.S. Department of Education, Office for Civil Rights, *National Summaries from the Elementary and Secondary School Civil Rights Survey*, various years.

Table 45-5 Distribution of the number of students with disabilities served in schools offering special education programs, by control of school and number of students served: School years 1987-88 and 1990-91

Number of students served in special education programs	Percentage of schools offering special education programs			
	Public schools		Private schools	
	1987-88	1990-91	1987-88	1990-91
1-10	16.1	17.0	52.1	48.2
11-25	28.9	26.7	16.9	16.6
26-50	29.2	28.4	11.8	12.4
51-75	11.8	12.3	5.1	7.3
76-100	6.4	6.8	2.4	4.2
101-125	2.6	3.4	2.1	0.7
126-150	1.5	1.9	0.5	1.5
Over 150	2.4	2.4	1.6	1.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 and 1990-91 (Public School Questionnaire and Private School Questionnaire).

Table 45-6 Percentage of public school children with disabilities served in various school environments, by type of disability and classroom environment: School years ending 1986-91

Type of disability	1986	1987	1988	1989	1990	1991
Regular class/resource room combined in regular school						
All disabilities	69.0	69.2	69.0	69.6	69.2	69.3
Learning disabilities	77.8	76.8	76.7	77.5	76.8	76.2
Speech impairments	94.7	93.9	94.6	94.6	94.6	92.8
Mental retardation	28.8	29.8	29.2	28.0	26.5	30.4
Serious emotional disturbance	44.1	46.0	45.5	44.2	43.5	45.9
Hearing impairments	43.8	46.9	45.4	48.2	45.3	46.6
Multiple disabilities	20.6	24.3	20.1	21.4	20.5	23.8
Orthopedic impairments	48.0	47.5	45.7	47.8	48.6	51.7
Other health impairments	47.6	59.0	51.5	50.3	53.4	57.8
Visual impairments	62.6	62.3	63.1	65.0	62.8	65.3
Deaf-blindness	26.0	26.1	15.2	17.0	24.6	16.9
Separate class in regular school						
All disabilities	24.4	24.8	24.7	24.2	24.8	25.1
Learning disabilities	20.8	21.2	21.8	21.0	21.7	22.4
Speech impairments	3.7	4.1	3.8	3.8	3.8	5.6
Mental retardation	57.3	58.4	58.0	58.3	61.5	58.3
Serious emotional disturbance	36.1	36.8	34.5	35.8	37.1	35.8
Hearing impairments	32.5	32.9	35.1	33.4	31.6	32.8
Multiple disabilities	44.5	48.2	46.6	46.8	44.1	42.8
Orthopedic impairments	31.0	33.4	32.0	33.7	35.0	33.1
Other health impairments	24.8	19.9	18.8	19.6	24.5	26.3
Visual impairments	19.2	21.9	21.0	20.6	21.3	19.9
Deaf-blindness	22.2	37.5	36.9	29.6	30.4	32.0

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, various years.

Table 45-7 Ratio of the number of students with disabilities to the number of special education teachers who serve them, by type of disability: Selected school years ending 1977-91

Type of disability	1977	1978	1979	1980	1981	1982	1983	1990	1991
All conditions	21:1	19:1	19:1	18:1	18:1	18:1	18:1	15:1	15:1
Learning disabilities	18:1	18:1	18:1	17:1	17:1	19:1	21:1	19:1	21:1
Speech impairments	71:1	62:1	64:1	49:1	48:1	56:1	58:1	28:1	29:1
Mental retardation	14:1	12:1	13:1	13:1	12:1	12:1	13:1	17:1	16:1
Serious emotional disturbance	13:1	14:1	13:1	12:1	13:1	14:1	13:1	12:1	13:1
Hearing impairments	10:1	10:1	9:1	9:1	10:1	9:1	9:1	11:1	11:1
Orthopedic impairments	16:1	18:1	12:1	14:1	13:1	12:1	13:1	7:1	7:1
Other health impairments	28:1	26:1	21:1	21:1	31:1	22:1	16:1	16:1	21:1
Visual impairments	11:1	10:1	8:1	9:1	9:1	10:1	9:1	10:1	10:1
Multiple disabilities	—	—	—	15:1	13:1	13:1	12:1	23:1	25:1
Deaf-blindness	—	—	—	3:1	8:1	5:1	2:1	9:1	14:1

—Not available.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, various years.

Table 46-1 Children 5 to 17 years old who speak a language other than English at home and who speak English with difficulty, by state: 1980

State	Speak language other than English at home			Speak English with difficulty*		
	All children 5 to 7 years	Total speakers of other languages	Percent of all children	Total	Percent of all children	Percentage distribution
United States	47,493,975	4,568,329	9.6	1,883,395	4.0	100.0
Alabama	867,635	14,379	1.7	3,900	0.4	0.2
Alaska	91,871	9,800	10.7	4,616	5.0	0.2
Arizona	578,750	129,814	22.4	60,213	10.4	3.2
Arkansas	495,992	8,023	1.6	2,396	0.5	0.1
California	4,685,403	1,073,945	22.9	493,641	10.5	26.2
Colorado	593,914	47,351	8.0	16,445	2.8	0.9
Connecticut	638,990	70,212	11.0	24,047	3.8	1.3
Delaware	125,470	5,557	4.4	1,769	1.4	0.1
District of Columbia	109,311	5,817	5.3	1,956	1.8	0.1
Florida	1,794,858	205,592	11.5	66,466	3.7	3.5
Georgia	1,235,867	27,690	2.2	8,569	0.7	0.5
Hawaii	198,167	29,475	14.9	14,432	7.3	0.8
Idaho	213,569	9,928	4.6	3,692	1.7	0.2
Illinois	2,407,255	234,057	9.7	90,040	3.7	4.8
Indiana	1,200,631	43,154	3.6	15,105	1.3	0.8
Iowa	605,996	15,834	2.6	5,439	0.9	0.3
Kansas	468,820	17,146	3.7	6,253	1.3	0.3
Kentucky	801,733	12,860	1.6	4,131	0.5	0.2
Louisiana	971,609	49,221	5.1	16,967	1.7	0.9
Maine	243,690	12,884	5.3	3,581	1.5	0.2
Maryland	895,619	45,256	5.1	13,832	1.5	0.7
Massachusetts	1,155,475	106,410	9.2	37,626	3.3	2.0
Michigan	2,068,134	80,218	3.9	24,066	1.2	1.3
Minnesota	867,061	24,767	2.9	8,129	0.9	0.4
Mississippi	602,032	10,277	1.7	3,603	0.6	0.2
Missouri	1,010,684	24,710	2.4	7,873	0.8	0.4
Montana	167,426	5,372	3.2	2,115	1.3	0.1
Nebraska	324,887	8,891	2.7	2,731	0.8	0.1
Nevada	159,786	11,984	7.5	4,344	2.7	0.2
New Hampshire	196,172	9,183	4.7	2,145	1.1	0.1
New Jersey	1,530,830	205,109	13.4	71,703	4.7	3.8
New Mexico	303,120	110,624	36.5	48,471	16.0	2.6
New York	3,559,784	612,561	17.2	233,945	6.6	12.4
North Carolina	1,256,408	26,038	2.1	8,054	0.6	0.4
North Dakota	136,996	3,872	2.8	1,111	0.8	0.1
Ohio	2,307,791	86,066	3.7	27,504	1.2	1.5
Oklahoma	623,293	20,914	3.4	8,101	1.3	0.4
Oregon	525,901	23,328	4.4	9,053	1.7	0.5
Pennsylvania	2,379,510	111,958	4.7	40,130	1.7	2.1
Rhode Island	186,659	18,585	10.0	6,860	3.7	0.4
South Carolina	705,533	15,813	2.2	4,840	0.7	0.3
South Dakota	148,151	7,082	4.8	2,912	2.0	0.2
Tennessee	974,666	17,152	1.8	5,563	0.6	0.3
Texas	3,143,074	803,353	25.6	413,393	13.2	21.9
Utah	349,752	18,914	5.4	7,552	2.2	0.4
Vermont	110,001	3,715	3.4	850	0.8	0.0
Virginia	1,113,789	42,727	3.8	13,014	1.2	0.7
Washington	833,853	46,706	5.6	18,220	2.2	1.0
West Virginia	414,460	6,487	1.6	1,431	0.3	0.1
Wisconsin	1,012,663	33,320	3.3	9,675	1.0	0.5
Wyoming	100,934	4,198	4.2	891	0.9	0.0

*English proficiency is determined using responses to the question asked about those who spoke a language other than English at home: "How well does this persons speak English?" Possible responses were "Very well," "Well," "Not well," and "Not at all." Persons who responded less than "Very well" were included in the category Speak English with difficulty.

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population, U.S. Summary PC80-1-C1, table 236 and, for language characteristics, individual state volumes, PC80-1-D, table 196.

Table 46-2 Children 5 to 17 years old who speak a language other than English at home and who speak English with difficulty, by state and change between 1980 and 1990

State	Speak language other than English at home						Speak English with difficulty*	
	All children 5 to 17 years, 1990	Total speakers of other languages, 1990	Percent of all children, 1990	Total, 1990	Percent of all children, 1990	Percentage distribution, 1990	Change between 1980 and 1990	
							Numeric	Percentage
United States	45,342,448	6,322,934	13.9	2,388,243	5.3	100.0	504,848	26.8
Alabama	779,216	23,122	3.0	8,117	1.0	0.3	4,217	108.1
Alaska	117,070	11,158	9.5	4,111	3.5	0.2	-505	-10.9
Arizona	688,361	156,782	22.8	61,069	8.9	2.6	856	1.4
Arkansas	457,208	13,587	3.0	4,304	0.9	0.2	1,908	79.6
California	5,363,005	1,878,957	35.0	796,905	14.9	33.4	303,264	61.4
Colorado	608,578	51,202	8.4	17,908	2.9	0.7	1,463	8.9
Connecticut	522,667	78,041	14.9	26,738	5.1	1.1	2,691	11.2
Delaware	114,559	7,403	6.5	2,765	2.4	0.1	996	56.3
District of Columbia	80,008	9,444	11.8	3,989	5.0	0.2	2,033	103.9
Florida	2,021,858	360,452	17.8	113,441	5.6	4.7	46,975	70.7
Georgia	1,236,622	55,976	4.5	19,834	1.6	0.8	11,265	131.5
Hawaii	198,205	29,600	14.9	11,253	5.7	0.5	-3,179	-22.0
Idaho	227,791	13,241	5.8	4,633	2.0	0.2	941	25.5
Illinois	2,103,057	302,087	14.4	102,031	4.9	4.3	11,991	13.3
Indiana	1,059,526	51,651	4.9	19,078	1.8	0.8	3,973	26.3
Iowa	526,115	20,740	3.9	7,375	1.4	0.3	1,936	35.6
Kansas	474,043	25,036	5.3	8,818	1.9	0.4	2,565	41.0
Kentucky	705,277	20,063	2.8	7,475	1.1	0.3	3,344	80.9
Louisiana	895,657	49,382	5.5	16,826	1.9	0.7	-141	-0.8
Maine	223,494	9,886	4.4	2,655	1.2	0.1	-926	-25.9
Maryland	806,039	67,904	8.4	21,879	2.7	0.9	8,047	58.2
Massachusetts	940,711	143,528	15.3	50,444	5.4	2.1	12,818	34.1
Michigan	1,761,163	95,963	5.4	27,815	1.6	1.2	3,749	15.6
Minnesota	831,671	42,163	5.1	17,013	2.0	0.7	8,884	109.3
Mississippi	552,960	16,594	3.0	6,186	1.1	0.3	2,583	71.7
Missouri	947,101	33,731	3.6	12,230	1.3	0.5	4,357	55.3
Montana	163,940	6,382	3.9	2,102	1.3	0.1	-13	-0.6
Nebraska	309,706	11,256	3.6	3,323	1.1	0.1	592	21.7
Nevada	203,376	24,055	11.8	8,953	4.4	0.4	4,609	106.1
New Hampshire	194,492	8,561	4.4	2,587	1.3	0.1	442	20.6
New Jersey	1,269,172	245,795	19.4	76,273	6.0	3.2	4,570	6.4
New Mexico	321,418	94,719	29.5	33,779	10.5	1.4	-14,692	-30.3
New York	3,008,894	700,788	23.3	247,948	8.2	10.4	14,003	6.0
North Carolina	1,152,157	54,382	4.7	21,784	1.9	0.9	13,730	170.5
North Dakota	127,720	3,456	2.7	894	0.7	0.0	-217	-19.5
Ohio	2,019,893	100,589	5.0	36,570	1.8	1.5	9,066	33.0
Oklahoma	613,015	28,351	4.6	9,473	1.5	0.4	1,372	16.9
Oregon	522,568	36,776	7.0	13,169	2.5	0.6	4,116	45.5
Pennsylvania	2,000,469	136,203	6.8	49,787	2.5	2.1	9,657	24.1
Rhode Island	158,964	25,970	16.3	8,928	5.6	0.4	2,068	30.1
South Carolina	666,884	23,346	3.5	8,068	1.2	0.3	3,228	66.7
South Dakota	144,167	5,849	4.1	1,930	1.3	0.1	-982	-33.7
Tennessee	883,214	28,694	3.2	9,702	1.1	0.4	4,139	74.4
Texas	3,454,664	974,282	28.2	391,881	11.3	16.4	-21,512	-5.2
Utah	458,429	25,434	5.5	8,428	1.8	0.4	876	11.6
Vermont	102,343	3,212	3.1	774	0.8	0.0	-76	-8.9
Virginia	1,063,388	74,634	7.0	23,668	2.2	1.0	10,654	81.9
Washington	893,647	78,267	8.8	30,077	3.4	1.3	11,857	65.1
West Virginia	337,661	9,129	2.7	2,815	0.8	0.1	1,384	96.7
Wisconsin	930,099	51,171	5.5	19,320	2.1	0.8	9,645	99.7
Wyoming	100,206	3,940	3.9	1,118	1.1	0.0	227	25.5

*English proficiency is determined using responses to the question asked about those who spoke a language other than English at home: "How well does this persons speak English?" Possible responses were "Very well", "Well," "Not well," and "Not at all." Persons who responded less than "Very well" were included in the category "Speak English with difficulty."

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population, 1990 CPH-L-98, table ED90-4, "Language Use and English Ability, Persons 5 to 17 Years, by State: 1990." Source for 1980 data, see table 1.

Table 48-1 Percentage of students who reported being under the influence of drugs at school in the previous month, by grade, type of drug, and number of days: 1992

Type of drug and number of days	8th grade	10th grade	12th grade
Alcohol			
None	95.5	94.5	92.3
One or more days	4.5	5.5	7.8
One day	2.7	2.8	3.5
Two days	0.8	1.4	2.2
3-5 days	0.5	0.9	1.2
6-9 days	0.2	0.2	0.4
10 or more days	0.3	0.2	0.5
Marijuana or other illegal drug			
None	97.0	95.4	93.4
One or more days	3.0	4.5	6.6
One day	1.4	1.8	2.4
Two days	0.7	1.0	1.2
3-5 days	0.4	1.0	1.2
6-9 days	0.1	0.2	0.5
10 or more days	0.4	0.5	1.3
Cigarettes or chewing tobacco			
None	93.0	86.8	85.9
One or more days	7.1	13.2	14.1
One day	3.0	2.9	2.6
Two days	1.0	1.9	1.4
3-5 days	1.0	1.6	1.9
6-9 days	0.5	0.9	0.7
10 or more days	1.6	5.9	7.5

SOURCE: Johnston, Lloyd D., Patrick O'Malley, and Jerald G. Bachman, "Selected 1992 Outcome Measures from the Monitoring the Future Study for Goal 6 of the National Educational Goals," Institute for Social Research, The University of Michigan, August 1993.

Table 48-2 Percentage of students who reported alcohol and drug use in the last 12 months, by type of drug, grade, situation, and race/ethnicity: 1991 and 1992 combined

Situation and race/ethnicity	Alcohol		Marijuana or other illegal drug	
	Percentage saying one or more times		Percentage saying one or more times	
	8th grade	10th grade	8th grade	10th grade
At a school dance, game, or other school event				
Total	11.0	18.9	3.7	5.6
White	10.4	18.3	3.2	5.6
Black	10.4	19.5	2.6	3.6
Hispanic	16.3	24.4	8.4	8.4
At school during the day				
Total	3.9	7.2	2.5	5.2
White	3.5	6.5	2.2	5.2
Black	3.8	8.1	1.8	2.8
Hispanic	6.2	11.7	5.5	8.3
Near school				
Total	6.4	11.3	3.6	6.2
White	6.4	11.8	3.2	6.5
Black	4.5	7.3	2.1	3.4
Hispanic	10.5	14.0	7.8	8.2

SOURCE: Johnston, Lloyd D., Patrick O'Malley, and Jerald G. Bachman, "Selected 1992 Outcome Measures from the Monitoring the Future Study for Goal 6 of the National Educational Goals," Institute for Social Research, The University of Michigan, August 1993.

Table 48-3 Percentage of students who had someone offer to sell them drugs at school during the first half of the school year, by grade, number of offers, sex, race/ethnicity, and control of school: Spring 1988, 1990, and 1992

Sex, race/ethnicity and control of school	8th-graders in 1988		10th-graders in 1990		12th-graders in 1992	
	Once or twice	More than twice	Once or twice	More than twice	Once or twice	More than twice
All students	6.9	3.1	10.1	6.9	9.5	6.5
Sex						
Male	8.1	4.0	12.6	9.3	12.0	9.7
Female	5.7	2.2	7.6	4.4	6.9	3.4
Race/ethnicity						
White	6.9	3.1	10.6	7.3	9.7	6.9
Black	5.8	1.8	7.1	3.8	6.5	2.8
Hispanic	8.9	5.3	9.4	7.9	12.2	8.9
Asian	3.5	1.3	8.5	4.9	6.7	4.8
American Indian	11.3	5.1	16.5	8.1	10.8	10.3
Control of school						
Public	7.6	3.4	10.5	7.2	9.8	6.9
Catholic	1.6	0.9	9.0	2.7	8.7	4.0
Private, other religious affiliation	1.7	0.9	1.2	1.4	2.6	0.7
Private, no religious affiliation	3.2	1.8	4.5	2.7	4.5	5.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year (1988), First Follow-up (1990), and Second Follow-up (1992) Student Surveys.

Table 48-4 Percentage of public school students who had someone offer to sell them drugs at school during the first half of the school year, by grade, number of offers, and selected school characteristics: Spring 1988, 1990, and 1992

School characteristics	8th-graders in 1988		10th-graders in 1990		12th-graders in 1992	
	Once or twice	More than twice	Once or twice	More than twice	Once or twice	More than twice
All public schools	7.6	3.4	10.5	7.2	9.8	6.9
Minority enrollment						
Less than 20 percent	7.0	3.2	10.2	7.2	—	—
20 percent or more	8.6	3.7	10.1	7.2	—	—
School size						
Less than 150	4.4	3.2	0.0	2.1	4.5	4.5
150 to 449	6.0	2.6	7.6	3.9	5.2	3.7
450 to 749	8.3	3.4	7.4	5.4	8.9	7.0
750 or more	8.1	3.8	11.1	8.1	10.9	7.4
Metropolitan status						
Urban	9.1	3.5	9.8	7.2	10.3	7.8
Suburban	7.6	3.7	11.1	8.1	11.0	8.4
Rural	6.6	2.9	9.3	6.1	8.0	4.3
Percent of students receiving free lunch						
0-5	6.4	3.0	11.8	8.0	11.4	9.0
6-20	8.4	3.4	10.5	7.3	10.1	7.1
21-40	7.6	3.7	8.4	6.4	8.9	5.2
41 or more	7.9	3.3	9.3	6.8	8.9	6.9
Urban						
0-5	9.3	2.2	8.9	5.1	11.1	6.5
6-20	9.2	4.5	9.4	7.1	13.7	7.8
21-40	10.4	3.4	9.1	8.2	9.6	7.7
41 or more	8.5	3.4	8.1	6.8	8.4	8.8
Suburban						
0-5	6.0	3.5	12.9	8.5	11.9	10.4
6-20	8.5	3.3	11.3	8.1	10.9	8.3
21-40	8.8	4.7	7.7	8.2	9.6	5.0
41 or more	8.0	3.7	8.0	6.3	8.9	8.9
Rural						
0-5	6.1	1.6	8.0	7.6	8.9	4.5
6-20	7.6	3.0	10.2	6.6	6.7	4.7
21-40	5.8	3.3	8.3	4.9	8.2	4.0
41 or more	7.3	2.8	11.1	7.0	9.4	4.3

—Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year (1988), First Follow-up (1990), and Second Follow-up (1992) Student Surveys.

Table 49-1 Percentage of 16- to 24-year-old high school students who were employed in October, by sex and hours worked per week: 1970-92

October	All students			Male			Female		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1970	31.5	11.6	2.8	34.6	15.0	4.0	28.1	7.8	1.5
1971	30.4	11.2	2.2	33.9	14.9	3.1	26.7	7.2	1.2
1972	32.5	13.6	2.9	36.0	16.9	4.2	28.6	9.9	1.5
1973	36.1	15.4	3.3	39.3	19.5	4.9	32.5	10.8	1.5
1974	35.2	15.1	3.1	38.1	18.5	4.3	32.0	11.4	1.7
1975	32.9	13.0	2.7	34.5	15.7	3.9	31.1	10.0	1.3
1976	33.4	14.3	2.6	35.3	17.3	3.7	31.3	10.9	1.3
1977	35.8	15.7	3.2	39.0	19.0	4.4	32.2	12.1	2.1
1978	38.2	16.2	2.9	39.8	19.2	3.9	36.5	12.9	1.8
1979	38.0	16.2	2.7	39.5	19.1	3.5	36.3	13.0	1.8
1980	35.1	13.3	2.3	36.0	14.7	3.0	34.0	11.9	1.4
1981	32.5	12.0	2.1	34.7	14.2	2.9	30.1	9.8	1.2
1982	29.5	9.7	1.6	29.3	10.6	2.1	29.8	8.6	0.9
1983	28.7	9.8	1.5	28.6	10.0	1.9	28.9	9.6	1.1
1984	31.0	11.5	1.3	31.3	12.6	2.0	30.6	10.3	0.4
1985	31.3	11.9	1.2	31.6	12.8	1.8	31.0	11.0	0.6
1986	34.1	13.7	1.9	33.2	14.0	2.6	35.2	13.4	1.2
1987	34.6	13.4	1.6	33.5	15.1	2.1	35.9	11.5	1.0
1988	35.1	14.2	1.6	34.7	16.7	2.3	35.5	11.3	0.9
1989	37.6	14.8	1.9	36.8	16.4	2.8	38.4	13.0	0.9
1990	32.1	11.9	2.0	32.7	13.2	2.4	31.4	10.4	1.6
1991	31.1	11.0	1.2	30.2	11.4	1.3	32.1	10.5	1.1
1992	29.6	10.7	1.2	31.1	11.9	1.5	27.9	9.4	0.8

—Not available.

*Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 49-2 Percentage of 16- to 24 year old full-time college students who were employed in October, by race/ethnicity and hours worked per week: 1970-92

October	All students			White			Black			Hispanic		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1970	33.8	14.1	3.7	34.9	14.7	3.9	21.2	8.0	1.8	—	—	—
1971	34.1	14.8	3.7	35.8	15.6	3.8	16.9	6.1	2.5	—	—	—
1972	35.1	15.0	3.4	36.3	15.2	3.2	21.5	12.2	5.8	42.7	21.0	2.5
1973	36.4	16.8	4.4	37.6	17.4	4.3	27.7	14.2	5.8	34.8	13.8	3.3
1974	36.6	17.0	4.7	38.2	17.4	4.7	23.2	13.0	5.0	34.4	15.8	6.8
1975	35.2	16.6	4.6	36.3	17.0	4.6	23.8	13.0	4.7	39.0	17.5	4.5
1976	37.5	16.9	4.0	39.6	17.7	3.9	22.7	11.9	4.7	35.4	14.8	3.1
1977	38.8	18.1	4.2	40.9	18.9	4.0	20.8	10.5	5.3	42.9	23.5	4.6
1978	39.9	19.0	4.7	41.8	19.7	4.7	22.2	11.7	4.7	53.2	26.8	7.4
1979	38.1	18.0	4.0	40.0	18.4	3.9	24.8	13.9	5.4	35.6	20.4	5.2
1980	40.0	17.9	3.8	42.1	18.3	3.8	24.0	12.2	5.1	41.4	26.6	4.5
1981	39.3	18.7	4.2	41.6	19.5	4.1	23.8	11.7	3.8	39.2	21.9	5.9
1982	39.9	18.5	3.1	42.4	19.6	3.0	26.2	12.2	4.3	33.1	14.1	1.6
1983	40.4	18.8	3.8	42.7	19.3	4.0	28.5	16.0	2.2	33.7	20.2	5.6
1984	42.1	21.0	4.2	44.7	22.0	4.3	25.2	14.8	3.2	34.8	19.7	4.1
1985	44.2	21.5	4.3	47.4	22.6	4.4	24.1	16.0	4.9	43.5	23.2	3.5
1986	43.0	21.9	4.3	46.3	23.5	4.7	24.7	14.2	3.9	40.5	22.6	2.1
1987	44.2	22.3	4.3	45.7	22.8	4.0	31.7	15.8	4.3	52.1	31.8	7.6
1988	46.5	24.5	4.7	48.9	25.1	5.0	31.8	18.6	3.3	40.9	28.7	6.7
1989	46.5	25.2	5.4	48.8	25.6	5.6	29.3	18.5	4.3	49.6	33.8	6.0
1990	45.7	24.1	4.8	48.6	25.1	5.2	29.8	17.1	2.8	45.7	28.0	6.7
1991	47.2	25.4	5.6	49.6	26.5	6.0	31.7	19.1	3.4	54.2	30.6	4.3
1992	47.2	25.8	5.5	50.5	27.2	5.9	30.2	19.9	4.4	47.0	29.4	4.7

—Not available.

*Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 49-3 Percentage of 16- to 24 year old full-time college students who were employed in October, by sex and hours worked per week: 1970-92

October	All students			Male			Female		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1970	33.8	14.1	3.7	33.9	17.3	5.0	33.6	9.5	1.8
1971	34.1	14.8	3.7	36.5	18.5	5.4	30.8	9.6	1.2
1972	34.9	15.0	3.4	37.8	18.9	5.3	31.5	10.0	1.0
1973	36.4	16.8	4.4	39.2	21.0	6.1	32.9	11.5	2.3
1974	36.6	17.0	4.7	37.5	19.0	6.1	35.4	14.7	3.1
1975	35.2	16.6	4.6	34.7	18.2	5.9	35.8	14.7	3.1
1976	37.5	16.9	4.0	39.1	20.0	5.1	35.9	13.6	2.9
1977	38.8	18.1	4.2	38.7	19.3	5.9	39.0	16.9	2.3
1978	39.9	19.0	4.7	39.6	20.6	5.8	40.3	17.2	3.4
1979	38.1	18.0	4.0	36.7	19.3	4.6	39.5	16.6	3.4
1980	40.0	17.9	3.8	39.4	19.0	4.4	40.7	16.7	3.2
1981	39.3	18.7	4.2	38.3	19.7	4.4	40.4	17.7	3.9
1982	39.9	18.5	3.1	38.8	19.2	3.2	41.0	17.7	2.9
1983	40.4	18.8	3.8	40.0	20.6	4.7	40.8	17.0	2.9
1984	42.1	21.0	4.2	40.6	21.6	5.3	43.6	20.2	3.1
1985	44.2	21.5	4.3	42.4	22.1	4.9	46.0	20.9	3.7
1986	43.0	21.9	4.3	43.2	22.9	4.5	42.8	20.8	4.1
1987	44.2	22.3	4.3	43.6	22.7	4.8	44.9	21.8	3.6
1988	46.5	24.5	4.7	44.3	24.7	5.1	48.7	24.3	4.3
1989	46.5	25.2	5.4	44.3	25.4	5.8	48.6	24.9	4.9
1990	45.7	24.1	4.8	43.1	23.2	5.0	48.3	25.0	4.6
1991	47.2	25.0	5.6	45.2	26.5	6.5	49.1	24.4	4.7
1992	47.2	25.8	5.5	46.8	25.8	6.6	47.5	25.8	4.5

—Not available.

*Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 49-4 Percentage of 16- to 24-year-old part-time college students who were employed in October, by race/ethnicity and hours worked per week: 1970-92

October	All students			White			Black			Hispanic		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1970	82.5	76.2	60.4	83.0	76.6	60.7	78.0	76.0	62.0	—	—	—
1971	83.4	75.0	51.7	83.8	75.2	53.6	79.2	74.0	36.4	—	—	—
1972	84.8	76.1	53.1	84.4	77.1	54.3	73.1	69.2	41.3	91.7	83.3	66.7
1973	85.3	76.8	52.5	86.6	77.9	53.5	70.7	66.7	42.7	92.5	82.5	55.0
1974	84.4	77.2	61.0	85.7	77.8	60.4	74.2	70.8	64.0	80.6	77.4	62.9
1975	80.8	72.1	52.6	82.4	74.1	55.1	76.0	62.5	41.3	68.3	57.1	39.7
1976	84.6	76.1	53.0	85.6	77.4	53.2	72.3	66.0	58.5	81.5	69.2	40.0
1977	83.4	75.3	53.1	86.0	77.4	54.7	65.9	61.1	44.4	77.8	74.1	51.9
1978	86.1	76.6	53.9	88.0	78.3	55.7	65.2	51.7	29.2	82.3	75.9	63.3
1979	86.9	78.8	56.6	89.2	80.8	58.2	73.5	66.3	49.0	75.0	68.3	46.7
1980	85.2	75.7	53.0	87.3	77.6	55.0	72.5	58.8	36.3	76.5	71.6	50.6
1981	85.7	76.0	51.4	87.2	77.8	52.0	75.4	61.0	41.5	84.1	79.7	50.7
1982	81.1	69.7	48.1	84.4	72.3	50.0	62.5	58.1	33.1	80.6	68.9	49.5
1983	81.7	74.8	48.1	86.6	79.2	51.9	49.2	47.5	23.8	74.0	68.0	45.0
1984	84.9	77.7	55.2	87.1	79.3	57.8	67.7	63.4	45.3	89.6	83.1	50.6
1985	85.9	79.0	52.2	87.9	81.7	56.2	71.8	66.4	42.0	85.2	70.4	28.4
1986	87.2	78.0	54.4	90.0	81.0	57.4	77.0	73.8	44.3	81.0	64.3	43.7
1987	85.4	77.4	49.5	87.2	79.2	51.4	70.9	65.8	37.3	86.5	77.4	54.1
1988	88.3	81.6	54.2	90.4	84.5	55.7	78.1	68.6	48.6	83.9	72.9	52.5
1989	87.2	80.8	55.4	89.8	83.2	58.3	73.2	67.5	43.1	85.1	79.3	55.4
1990	83.7	78.7	52.7	86.8	80.5	55.3	76.9	76.3	49.5	81.8	77.7	50.4
1991	85.8	76.3	50.9	89.0	79.1	55.3	66.1	63.4	38.4	80.2	71.0	37.4
1992	83.4	75.0	47.8	87.0	78.4	49.8	77.6	67.1	45.4	73.0	65.5	38.5

—Not available.

*Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 49-5 Percentage of 16- to 24 year old part-time college students who were employed in October, by sex and hours worked per week: 1970-92

October	All students			Male			Female		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1970	82.5	76.2	60.4	87.6	82.0	66.2	77.7	71.1	55.2
1971	83.4	75.0	51.7	87.7	80.4	60.9	78.2	68.7	40.7
1972	83.1	76.1	53.1	88.5	81.5	61.5	77.4	70.4	44.2
1973	85.3	76.8	52.5	86.3	78.9	57.5	84.4	74.8	47.3
1974	84.4	77.2	61.0	88.3	82.1	65.8	80.7	72.5	56.5
1975	80.8	72.1	52.6	82.5	74.1	55.3	79.1	70.0	49.9
1976	84.6	76.1	53.0	84.0	76.4	56.2	85.3	75.9	50.3
1977	83.4	75.3	53.1	86.3	78.4	57.0	80.6	72.3	49.5
1978	86.1	76.6	53.9	88.6	80.4	61.6	83.8	72.8	47.0
1979	86.9	78.8	56.6	90.4	82.3	60.4	83.9	76.2	53.6
1980	85.2	75.7	53.0	86.5	80.2	58.2	84.2	72.3	49.1
1981	85.7	76.0	51.4	88.5	78.0	57.2	83.3	74.3	46.4
1982	81.1	69.7	48.1	79.8	70.2	50.7	82.1	69.4	46.2
1983	81.7	74.8	48.1	84.0	78.3	52.5	79.5	71.3	43.8
1984	84.9	77.7	55.2	90.0	82.0	60.1	80.6	74.2	51.2
1985	85.9	79.0	52.2	85.9	80.0	53.6	85.7	78.3	51.2
1986	87.2	78.0	54.4	87.8	81.7	59.0	86.9	75.3	50.9
1987	85.4	77.4	49.5	86.9	78.8	50.4	84.3	76.2	48.8
1988	88.3	81.6	54.2	87.4	82.1	56.1	89.2	81.3	52.7
1989	87.2	80.8	55.4	88.1	82.6	60.1	86.7	79.4	52.0
1990	83.7	78.7	52.7	86.4	82.6	55.4	81.3	75.4	50.5
1991	85.8	76.3	50.9	87.2	79.3	50.2	84.7	73.9	51.7
1992	83.4	75.0	47.8	83.7	75.8	44.1	83.2	74.5	50.3

*Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table 50-1 Total enrollment in institutions of higher education, by control and type of institution and race/ethnicity of student: Fall, selected years 1976-92

Control and type of institution and race/ethnicity of student	Number, in thousands									
	1976	1978	1980	1982	1984	1986	1988	1990	1991	1992
All institutions	10,986	11,231	12,087	12,388	12,235	12,504	13,043	13,710	14,359	14,491
White	9,076	9,194	9,833	9,997	9,815	9,921	10,283	10,675	10,990	10,870
Minority	1,691	1,785	1,949	2,059	2,085	2,238	2,399	2,639	2,953	3,164
Black	1,033	1,054	1,107	1,101	1,076	1,082	1,130	1,223	1,335	1,394
Hispanic	384	417	472	519	535	618	680	758	867	954
Asian or Pacific Islander	198	235	286	351	390	448	497	555	637	697
American Indian/Alaskan Native	76	78	84	88	84	90	93	103	114	119
Nonresident alien	219	253	305	331	335	345	361	397	416	458
Public institutions	8,641	8,770	9,456	9,695	9,458	9,714	10,156	10,741	11,310	11,388
White	7,095	7,136	7,656	7,785	7,543	7,654	7,964	8,340	8,622	8,487
Minority	1,401	1,466	1,596	1,692	1,696	1,836	1,955	2,136	2,412	2,592
Black	831	840	876	873	844	854	881	952	1,053	1,101
Hispanic	337	363	406	446	456	532	587	648	742	822
Asian or Pacific Islander	166	195	240	296	323	371	406	445	516	566
American Indian/Alaskan Native	68	68	74	77	72	79	81	90	100	103
Nonresident alien	145	167	204	219	219	224	238	265	275	310
Private institutions	2,345	2,461	2,630	2,693	2,777	2,790	2,887	2,970	3,049	3,104
White	1,982	2,058	2,177	2,212	2,272	2,267	2,319	2,335	2,368	2,383
Minority	290	319	353	368	389	403	444	503	541	572
Black	202	215	231	228	232	228	248	271	282	293
Hispanic	47	55	66	74	79	86	93	110	125	133
Asian or Pacific Islander	32	40	47	55	67	77	91	110	121	132
American Indian/Alaskan Native	9	9	10	10	11	11	11	12	14	16
Nonresident alien	73	85	101	113	116	120	123	132	141	149
All 4-year institutions	7,107	7,203	7,565	7,648	7,708	7,824	8,175	8,529	8,707	8,768
White	5,999	6,027	6,275	6,306	6,301	6,337	6,582	6,757	6,791	6,747
Minority	931	975	1,050	1,073	1,124	1,195	1,292	1,450	1,573	1,664
Black	604	612	634	612	617	615	656	715	758	792
Hispanic	174	190	217	229	246	278	296	345	383	410
Asian or Pacific Islander	119	138	162	193	223	262	297	343	382	408
American Indian/Alaskan Native	35	35	37	39	38	40	42	48	51	55
Nonresident alien	177	201	241	270	282	292	302	322	343	357
Public 4-year institutions	4,893	4,896	5,128	5,176	5,196	5,300	5,544	5,848	5,905	5,902
White	4,120	4,085	4,243	4,258	4,230	4,275	4,455	4,606	4,597	4,534
Minority	667	691	741	756	796	850	908	1,046	1,102	1,156
Black	422	425	438	421	427	424	449	495	516	536
Hispanic	129	140	156	164	179	206	216	263	279	295
Asian or Pacific Islander	88	99	117	140	160	188	210	251	266	282
American Indian/Alaskan Native	28	27	29	31	30	32	33	38	41	43
Nonresident alien	106	120	144	161	170	176	181	196	206	213
Private 4-year institutions	2,214	2,306	2,438	2,473	2,510	2,524	2,631	2,731	2,802	2,866
White	1,879	1,942	2,032	2,048	2,071	2,062	2,127	2,163	2,194	2,213
Minority	264	283	309	317	328	345	384	440	472	508
Black	182	187	196	192	190	191	208	228	242	256
Hispanic	44	50	60	65	67	73	80	96	104	115
Asian or Pacific Islander	31	39	45	53	62	74	87	107	115	126
American Indian/Alaskan Native	7	8	8	8	8	8	9	10	11	12
Nonresident alien	71	81	97	108	112	117	120	128	137	145

**Table 50-1 Total enrollment in institutions of higher education, by control and type of institution and race/ethnicity of student: Fall, selected years 1976-92—
Continued**

Control and type of institution and race/ethnicity of student	Number, in thousands									
	1976	1978	1980	1982	1984	1986	1988	1990	1991	1992
All 2-year institutions	3,879	4,028	4,521	4,740	4,527	4,680	4,868	5,181	5,652	5,723
White	3,077	3,167	3,558	3,692	3,514	3,584	3,702	3,918	4,199	4,123
Minority	760	810	899	987	961	1,043	1,107	1,189	1,380	1,500
Black	429	443	472	489	459	467	473	509	578	602
Hispanic	210	227	255	291	289	340	384	414	484	545
Asian or Pacific Islander	79	97	124	158	167	186	199	212	256	289
American Indian/Alaskan Native	41	43	47	49	46	51	50	54	63	64
Nonresident alien	42	52	64	61	53	53	60	75	74	100
Public 2-year institutions	3,748	3,874	4,329	4,520	4,260	4,414	4,612	4,997	25,405	5,486
White	2,974	3,051	3,413	3,527	3,313	3,379	3,509	3,780	4,025	3,953
Minority	735	775	855	936	899	986	1,047	1,153	1,310	1,436
Black	410	415	438	452	417	430	433	481	537	565
Hispanic	208	222	250	282	277	326	371	409	463	527
Asian or Pacific Islander	78	96	123	155	162	183	196	210	250	284
American Indian/Alaskan Native	39	41	45	46	42	47	48	52	60	60
Nonresident alien	39	48	60	57	49	49	56	64	70	97
Private 2-year institutions	131	155	193	220	266	266	256	244	247	238
White	103	116	145	165	202	205	193	175	174	170
Minority	25	35	44	51	61	57	60	66	69	64
Black	20	28	35	37	41	37	41	43	40	37
Hispanic	3	5	5	9	12	14	13	15	20	18
Asian or Pacific Islander	1	1	2	3	5	4	4	5	6	6
American Indian/Alaskan Native	2	2	2	3	4	3	3	3	3	4
Nonresident alien	3	4	4	4	4	4	3	4	4	4

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 201 and unpublished tabulations (based on the IPEDS/HEGIS survey of fall enrollment in postsecondary and higher education, various years).

Table 50-2 Percentage distribution of total enrollment in institutions of higher education, by control and type of institution and race/ethnicity of student: Fall, selected years 1976-92

Control and type of institution and race/ethnicity of student	Number, in thousands									
	1976	1978	1980	1982	1984	1986	1988	1990	1991	1992
All institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	82.6	81.9	81.4	80.7	80.2	79.3	78.8	77.9	76.5	75.0
Minority	15.4	15.9	16.1	16.6	17.0	17.9	18.4	19.2	20.6	21.8
Black	9.4	9.4	9.2	8.9	8.8	8.7	8.7	8.9	9.3	9.6
Hispanic	3.5	3.7	3.9	4.2	4.4	4.9	5.2	5.5	6.0	6.6
Asian or Pacific Islander	1.8	2.1	2.4	2.8	3.2	3.6	3.8	4.0	4.4	4.8
American Indian/Alaskan Native	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
Nonresident alien	2.0	2.3	2.5	2.7	2.7	2.8	2.8	2.9	2.9	3.2
Public institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	82.1	81.4	81.0	80.3	79.8	78.8	78.4	77.6	76.2	74.5
Minority	16.2	16.7	16.9	17.5	17.9	18.9	19.2	19.9	21.3	22.8
Black	9.6	9.6	9.3	9.0	8.9	8.8	8.7	8.9	9.3	9.7
Hispanic	3.9	4.1	4.3	4.6	4.8	5.5	5.8	6.0	6.6	7.2
Asian or Pacific Islander	1.9	2.2	2.5	3.1	3.4	3.8	4.0	4.1	4.6	5.0
American Indian/Alaskan Native	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
Nonresident alien	1.7	1.9	2.2	2.3	2.3	2.3	2.3	2.5	2.4	2.7
Private institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	84.5	83.6	82.8	82.1	81.8	81.3	80.3	78.6	77.7	76.8
Minority	12.4	13.0	13.4	13.7	14.0	14.4	15.4	16.9	17.7	18.4
Black	8.6	8.7	8.8	8.5	8.4	8.2	8.6	9.1	9.2	9.4
Hispanic	2.0	2.2	2.5	2.7	2.8	3.1	3.2	3.7	4.1	4.3
Asian or Pacific Islander	1.4	1.6	1.8	2.0	2.4	2.8	3.2	3.7	4.0	4.3
American Indian/Alaskan Native	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Nonresident alien	3.1	3.5	3.8	4.2	4.2	4.3	4.3	4.4	4.6	4.8
All 4-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	84.4	83.7	82.9	82.5	81.7	81.0	80.5	79.2	78.0	77.0
Minority	13.1	13.5	13.9	14.0	14.6	15.3	15.8	17.0	18.1	19.0
Black	8.5	8.5	8.4	8.0	8.0	7.9	8.0	8.4	8.7	9.0
Hispanic	2.4	2.6	2.9	3.0	3.2	3.6	3.6	4.0	4.4	4.7
Asian or Pacific Islander	1.7	1.9	2.1	2.5	2.9	3.3	3.6	4.0	4.4	4.7
American Indian/Alaskan Native	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Nonresident alien	2.5	2.8	3.2	3.5	3.7	3.7	3.7	3.8	3.9	4.1
Public 4-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	84.2	83.4	82.7	82.3	81.4	80.7	80.4	78.8	77.8	76.8
Minority	13.6	14.1	14.5	14.6	15.3	16.0	16.4	17.9	18.7	19.6
Black	8.6	8.7	8.5	8.1	8.2	8.0	8.1	8.5	8.7	9.1
Hispanic	2.6	2.9	3.0	3.2	3.4	3.9	3.9	4.5	4.7	5.0
Asian or Pacific Islander	1.8	2.0	2.3	2.7	3.1	3.5	3.8	4.3	4.5	4.8
American Indian/Alaskan Native	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7
Nonresident alien	2.2	2.5	2.8	3.1	3.3	3.3	3.3	3.4	3.5	3.6
Private 4-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	84.9	84.2	83.3	82.8	82.5	81.7	80.8	79.2	78.3	77.2
Minority	11.9	12.3	12.7	12.8	13.1	13.7	14.6	16.1	16.8	17.7
Black	8.2	8.1	8.0	7.8	7.6	7.6	7.9	8.3	8.6	8.9
Hispanic	2.0	2.2	2.5	2.6	2.7	2.9	3.0	3.5	3.7	4.0
Asian or Pacific Islander	1.4	1.7	1.8	2.1	2.5	2.9	3.3	3.9	4.1	4.4
American Indian/Alaskan Native	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
Nonresident alien	3.2	3.5	4.0	4.4	4.5	4.6	4.6	4.7	4.9	5.1

Table 50-2 Percentage distribution of total enrollment in institutions of higher education, by control and type of institution and race/ethnicity of student: Fall, selected years 1976-92—Continued

Control and type of institution and race/ethnicity of student	Number, in thousands									
	1976	1978	1980	1982	1984	1986	1988	1990	1991	1992
All 2-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	79.3	78.6	78.7	77.9	77.6	76.6	76.0	75.6	74.3	72.0
Minority	19.6	20.1	19.9	20.8	21.2	22.3	22.7	22.9	24.4	26.2
Black	11.1	11.0	10.4	10.3	10.1	10.0	9.7	9.8	10.2	10.5
Hispanic	5.4	5.6	5.6	6.1	6.4	7.3	7.9	8.0	8.6	9.5
Asian or Pacific Islander	2.0	2.4	2.7	3.3	3.7	4.0	4.1	4.1	4.5	5.0
American Indian/Alaskan Native	1.1	1.1	1.0	1.0	1.0	1.1	1.0	1.0	1.1	1.1
Nonresident alien	1.1	1.3	1.4	1.3	1.2	1.1	1.2	1.4	1.3	1.7
Public 2-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	79.3	78.8	78.8	78.0	77.8	76.6	76.1	75.6	74.5	72.1
Minority	19.6	20.0	19.8	20.7	21.1	22.3	22.7	23.1	24.2	26.2
Black	10.9	10.7	10.1	10.0	9.8	9.7	9.4	9.6	9.9	10.3
Hispanic	5.5	5.7	5.8	6.2	6.5	7.4	8.0	8.2	8.6	9.6
Asian or Pacific Islander	2.1	2.5	2.8	3.4	3.8	4.1	4.2	4.2	4.6	5.2
American Indian/Alaskan Native	1.0	1.1	1.0	1.0	1.0	1.1	1.0	1.0	1.1	1.1
Nonresident alien	1.0	1.2	1.4	1.3	1.2	1.1	1.2	1.3	1.3	1.8
Private 2-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	78.6	74.8	75.1	75.0	75.9	77.1	75.4	71.7	70.4	71.4
Minority	19.1	22.6	22.8	23.2	22.9	21.4	23.4	27.0	27.9	26.9
Black	15.3	18.1	18.1	16.8	15.4	13.9	16.0	17.6	16.2	15.5
Hispanic	2.3	3.2	2.6	4.1	4.5	5.3	5.1	6.1	8.1	7.6
Asian or Pacific Islander	0.8	0.6	1.0	1.4	1.9	1.5	1.6	2.0	2.4	2.5
American Indian/Alaskan Native	1.5	1.3	1.0	1.4	1.5	1.1	1.2	1.2	1.2	1.7
Nonresident alien	2.3	2.6	2.1	1.8	1.5	1.5	1.2	1.6	1.6	1.7

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 201 and unpublished tabulations (based on the IPEDS/HEGIS survey of fall enrollment in postsecondary and higher education, various years).

Table 51-1 Percentage of undergraduate students with selected characteristics, by control and type of postsecondary institution: 1989-90

Characteristic	Public				Private, nonprofit				Private for-profit ²
	Total ¹	2-year	4-year		Total ¹	2-year	4-year		
			Non-PhD	PhD			Non-PhD	PhD	
Attended part-time	50.9	70.1	30.8	24.1	23.4	28.5	26.9	17.2	17.1
Lived off campus	88.9	98.7	78.4	73.9	59.7	72.4	57.6	57.2	96.8
Female	55.0	56.7	55.5	51.6	54.3	61.2	55.9	50.0	61.6
Minority	22.6	24.7	21.5	19.0	21.1	19.3	18.4	22.8	42.7
24 years of age or older	44.3	56.2	32.6	25.0	29.5	34.2	31.7	21.2	49.2
Married	27.1	34.8	19.6	14.5	17.5	19.9	20.0	11.4	24.2
Financially independent	53.2	65.6	41.0	32.5	36.5	45.1	38.1	27.7	71.5
Family income (dependent students) ³									
Low	17.9	19.8	19.3	14.6	19.0	21.7	20.9	15.3	35.8
Lower middle	21.1	23.8	20.3	17.8	16.7	21.7	17.6	14.3	27.7
Middle	20.2	19.3	21.5	20.6	17.4	22.5	18.5	14.8	17.3
Upper middle	21.9	21.3	21.5	23.0	18.8	14.2	19.3	19.1	12.5
Upper	18.9	15.7	17.4	24.0	28.1	19.9	23.6	36.6	6.7
Parents' highest educational level ⁴									
High school graduate or less	41.6	47.9	38.4	29.0	32.5	44.3	36.0	22.7	64.1
Vocational/trade school	5.1	5.2	5.4	4.6	4.5	7.4	5.0	2.9	6.0
Some college	18.4	18.5	18.9	17.8	14.6	15.1	16.0	12.2	14.6
Bachelor's degree or higher	35.0	28.4	37.4	48.7	48.5	33.2	43.1	62.2	15.3
Bachelor's degree	19.9	17.1	21.4	25.4	22.5	17.5	21.5	25.7	9.3
Advanced degree	15.1	11.3	16.0	23.3	26.0	15.7	21.6	36.5	6.0

¹Includes students in less than 2-year institutions (1 percent of enrollment in public institutions and 3 percent of enrollment in private, nonprofit institutions).

²Sixty-three percent of the students in private, for-profit institutions were in less-than-2-year institutions, 30 percent were in 2-year institutions, and 7 percent were in 4-year institutions.

³Adjusted 1988 gross family income in quintiles. The cut-points for the quintiles are: \$0, \$16,200, \$30,100, \$43,900, and \$60,100.

⁴Highest level attained by either parent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table 52-1 Community service performed by undergraduate students, by degree program and attendance status: Academic year 1989-90

Attendance status	Bachelor's degree		Associate's degree	
	Percent performing community service	Average hours of community service*	Percent performing community service	Average hours of community service*
Total	16.9	5.2	13.3	5.3
Full-time	15.6	5.3	10.0	5.4
At least half-time, but less than full-time	19.1	5.1	13.3	5.4
Less than half-time	24.4	4.4	18.1	5.3

*Calculated only for those performing community service.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table 52-2 Relationship of community service performed by full-time students to future career, by degree program: Academic year 1989-90

Relationship to future career	Bachelor's degree	Associate's degree
	(Percentage distribution)	
Total	100.0	100.0
Related to career	40.8	38.5
Not related to career	59.2	61.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table 52-3 Community service performed by full-time undergraduate students, by degree program and selected institutional and student characteristics: Academic year 1989-90

	Bachelor's degree program		Associate's degree program	
	Percent performing community service	Average hours of community service ¹	Percent performing community service	Average hours of community service ¹
Total	15.6	5.3	10.0	5.4
Institutional characteristics				
Control and type of institution				
Public	14.5	5.4	10.4	5.4
4-year non-PhD-granting	14.7	5.1	—	—
4-year PhD-granting	14.3	5.6	—	—
Private, non-profit	18.4	5.3	8.8	5.9
4-year non-PhD-granting	16.2	5.5	—	—
4-year PhD-granting	21.5	5.0	—	—
Private, for-profit	7.3	(4)	6.4	5.0
Size of institution ²				
Fewer than 2,500 students	16.5	6.0	11.4	0.9
2,500 to 4,999 students	17.7	4.5	12.2	(4)
5,000 to 9,999 students	15.7	4.9	9.4	1.4
10,000 students or more	15.1	5.5	6.8	(4)
Student demographic and educational characteristics				
Sex				
Men	14.0	5.8	8.4	5.9
Women	17.2	5.0	11.2	5.2
Race/ethnicity				
White	15.6	5.3	10.4	5.1
Black	15.9	5.7	8.3	10.1
Hispanic	14.9	5.7	11.7	(4)
Asian/Pacific Islander	15.8	4.6	4.3	(4)
American Indian	20.9	(4)	(4)	(4)
Age				
Under 24	14.5	5.3	8.4	5.6
24 or older	21.7	5.4	14.3	5.2
Field of major				
Humanities	15.1	6.1	11.4	5.3
Social/behavioral sciences	20.7	5.2	(4)	(4)
Natural sciences	17.3	5.3	12.4	(4)
Computer science and engineering	11.3	4.5	7.4	(4)
Computer science	9.8	4.5	11.2	(4)
Engineering	11.8	4.5	6.2	(4)
Education	17.7	4.8	17.2	(4)
Business	12.5	4.6	5.7	5.9
Health services/sciences	17.4	6.2	14.1	(4)
Other ³	17.1	7.7	11.4	6.1

Table 52-3 Community service performed by full-time undergraduate students, by degree program and selected institutional and student characteristics: Academic year 1989-90—Continued

	Bachelor's degree program		Associate's degree program	
	Percent performing community service	Average hours of community service ¹	Percent performing community service	Average hours of community service ¹
Student family background characteristics				
Parents' highest education level				
High school graduate or less	13.9	5.5	10.8	5.7
Trade/vocational school	17.9	4.5	13.0	(4)
Some college	14.6	5.2	9.8	5.5
Bachelor's degree	15.2	4.9	6.9	(4)
Advanced degree	18.2	5.7	9.4	(4)
Financial dependency status				
Dependent	14.3	5.3	8.8	5.2
Independent	20.0	5.4	11.8	5.7
1988 family income (dependent students) ⁵				
Low	13.8	4.9	9.3	(4)
Lower middle	13.7	5.7	8.1	(4)
Middle	13.1	5.5	10.5	4.0
Upper middle	15.6	5.0	8.7	(4)
Upper	14.9	5.4	7.1	(4)
Receipt of financial aid				
Loan from any source				
No	15.2	5.6	9.7	5.4
Yes	16.5	4.7	11.2	5.3
Federal loan				
No	15.3	5.6	9.8	5.6
Yes	16.4	4.6	11.0	4.5
Grant				
No	14.7	5.4	8.7	5.2
Yes	16.7	5.2	12.0	5.7

—Not applicable.

¹Only calculated for those performing community service.

²Excludes proprietary institutions because the coding scheme was not comparable to that of other institutions.

³Agriculture, architecture, communications, health technology, home economics, law, mechanic technology, social work, protective service, crafts, transportation, construction.

⁴Too few cases for a reliable estimate.

⁵Adjusted 1988 gross family income in quintiles. The cut-points for the quintiles are: \$0, \$16,200, \$30,100, \$43,900, and \$60,100.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table 53-1 National index of elementary and secondary public education revenues per student in relation to per capita personal income: Selected school years ending 1930-92

School year ending	National index	Public education revenues ¹ (billions)	Total elementary/secondary enrollment (millions)	Public education revenues per pupil ¹	Total personal income ^{1,2} (billions)	Total population ³ (millions)	Per capita personal income ^{1,2}
1930	10.6	\$17.7	28.3	\$623	\$715.1	121.9	\$5,867
1940	14.6	23.4	28.0	835	750.1	131.0	5,725
1950	13.9	33.2	28.5	1,166	1,254.4	149.2	8,408
1960	16.2	72.6	40.9	1,777	1,948.6	177.8	10,958
1966	18.2	115.0	48.5	2,372	2,539.2	194.3	13,068
1968	19.3	135.7	49.9	2,721	2,804.4	198.7	14,113
1970	20.0	154.2	51.1	3,017	3,051.9	202.7	15,058
1971	20.9	162.1	51.3	3,162	3,097.1	205.1	15,104
1972	22.3	175.8	51.3	3,429	3,193.0	207.7	15,376
1973	21.5	176.2	50.7	3,472	3,392.9	209.9	16,165
1974	21.2	180.7	50.4	3,584	3,580.7	211.9	16,897
1975	21.7	180.1	50.1	3,597	3,538.2	213.9	16,545
1976	22.9	185.8	49.8	3,731	3,515.0	216.0	16,275
1977	22.2	185.7	49.5	3,753	3,677.5	218.0	16,866
1978	22.2	188.2	48.7	3,862	3,823.0	220.2	17,359
1979	21.7	185.9	47.6	3,902	4,010.3	222.6	18,017
1980	21.5	180.6	46.6	3,871	4,053.6	225.1	18,012
1981	21.9	177.0	46.2	3,827	3,977.8	227.7	17,467
1982	21.2	169.4	45.5	3,722	4,033.8	230.0	17,541
1983	22.1	173.2	45.2	3,835	4,035.0	232.2	17,378
1984	22.5	179.2	45.0	3,985	4,158.7	234.3	17,749
1985	22.5	187.8	44.9	4,183	4,394.1	236.3	18,592
1986	23.1	198.3	45.0	4,409	4,546.5	238.5	19,066
1987	23.2	206.6	45.2	4,571	4,739.9	240.6	19,699
1988	23.3	211.8	45.5	4,656	4,841.8	242.8	19,941
1989	24.7	228.4	45.4	5,027	4,987.2	245.0	20,354
1990	25.0	236.9	45.9	5,162	5,112.9	247.3	20,671
1991	25.1	240.8	46.5	5,183	5,165.5	249.9	20,668
1992	25.5	243.8	4 47.2	5,167	5,129.6	252.7	20,300

¹In constant 1993 dollars, using the CPI adjusted to a school year basis.

²For the calendar year in which the school year began.

³As of July 1, the year in which the school year began.

⁴Estimated.

NOTE: Public education revenues at the elementary and secondary level are revenues at public schools. Enrollment is in all institutions, public and private. Data revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1992*, tables 3 and 38 (based on Common Core of Data) and *Early Estimates: Public and Private Elementary and Secondary Education Statistics: School year 1992-1993*, table 9 (based on Common Core of Data and Private School Survey); Executive Office of the President, *Economic Report of the President, January 1993*, tables B-24 and B-29.

Table 53-2 National index of higher education public revenues per student in relation to per capita personal income: Selected school years ending 1930-90

School year ending	National index	Public higher education revenues ¹ (billions)	Total higher education enrollment (millions)	Public higher education revenues per student ¹	Total personal income ^{1,2} (billions)	Total population ³ (millions)	Per capita personal income ^{1,2}
1930	22.5	\$1.5	1.1	\$1,322	\$715.1	121.9	\$5,867
1940	26.1	2.2	1.5	1,493	750.1	131.0	5,725
1950	31.9	6.5	2.4	2,679	1,254.4	149.2	8,408
1960	32.0	12.8	3.6	3,508	1,948.6	177.8	10,958
1966	34.3	26.6	5.9	4,488	2,539.2	194.3	13,068
1968	32.8	32.0	6.9	4,632	2,804.4	198.7	14,113
1970	31.8	38.3	8.0	4,785	3,051.9	202.7	15,058
1971	31.0	40.1	8.6	4,677	3,097.1	205.1	15,104
1972	30.6	42.1	8.9	4,701	3,193.0	207.7	15,376
1973	30.3	45.2	9.2	4,903	3,392.9	209.9	16,165
1974	29.4	47.7	9.6	4,963	3,580.7	211.9	16,897
1975	30.0	50.7	10.2	4,958	3,538.2	213.9	16,545
1976	28.5	51.9	11.2	4,638	3,515.0	216.0	16,275
1977	28.3	52.5	11.0	4,766	3,677.5	218.0	16,866
1978	27.5	54.0	11.3	4,782	3,823.0	220.2	17,359
1979	27.1	55.0	11.3	4,882	4,010.3	222.6	18,017
1980	26.5	55.3	11.6	4,780	4,053.6	225.1	18,012
1981	25.2	53.3	12.1	4,409	3,977.8	227.7	17,467
1982	23.5	51.1	12.4	4,130	4,033.8	230.0	17,541
1983	23.1	49.9	12.4	4,016	4,035.0	232.2	17,378
1984	23.4	51.8	12.5	4,159	4,158.7	234.3	17,749
1985	24.2	55.1	12.2	4,504	4,394.1	236.3	18,592
1986	24.7	57.7	12.2	4,715	4,546.5	238.5	19,066
1987	24.3	59.8	12.5	4,786	4,739.9	240.6	19,699
1988	24.2	61.6	12.8	4,827	4,841.8	242.8	19,941
1989	24.1	63.9	13.1	4,895	4,987.2	245.0	20,354
1990	23.4	65.4	13.5	4,829	5,112.9	247.3	20,671

¹In constant 1993 dollars, using the CPI adjusted to a school year basis.

²For the calendar year in which the school year began.

³As of July 1, the year in which the school year began.

NOTE: Public higher education revenues are the portion of educational and general revenue from federal, state, and local sources at both public and private institutions. Pell Grants and other direct student aid is excluded from this time series, understating public higher education revenues between 2 and 4 percent. Enrollment is in all institutions, public and private.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *120 Years of American Education: A Statistical Portrait 1993*, tables 24 and 33 (based on Biennial Survey of Education in the United States, and IPEDS/HEGIS Financial Statistics and Fall Enrollments Surveys). Executive Office of the President, *Economic Report of the President*, January 1993, tables B-24 and B-29.

Table 53-3 State indices of public elementary/secondary education revenues per student in relation to per capita personal income: School year 1991-92

State	Index	Public education revenues (thousands) 1991-92 ¹	Total elementary/secondary enrollment (thousands) 1991-92	Education revenues per student 1991-92 ¹	Total personal income (millions) 1991-92 ²	Total population (thousands) 1991 ³	Per capita personal income 1991 ²
U.S. total	26.3	\$243,846,429	47,197	\$5,116	\$5,112,395	252,161	\$19,455
Alabama	21.2	2,775,829	793	3,500	67,629	4,091	16,531
Alaska	38.2	1,112,209	125	8,909	13,290	570	23,315
Arizona	26.3	3,216,232	701	4,585	65,337	3,748	17,433
Arkansas	20.4	1,491,250	467	3,192	37,177	2,373	15,667
California	21.9	27,784,509	5,708	4,867	676,232	30,380	22,259
Colorado	24.2	3,178,956	638	4,986	69,740	3,378	20,645
Connecticut	26.0	3,957,786	554	7,149	90,492	3,289	27,513
Delaware	24.0	643,630	124	5,178	14,699	680	21,617
District of Columbia	21.6	544,038	97	5,632	15,535	595	26,108
Florida	26.1	11,395,973	2,172	5,247	266,314	13,267	20,073
Georgia	25.8	6,100,522	1,280	4,767	122,177	6,623	18,447
Hawaii	21.6	1,030,646	211	4,875	25,686	1,137	22,591
Idaho	22.0	851,028	237	3,598	17,005	1,040	16,351
Illinois	21.8	10,522,854	2,181	4,824	255,374	11,541	22,128
Indiana	30.8	5,998,454	1,064	5,640	102,606	5,610	18,290
Iowa	23.7	2,394,052	543	4,407	51,984	2,795	18,599
Kansas	25.4	2,427,689	487	4,986	49,059	2,495	19,663
Kentucky	25.8	3,045,961	716	4,253	61,303	3,713	16,510
Louisiana	23.5	3,461,774	918	3,771	68,398	4,254	16,078
Maine	32.1	1,360,301	230	5,907	22,699	1,234	18,395
Maryland	24.2	4,884,160	859	5,685	114,002	4,859	23,462
Massachusetts	24.8	5,915,796	981	6,030	145,860	5,996	24,326
Michigan	27.4	9,758,408	1,800	5,421	185,902	9,380	19,819
Minnesota	26.4	4,627,887	864	5,359	89,973	4,432	20,301
Mississippi	21.9	1,739,093	561	3,101	36,744	2,593	14,171
Missouri	22.0	4,016,368	961	4,180	97,766	5,157	18,958
Montana	30.4	856,473	166	5,172	13,779	809	17,033
Nebraska	23.6	1,426,349	318	4,482	30,206	1,593	18,962
Nevada	26.3	1,195,573	223	5,354	26,154	1,283	20,385
New Hampshire	29.1	1,277,714	197	6,492	24,589	1,104	22,273
New Jersey	30.1	10,800,770	1,328	8,135	209,189	7,753	26,982
New Mexico	28.9	1,498,425	330	4,547	24,408	1,549	15,757
New York	30.1	22,833,597	3,175	7,192	430,801	18,055	23,860
North Carolina	28.8	5,943,380	1,166	5,096	119,112	6,736	17,683
North Dakota	26.7	573,695	126	4,552	10,846	635	17,081
Ohio	25.4	9,954,897	2,058	4,837	208,213	10,941	19,031
Oklahoma	23.0	2,412,891	625	3,863	53,383	3,175	16,813
Oregon	27.8	2,797,673	539	5,191	54,610	2,922	18,689
Pennsylvania	29.3	12,279,389	2,063	5,953	243,064	11,958	20,326
Rhode Island	27.8	928,223	167	5,565	20,102	1,005	20,002
South Carolina	27.1	3,018,781	681	4,435	58,313	3,560	16,380
South Dakota	23.8	585,760	142	4,136	12,249	704	17,398
Tennessee	20.0	3,150,289	908	3,470	85,900	4,953	17,343
Texas	25.1	17,005,101	3,688	4,610	318,968	17,348	18,386
Utah	21.9	1,589,666	470	3,384	27,324	1,770	15,437
Vermont	34.9	692,102	105	6,584	10,684	567	18,842
Virginia	24.7	5,805,032	1,105	5,255	133,401	6,280	21,242
Washington	27.7	5,392,659	943	5,720	103,641	5,012	20,679
West Virginia	34.3	1,734,947	336	5,158	27,119	1,803	15,041
Wisconsin	28.2	5,199,144	963	5,399	94,999	4,956	19,169
Wyoming	34.5	658,495	105	6,264	8,357	460	18,167

¹In constant 1993 dollars.

²For the calendar year in which the school year began.

³As of July 1, the year in which the school year began.

NOTE: Public education revenues at the elementary and secondary level are revenues at public schools. Enrollment is in all institutions, public and private.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Public and Private Elementary and Secondary Education Statistics: School Year 1991-92*, tables 6 and 9 (based on the Common Core of Data). U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, various years and Bureau of the Census, 1990 Census.

Table 53-4 Public elementary and secondary school revenues as a percentage of GNP, GDP, and revenue sources: Selected school years 1920-91

School year ending	Public elementary/secondary school revenues as a percent of		Source (Percent of total public school revenues)		
	GNP ¹	GDP ^{1,2}	Local ³	State	Federal
1920 ⁴	1.2	—	83.2	16.5	0.3
1930	2.0	—	82.7	16.9	0.4
1940	2.5	—	68.0	30.3	1.8
1942	1.9	—	67.1	31.4	1.4
1944	1.4	—	65.6	33.0	1.4
1946	1.4	—	63.9	34.7	1.4
1948	1.8	—	58.3	38.9	2.8
1950	2.1	—	57.3	39.8	2.9
1952	1.9	—	57.9	38.6	3.5
1954	2.1	—	58.1	37.4	4.5
1956	2.4	—	55.9	39.5	4.6
1958	2.7	—	56.6	39.4	4.0
1960	3.0	3.0	56.5	39.1	4.4
1962	3.3	3.3	56.9	38.7	4.3
1964	3.4	3.4	56.3	39.3	4.4
1966	3.6	3.6	53.0	39.1	7.9
1968	3.9	3.9	52.7	38.5	8.8
1970	4.2	4.2	52.1	39.9	8.0
1971	4.4	4.4	52.5	39.1	8.4
1972	4.5	4.6	52.8	38.3	8.9
1973	4.3	4.3	51.3	40.0	8.7
1974	4.3	4.3	50.1	41.4	8.5
1975	4.4	4.4	48.8	42.2	9.0
1976	4.5	4.5	46.5	44.6	8.9
1977	4.2	4.3	47.8	43.4	8.8
1978	4.1	4.1	47.6	43.0	9.4
1979	3.9	3.9	44.6	45.6	9.8
1980	3.9	3.9	43.4	46.8	9.8
1981	3.9	3.9	43.4	47.4	9.2
1982	3.6	3.6	45.0	47.6	7.4
1983	3.7	3.7	45.0	47.9	7.1
1984	3.7	3.7	45.4	47.8	6.8
1985	3.6	3.6	44.4	48.9	6.6
1986	3.7	3.7	43.9	49.4	6.7
1987	3.8	3.7	43.9	49.7	6.4
1988	3.8	3.7	44.1	49.5	6.3
1989	3.9	3.9	46.0	47.8	6.2
1990	4.0	4.0	46.6	47.3	6.1
1991	4.1	4.0	46.5	47.3	6.2

—Not available.

¹For the calendar year in which the school year began.²Gross Domestic Product (GDP) is Gross National Product (GNP) less net property income from abroad.³Includes intermediate sources and a relatively small amount from nongovernmental sources (gifts and tuition and transportation fees from patrons). Nongovernmental sources accounted for 0.4 percent of total revenues in school year 1967-68.⁴1919 GNP from U.S. Department of Commerce, Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970, series F 1-5.

NOTE: Beginning in school year 1980-81, revenues for State education agencies are excluded. Data for school years 1988-91 reflect new survey collection procedures and may not be entirely comparable to figures for earlier years.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, table 156 (from Common Core of Data, various years); *Public Elementary and Secondary School Aggregate Data, by State for School Years 1991-92 and 1990-91, 1993*.

Note on calculation of national index of public education revenues

There are many indices of public investment in education available. Choosing the most appropriate measure has been an issue in international comparisons as well as national trends. The national index of public school revenues provides a measure of public investment in each student compared to available societal resources.

Public education revenues per student are the ratio of total public education revenues to public and private enrollment. Per capita income is the ratio of total personal income to total population. The index can be expressed algebraically, therefore, as a function of 4 variables:

$$\text{National index} = \frac{\text{Public education revenues per student}}{\text{Per capita income}} \times 100$$

or

$$\text{National index} = \frac{\text{Public education revenues} / \text{Total enrollment}}{\text{Total personal income} / \text{Total population}} \times 100$$

Revenue data from elementary/secondary and higher education are based on different accounting systems and are not entirely comparable. For example, elementary and secondary public revenues represent additions to assets (cash) from taxes, appropriations, and other funds which do not incur an obligation that must be met at some future date (loans) in all public schools. These include revenues that are spent on construction of buildings and other investments in the physical plant. Because of the difficulty in constructing a comparable time series, public funds going to private schools (for Head Start, handicapped children, etc) have been excluded. For higher education, educational and general public revenues are those available from public sources at both public and private institutions for the *regular or customary activities* of an institution which are part of, contributory to, or necessary to its instructional or research program. These include salaries and travel of faculty and administrative or other employees; purchase of supplies or materials for *current* use in classrooms, libraries, laboratories, or offices; and operation and maintenance of the educational plant. In contrast to elementary/secondary public revenues, higher education public revenues, as defined in this indicator, do not include public funds that would be used for expansion of the physical plant. As a result, the reader should focus on the changes over time in the elementary/secondary and the higher education measures rather than on comparisons across levels.

Enrollment is in all institutions, regardless of control. No adjustments were made for part-time enrollment.

Total education revenues are in 1993 dollars, based on the Consumer Price Index (CPI), prepared by the Bureau of Labor Statistics, U.S. Department of Labor, adjusted to a school year basis. Personal income is in constant 1993 dollars.

Table 54-1 Current public expenditures for education, by country: School year 1990-91

Country	Per student ¹								
	As a percent of GDP ²			Constant 1990-91 U.S. dollars ³			As a fraction of GDP per capita ²		
	Preprimary	1st-12th	Higher education	Preprimary	1st-12th	Higher education	Preprimary	1st-12th	Higher education
Australia ⁴	0.1	2.8	1.4	—	\$2,125	\$7,752	—	12.9	47.1
Austria	0.3	3.3	1.0	\$2,196	3,956	5,683	12.7	22.9	32.9
Belgium	0.3	1.6	—	1,159	1,758	2,203	6.6	10.1	12.6
Canada	—	4.0 ✓	2.1	—	4,558	8,556	—	23.2	43.5
Denmark	0.2	4.1 ✓	1.2	4,173	4,613	7,160	23.7	26.2	40.7
France	0.5	3.2	0.7	2,077	3,375	4,449	11.4	18.6	24.5
Former West Germany ⁵	0.2	2.3	0.8	1,302	3,293	5,537	6.7	16.9	28.4
Hungary	0.7	3.8 ✓	0.8	1,105	1,343	5,858	18.4	22.4	97.5
Ireland	0.5	3.6 ✓	1.0	1,437	1,887	4,864	12.6	16.5	42.5
Italy ⁶	0.3	3.1	0.7	2,058	3,720	4,421	12.1	22.0	26.1
Japan	0.1	2.3	0.2	726	2,624	1,988	3.9	14.2	10.8
Netherlands	—	3.2	1.5	—	3,104	8,569	—	18.8	52.0
Norway	0.7	4.3 ✓	1.1	3,655	4,343	5,917	21.8	25.9	35.2
Portugal	0.1	4.0 ✓	0.8	686	1,934	4,012	7.5	21.1	43.7
Spain ⁷	0.3	2.9	0.6	1,448	1,953	2,579	11.4	15.4	20.3
Sweden	0.2	4.7 ✓	1.1	2,387	5,825	8,204	13.9	34.0	47.9
Switzerland	0.2	3.4	1.0	1,707	5,205	12,413	7.9	23.9	57.1
United Kingdom ⁸	0.2	3.2	0.9	1,943	3,054	9,087	11.9	18.7	55.5
United States	0.3	3.5 ✓	1.4	2,228	4,765	8,275	9.9	21.2	36.8

—Not available.

¹Enrollment is in all institutions, public and private, and is based on headcount estimates for preprimary through 12th grade. For higher education, it is full-time equivalent enrollment.

²Gross Domestic Product is Gross National Product less net property income from abroad.

³Purchasing power parity indices (PPPI) were used to convert other currencies to U.S. dollars. Because the fiscal year has a different starting date in different countries, within-country Consumer Price Indices (CPI) were used to adjust the PPPIs to account for inflation.

⁴Expenditure for higher education includes expenditure for vocational secondary education, as it is taught in institutions of higher education.

⁵Includes contributions to the pension funds of teachers who are civil servants.

⁶1989 data.

⁷Public expenditure for education is underestimated because a large part of the pension costs is not included.

⁸Excludes expenditure on nursing and paramedical education.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project, 1993.

Table 54-2 Current and capital public expenditure as a percentage of total education expenditure, by country: School year 1990-91

Country	Preprimary			1st-12th			Higher education		
	Total expenditure (millions) ¹	Percent current	Percent capital	Total expenditure (millions) ¹	Percent current	Percent capital	Total expenditure (millions) ¹	Percent current	Percent capital
Australia ²	\$162	90.4	9.6	\$9,687	81.1	18.9	\$5,515	71.0	29.0
Austria	468	91.5	8.5	4,816	91.7	8.3	1,548	88.2	11.8
Belgium	438	99.6	0.4	2,773	99.6	0.4	550	98.8	1.2
Canada	—	—	—	23,099	92.1	7.9	11,414	95.8	4.2
Denmark	226	95.3	4.7	3,987	92.9	7.1	1,155	93.1	6.9
France	5,472	97.0	3.0	36,597	90.6	9.4	8,001	94.5	5.5
Former West Germany ³	2,680	85.6	14.4	30,317	92.9	7.1	11,298	87.4	12.6
Hungary	488	88.6	11.4	2,689	88.1	11.9	586	89.5	10.5
Ireland	190	96.6	3.4	1,513	96.6	3.4	436	89.5	10.5
Italy ⁴	3,345	96.4	3.6	32,829	92.9	7.1	7,076	94.6	5.4
Japan	1,743	83.6	16.2	62,926	84.9	15.1	6,529	79.6	20.4
Netherlands	868	81.6	18.4	8,868	89.1	10.9	4,142	91.6	8.4
Norway	527	91.4	8.6	3,178	95.8	4.2	916	82.7	17.3
Portugal	119	98.1	1.9	3,822	95.0	5.0	783	88.4	11.6
Spain ⁵	1,568	91.8	8.2	16,303	89.7	10.3	3,862	81.6	18.4
Sweden	236	95.4	4.6	7,137	96.2	3.8	1,647	95.9	4.1
Switzerland	267	89.3	10.7	5,662	89.3	10.7	1,726	89.3	10.7
United Kingdom ⁶	1,686	92.1	7.9	32,725	90.7	9.3	8,964	93.9	6.1
United States	17,493	92.5	7.5	217,179	91.5	8.5	87,276	92.5	7.5

—Not available.

¹Purchasing Power Parity Indices (PPI) were used to convert other currencies to U.S. dollars. Because the fiscal year has a different starting date in different countries, within-country Consumer Price Indices (CPI) were used to adjust the PPPs to account for inflation.

²Expenditure for higher education includes expenditure for vocational secondary education, as it is taught in institutions of higher education.

³Includes contributions to the pension funds of teachers who are civil servants.

⁴1989 data.

⁵Public expenditure for education is underestimated because a large part of the pension costs are not included.

⁶Excludes expenditure on nursing and paramedical education.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project, 1993.

Table 54-3 Current public expenditure on education as a percentage of total public expenditure, by country: School year 1990-91

Country	Current public expenditure for education (millions) ^{1,2}	Total public expenditure (millions) ²	Current public expenditure on education as a percentage of total public expenditure				
			Total	Preprimary	1st-12th	Higher education	Undistributed/other
Australia ³	\$16,086	\$142,108	11.3	0.1	7.5	3.7	0.0
Austria	95,065	966,525	9.8	0.6	6.5	2.0	0.7
Belgium	146,640	3,818,090	3.8	0.4	2.8	0.6	—
Canada	40,573	321,407	12.6	—	8.3	4.3	0.0
Denmark	45,860	489,335	9.4	0.4	6.9	2.0	0.0
France	327,934	3,404,913	9.6	1.0	6.4	1.4	0.8
Former West Germany ⁴	96,763	1,283,460	7.5	0.4	4.6	1.6	1.0
Hungary	123,387	—	—	—	—	—	—
Ireland	1,389	—	—	—	—	—	—
Italy ⁵	54,381,850	623,382,333	8.7	0.6	6.1	1.3	0.6
Japan	14,210,513	138,914,250	10.2	0.2	7.3	0.7	2.1
Norway	43,465	387,906	11.2	1.2	7.5	1.9	0.6
Sweden	82,043	862,156	9.5	0.2	7.5	1.7	0.0
Switzerland ⁶	16,025	113,075	14.2	0.5	10.0	3.0	0.7
United Kingdom ⁶	23,836	234,918	10.1	0.4	7.5	2.1	0.2
United States	289,730	2,074,741	14.0	0.8	9.4	3.8	0.0

—Not available.

¹Current expenditures exclude both capital expenditures and servicing of debt.

²National currency.

³Expenditure for higher education includes expenditure for vocational secondary education, as it is taught in institutions of higher education.

⁴Includes contributions to the pension funds of teachers who are civil servants.

⁵1989 data.

⁶Exclude expenditure on nursing and paramedical education.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project, 1993.

Table 54-4 Distribution of current public expenditure on education for each school level, by country: School year 1990-91

Country	Total	Preprimary	1st-12th	Higher education	Undistributed/ other
Australia ¹	100.0	1.2	65.9	32.9	0.0
Austria	100.0	6.4	65.9	20.4	7.4
Canada	100.0	—	66.0	34.0	0.0
Denmark	100.0	4.3	74.2	21.5	—
France	100.0	10.6	66.0	15.0	8.5
Former West Germany ²	100.0	5.0	60.9	21.3	12.9
Hungary	100.0	13.0	71.2	15.8	0.0
Ireland	100.0	8.8	70.5	18.8	1.9
Ireland	100.0	7.4	70.1	15.4	7.0
Italy ³	100.0	1.9	71.0	6.9	20.2
Japan	100.0	—	61.7	29.6	3.1
Netherlands	100.0	10.6	67.2	16.7	5.5
Norway	100.0	2.5	78.5	15.0	4.0
Portugal	100.0	7.5	76.1	16.4	0.0
Spain ⁴	100.0	2.6	79.2	18.2	0.0
Sweden	100.0	—	—	—	4.9
Switzerland	100.0	3.3	70.4	21.4	1.9
United Kingdom ⁵	100.0	3.8	73.5	20.8	0.0
United States	100.0	5.5	67.2	27.3	—

—Not available.

¹Expenditure for higher education includes expenditure for vocational secondary education, as it is taught in institutions of higher education.

²Includes contributions to the pension funds of teachers who are civil servants.

³1989 data.

⁴Public expenditure for education is underestimated because a large part of the pension costs is not included.

⁵Excludes expenditure on nursing and paramedical education.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project, 1993

Table 54-5 Public current education expenditure (in national currency) and total enrollment, by country: School year 1990-91

OECD Country	Population (thousands)	GDP ² (millions)	Public current education expenditure				Enrollment in public and private schools ¹			PPPIs
			Preprimary	1st-12th	Higher education	Undistributed/other	Preprimary	1st-12th	Higher education	
Australia ⁴	17,085	\$379,262	\$198	\$10,601	\$5,287	0	—	3,696,086	505,216	1.35
Austria	7,823	1,914,749	6,066	62,636	19,366	6,997	194,829	1,116,482	240,334	14.18
Belgium	9,840	6,722,855	17,080	108,261	21,299	—	376,102	1,571,379	246,668	39.19
Canada	26,735	662,604	NA	26,792	13,781	0	—	4,665,261	1,278,387	1.26
Denmark	5,154	833,314	1,976	34,007	9,877	—	51,583	803,106	150,275	9.18
France	57,050	6,766,517	34,604	216,289	49,277	27,764	2,555,684	9,828,300	1,698,716	6.52
Former West Germany ⁵	64,036	2,612,640	4,795	58,887	20,633	12,450	1,762,440	8,556,194	1,782,819	2.09
Hungary	10,355	2,308,404	16,032	87,906	19,448	26	391,129	1,763,823	89,494	37.10
Ireland	3,520	26,984	123	979	261	—	127,512	774,490	80,142	0.67
Italy ⁶	57,555	1,219,460,000	4,032,020	38,142,870	8,374,410	3,832,550	1,566,364	8,196,251	1,514,243	1251.00
Japan	123,635	431,102,250	275,622	10,089,448	981,041	2,864,402	2,009,852	20,365,793	2,613,682	188.80
Netherlands	15,065	543,560	1,550	17,310	8,310	880	—	2,546,387	442,794	2.19
Norway	4,262	686,687	4,620	29,189	7,264	2,392	131,805	700,779	128,015	9.59
Portugal	9,815	9,913,400	12,841	399,425	76,154	20,245	170,052	1,876,768	172,545	110.02
Spain ⁷	39,025	54,791,100	159,096	1,615,147	348,329	0	994,322	7,483,344	1,222,258	110.49
Sweden	8,588	1,390,913	2,127	64,967	14,948	0	94,231	1,178,939	192,597	9.46
Switzerland	6,860	332,685	532	11,276	3,436	780	139,798	971,550	124,139	2.23
United Kingdom ⁸	57,401	554,565	916	17,508	4,969	443	799,101	9,716,728	926,786	0.59
United States	251,307	5,537,798	15,852	194,758	79,120	0	7,259,047	41,704,501	9,757,003	0.98

—Not available.

¹Enrollment is in all institutions, public and private, and is based on headcount estimates for preprimary through 12th grade. For higher education, it is full-time equivalent enrollment.

²Gross Domestic Product is Gross National Product less net property income from abroad.

³Purchasing power parity indices (PPPI) were used to convert other currencies to U.S. dollars. Because the fiscal year has a different starting date in different countries, within-country Consumer Price Indices (CPI) were used to adjust the PPPI account for inflation.

⁴Expenditure for higher education includes expenditure for vocational secondary education, as it is taught in institutions of higher education.

⁵1989 data.

⁶Includes contributions to the pension funds of teachers who are civil servants.

⁷Public expenditure for education is underestimated because a large part of the pension costs is not included.

⁸Excludes expenditure on nursing and paramedical education.

SOURCE: Organization for Economic Co-operation and Development, Center for Educational Research and Innovation, International Indicators Project, 1993.

Note on international comparisons of current public education expenditures

The purpose of this indicator is to compare *public* support for education across the developed countries, based on Gross Domestic Product (GDP), population, and school enrollment, for which data are available.

Definitions

Public education expenditures include funds channeled to both public and private schools by federal, state, and local governments either directly or through students. This includes expenditures at public schools funded by public sources and subsidies to students at private schools from government agencies. *Private education expenditures* are expenditures financed by private sources—households, private non-profit institutions, businesses, and corporations. For example, this includes expenditures supported by public and private school tuition and fees and expenses for books and materials that must be purchased by students themselves.

Current expenditures are expenditures for educational goods and services whose life span should not in principle exceed the current year (salaries of personnel, school books and other teaching materials, scholarships, minor repairs and maintenance to school buildings, administration, etc.). Current expenditures exclude both capital expenditures (construction of buildings, major repairs, major items of equipment, vehicles) and the servicing of debt.

This indicator focuses on the portion of current education expenditures at both public and private schools funded by public sources.

Expenditures in the United States

Elementary and Secondary

For the United States, *current public expenditures for elementary and secondary education* include current expenditures in local public school districts funded by state and local taxes, federal programs administered by the U.S. Department of Education (ED), and programs operated outside of ED that are not administered by state or local education agencies, e.g., Head Start,

Department of Defense Schools, and schools operated by the Bureau of Indian Affairs.

Also included are federal expenditures to operate ED and other activities such as research, statistics, assessment, and school improvement, and state expenditures to operate state departments of education and other direct state expenditures, including state schools for the deaf and blind and reform schools.

Some expenditures, such as those for federal or state agency administration and those for ungraded special education programs, can not be assigned to particular grade levels by any obviously universally superior method. These expenditures defy strict grade-level categorizations. Like some other countries, the United States has chosen to prorate these expenditures over the grade levels based on the relative size of enrollments, staffing, and salaries. Other countries, however, have chosen not to allocate such expenditures, classifying them, instead, as "undistributed."

Higher Education

Current public expenditures for higher education in the United States include expenditures at both public and private colleges and universities funded by federal, state, and local governments. The Integrated Postsecondary Education Data System (IPEDS), the core postsecondary education data collection program for NCES, gathers institutional reports for revenue received by both public and private institutions from both public and private sources. Current expenditures by public and private non-profit institutions are separated into public and private expenditures based on the share of current fund revenues from federal, state, and local sources.

Most federal aid goes to students who then spend it on education (e.g., tuition) and non-education (room and board) services. It was assumed the 60 percent of federally administered Pell Grants were spent by students on education expenditures.

With the exception of Pell Grant money, public

expenditures for less-than-2-year public and private institutions were not available and current public expenditures for higher education in the United States is therefore biased downward. But the students participating in these institutions are also excluded from higher education enrollments, so the estimate of public expenditures per student would be biased upward if the per-student public expenditures in less-than-2-year institutions is less than in other higher education institutions.

Private Expenditures

Per pupil expenditures are calculated as current public expenditures divided by enrollment in both public and private schools. This is a measure of average public investment per student in the education system. It is not a measure of total resources a student receives which would include private expenditures. For Canada, France, Germany, Japan, and the United States, private education expenditures are a significant portion of GDP.

Total Expenditures on Education in 1991

Country	Percentage of GDP		Total
	Public sources	Private sources	
Canada	6.7	0.7	7.4
France	5.4	0.6	6.0
Former West Germany	4.0	1.5	5.4
Spain	4.5	1.1	5.6
Japan	3.7	1.3	5.0
United Kingdom	5.3	—	—
United States	5.5	1.5	7.0

— Not available.

NOTE: Total expenditures include current expenditures, capital expenditures, and interest on debt.

SOURCE: Organization for Economic Co-operation and Development, *Education at a Glance: OECD Indicators*, 1993, table P1.

How Students Are Classified

The International Standard Classification of Education (ISCED) was designed as an instrument for presenting statistics of education

internationally. Many countries report education statistics to UNESCO and the Organization for Economic Co-operation and Development (OECD) using the ISCED. In this classification system, education is divided into several levels.

The following are summary definitions used in this indicator:

Education preceding the first level, where it is provided, usually begins at age 3, 4, or 5 (sometimes earlier) and lasts from 1 to 3 years. For the United States, this would primarily be nursery schools and kindergarten classes.

Education at the first level usually begins at age 5, 6, or 7, and lasts for about 5 or 6 years. For the United States, this would start with first grade and finish with grade 6.

Education at the second level, first stage, begins at about 11 or 12 and lasts for about 3 years. *Education at the second level, second phase*, begins at about age 14 or 15 and lasts about 3 years. For the United States, second level would start with grade 7 and finish with grade 12.

Education at the third level is provided at universities, colleges, and professional schools, and typically requires as a minimum condition of admission the successful completion of education at the second level (or equivalent knowledge). For the United States, third level includes junior colleges and degree-granting institutes in addition to 4-year colleges and universities.

For the United States, pre-primary education includes enrollment in both public and private nursery schools and kindergartens. This is what is considered *education preceding the first level* using ISCED terminology. ISCED levels 1 and 2 are defined as total public and private enrollments in grades 1–12 and ISCED level 3 is defined as higher education for the purposes of this indicator. Expenditures reported by countries as "undistributed" or "other" are shown in table IFN-4, and are not allocated across education levels in this indicator.

How Expenditures Are Compared Across Countries

To compare public expenditures per student in the United States with expenditures per student in other countries, expenditures must be denominated in a common currency. Conversion of other countries' expenditures to U.S. dollars facilitates comparison with expenditures in the United States. There are at least two methods of conversion: (1) market exchange rates and (2) purchasing power parity (PPP) indices.

The market exchange rate is the rate at which an individual can exchange the currencies of two countries. It is determined by confidence in the government, the monetary system, and the economies of the two countries and by the relative demands for commodities the two countries trade with each other. Market exchange rates can be highly volatile.¹

PPP indices are calculated by comparing the cost of a fixed market basket of goods in each country. Changes over time in the PPP index are determined by the rates of inflation in each country. The PPP index is not volatile.¹

PPP indices for Gross Domestic Product (GDP) have been used in this indicator.²

Because the fiscal year has a different starting month in different countries, within country consumer price indexes (CPI) calculated by the International Monetary Fund were used to adjust educational expenditure per pupil data to allow for inflation between the starting month of the fiscal year and July 1, 1990. See supplemental table IFN-5 for both the PPP indices used in this indicator and the CPI adjustment ratios.

NOTES:

1. For a further argument against using market exchange rates see Rasel, Edith M. and Lawrence Mishel, *Shortchanging Education*, Economic Policy Institute, January, 1990.
2. PPP indices for other aggregates such as private consumption expenditures are available. See Barro, Stephen M., *International Comparisons of Education Spending: Some Conceptual and Methodological Issues*, SMB Economic Research, Inc., April, 1990, for a discussion of the strengths and weaknesses of using various indices.

Table 55-1 Index of expenditures (in constant dollars) per full-time-equivalent student at public institutions, by type of expenditure and type of institution: Academic years ending 1977-91 (1981=100)

Academic year ending	Total	Instruction	Admini- stration ¹	Student services	Research	Libraries	Public services	Operation and main- tenance of plan	Scholar- ships and fellowships	Mandatory transfers
Universities										
1977	98	99	99	96	91	107	96	98	111	120
1978	99	101	101	100	93	103	94	100	107	103
1979	103	104	104	101	99	102	101	105	102	104
1980	102	102	99	102	101	116	99	102	101	101
1981	100	100	100	100	100	100	100	100	100	100
1982	99	99	100	98	97	99	96	101	97	85
1983	98	99	100	98	96	100	96	102	98	84
1984	101	101	103	100	98	104	98	105	104	101
1985	106	105	113	104	105	105	102	107	107	94
1986	110	108	119	108	110	110	107	107	118	130
1987	112	111	122	111	114	106	106	102	122	136
1988	115	111	124	114	120	113	108	102	130	159
1989	117	111	126	115	124	112	113	101	139	155
1990	117	111	125	113	127	110	113	100	141	162
1991	120	113	127	115	132	110	118	100	153	172
4-year colleges										
1977	96	99	93	90	84	96	89	93	119	102
1978	97	100	94	94	86	96	89	95	107	111
1979	100	102	99	101	95	97	93	98	103	108
1980	101	101	102	103	102	99	100	99	105	99
1981	100	100	100	100	100	100	100	100	100	100
1982	100	101	102	94	95	96	99	101	89	85
1983	97	99	98	94	92	91	96	99	91	87
1984	98	99	104	101	93	95	98	94	90	93
1985	104	104	111	105	101	97	110	102	88	89
1986	108	108	115	109	111	99	113	97	98	104
1987	108	107	117	107	116	89	124	94	105	94
1988	109	109	117	111	122	94	132	93	107	96
1989	107	107	114	107	126	91	132	89	105	95
1990	109	107	118	107	127	91	140	87	111	92
1991	105	104	114	107	126	83	135	84	112	86
2-year colleges										
1977	102	103	97	98	(2)	114	(2)	96	132	147
1978	103	103	104	96	(2)	115	101	97	100	148
1979	106	105	109	102	(2)	114	(2)	101	105	166
1980	104	104	104	104	(2)	106	108	102	108	134
1981	100	100	100	100	(2)	100	100	100	100	(2)
1982	100	100	100	101	(2)	107	(2)	103	91	(2)
1983	95	95	97	97	(2)	90	(2)	97	88	(2)
1984	96	96	100	97	(2)	91	(2)	98	(2)	(2)
1985	105	105	112	106	(2)	98	(2)	107	102	(2)
1986	109	107	118	112	(2)	100	(2)	108	106	(2)
1987	110	108	126	119	(2)	80	111	107	110	(2)
1988	109	106	121	124	(2)	94	114	103	116	(2)
1989	110	107	124	119	(2)	90	126	102	115	(2)
1990	107	105	120	119	(2)	86	120	98	107	(2)
1991	108	106	122	122	(2)	84	120	97	113	(2)

¹Includes institutional and academic support less libraries.

²Not calculated; expenditure category constituted 2 percent or less of total expenditures.

NOTE: The Higher Education Price Index was used to convert expenditure figures to constant dollars.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 332, 333, 334 (based on IPEDS/HEGIS Financial Statistics and Fall Enrollment surveys).

Table 55-2 Index of expenditures (in constant dollars) per full-time-equivalent student at private (nonprofit) institutions, by type of expenditure and type of institution: Academic years ending 1977-91 (1981=100)

Academic year ending	Total	Instruction	Admini- stration ¹	Student services	Research	Libraries	Public services	Operation and main- tenance of plan	Scholar- ships and fellowships	Mandatory transfers
Universities										
1977	97	97	92	92	103	110	105	93	96	68
1978	96	96	92	92	101	110	98	92	98	71
1979	97	95	98	95	102	103	99	96	96	84
1980	99	98	101	95	102	99	110	96	95	83
1981	100	100	100	100	100	100	100	100	100	100
1982	100	102	99	103	95	100	97	104	99	76
1983	101	104	107	106	91	98	100	102	100	77
1984	108	109	118	113	97	111	103	107	115	83
1985	113	112	121	121	103	107	132	110	122	101
1986	117	116	126	128	109	111	135	111	130	100
1987	128	129	139	140	119	106	158	108	145	116
1988	129	127	141	140	122	122	153	110	150	125
1989	131	131	143	140	122	120	159	108	155	135
1990	133	132	141	141	125	123	163	110	160	154
1991	137	138	145	146	123	118	170	117	171	144
4-year colleges										
1977	97	100	94	91	97	105	101	94	96	98
1978	97	100	94	93	92	106	91	95	94	97
1979	98	101	96	95	101	104	92	95	93	99
1980	100	101	98	98	104	102	93	99	97	103
1981	100	100	100	100	100	100	100	100	100	100
1982	101	101	103	102	93	100	110	100	101	99
1983	104	104	106	107	91	105	108	100	103	99
1984	107	107	110	111	94	107	111	101	113	104
1985	111	110	114	116	100	109	117	102	122	109
1986	115	112	119	121	111	111	128	102	132	114
1987	122	116	132	128	118	98	143	103	146	118
1988	125	118	130	132	124	109	160	103	158	110
1989	125	118	132	134	124	109	158	102	161	118
1990	128	119	132	138	123	110	172	101	173	123
1991	130	120	137	142	114	104	172	100	184	121
2-year colleges										
1977	103	106	99	96	(2)	121	(2)	108	92	87
1978	97	99	96	96	(2)	117	(2)	101	86	73
1979	101	104	98	105	(2)	113	(2)	99	93	84
1980	100	102	100	101	(2)	110	(2)	97	99	83
1981	100	100	100	100	(2)	100	(2)	100	100	100
1982	96	98	101	99	(2)	95	(2)	93	87	80
1983	100	101	101	100	(2)	95	(2)	99	100	96
1984	100	98	103	103	(2)	94	(2)	101	107	75
1985	110	107	111	124	(2)	104	(2)	109	119	71
1986	111	110	113	128	(2)	103	(2)	108	120	62
1987	137	125	163	146	(2)	107	(2)	138	138	67
1988	138	135	148	147	(2)	100	(2)	129	168	53
1989	119	116	126	127	(2)	82	(2)	111	150	57
1990	—	—	—	—	—	—	—	—	—	—
1991	—	—	—	—	—	—	—	—	—	—

—Not available.

¹Includes institutional and academic support less libraries.

²Not calculated; expenditure category constituted 2 percent or less of total expenditures.

NOTE: The Higher Education Price Index was used to convert expenditure figures to constant dollars.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 335 and 336; *Digest of Educational Statistics, 1991*, table 321 (based on IPEDS/HEGIS Financial Statistics and Fall Enrollment surveys).

Table 55-3 Index of average undergraduate tuition charges (in constant dollars) at institutions of higher education, by control and type of institution: Academic years ending 1977-91 (1981=100)

Academic year ending	Public Institutions			Private Institutions		
	University	Other 4-year	2-year	University	Other 4-year	2-year
1977	105	109	101	100	97	92
1978	105	108	103	99	97	93
1979	103	105	102	99	100	92
1980	102	102	101	99	99	95
1981	100	100	100	100	100	100
1982	104	102	101	104	103	98
1983	109	111	103	112	109	107
1984	114	118	110	118	113	104
1985	116	119	114	123	116	111
1986	123	118	121	127	122	112
1987	128	122	119	134	129	108
1988	128	133	123	140	132	117
1989	130	135	120	142	136	128
1990	135	135	117	147	139	131
1991	136	136	121	153	142	133

NOTE: Tuition charges and fees are in constant dollars, adjusted by the Consumer Price Index for the academic year (July 1-June 30). They are for the entire academic year and are average charges paid by students. They were calculated on the basis of full-time-equivalent undergraduates. Tuition at public institutions is the charge to in-state students. The amount at private institutions includes charges at both nonprofit and proprietary schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, tables 40 and 306 (based on IPEDS Institutional Characteristics and Fall Enrollment surveys).

Table 56-1 Average annual and beginning salary (in constant 1993 dollars) of teachers in public elementary and secondary schools: Selected years 1960–93

School year ending	All teachers	Elementary teachers	Secondary teachers	Beginning teachers*
1960	\$24,599	\$23,712	\$25,983	—
1962	26,549	25,706	27,801	—
1964	28,127	27,235	29,398	—
1966	29,409	28,475	30,661	—
1968	31,584	30,669	32,729	—
1970	33,043	32,222	34,058	—
1971	33,759	32,859	34,852	—
1972	34,127	33,138	35,273	24,128
1973	34,390	33,441	35,516	—
1974	33,424	32,608	34,378	23,651
1975	32,524	31,666	33,526	—
1976	32,876	32,041	33,755	23,104
1977	32,923	32,023	33,964	—
1978	32,801	31,986	33,735	22,331
1979	31,753	31,012	32,637	—
1980	29,766	29,019	30,678	20,504
1981	29,473	28,782	30,305	—
1982	29,635	28,989	30,452	20,301
1983	30,511	29,820	31,389	—
1984	31,184	30,547	32,064	21,562
1985	32,287	31,740	33,090	—
1986	33,509	32,869	34,369	23,325
1987	34,563	33,897	35,441	—
1988	35,017	34,373	35,974	23,938
1989	35,304	34,653	36,093	—
1990	35,773	35,117	36,552	24,072
1991	35,781	35,103	36,642	24,127
1992	34,618	34,053	35,421	24,001
1993	35,873	35,308	36,609	23,969

—Not available.

*Salary for beginning teachers is for the calendar year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1993*, Table 76; National Education Association, *Estimates of State School Statistics, 1992–93* (Copyright © 1992 by NEA. All rights reserved.); American Federation of Teachers, *Survey & Analysis of Salary Trends 1993*, September, 1993, Table III-2.

Table 56-2 Average annual salaries of all teachers: 1981 and 1993, percentage increase 1981-93, and 1992 per capita personal income (in constant 1993 dollars)

Region and state	All teachers 1980-81	All teachers 1992-93	Percentage increase 1981-93	1992 per capita personal income
50 states and D.C.	\$29,473	\$35,873	21.7	\$20,745
New England	26,816	40,527	51.1	24,225
Connecticut ¹	29,072	49,595	70.6	27,988
Maine	23,376	30,720	31.4	18,668
Massachusetts ¹	31,242	39,844	27.5	24,558
New Hampshire	22,404	34,449	53.8	23,305
Rhode Island	33,079	38,082	15.1	20,519
Vermont	21,725	35,355	62.7	19,425
Mideast	32,725	43,625	33.3	24,130
Delaware	30,410	36,770	20.9	22,897
District of Columbia	38,223	38,750	1.4	27,316
Maryland	31,735	39,738	25.2	23,978
New Jersey	30,477	44,668	46.6	27,815
New York	35,623	45,281	27.1	24,590
Pennsylvania	29,884	42,215	41.3	21,024
Southeast	25,121	30,089	19.8	20,488
Alabama	25,399	27,910	9.9	22,669
Arkansas	22,171	28,019	26.4	18,982
Florida	25,734	31,628	22.9	20,297
Georgia	25,800	31,093	20.5	19,451
Kentucky	26,309	31,968	21.5	19,763
Louisiana	27,657	26,472	-4.3	19,806
Louisiana	21,744	24,741	13.8	19,107
Mississippi	26,489	29,815	12.6	19,955
North Carolina	23,976	29,596	23.4	21,068
South Carolina	25,253	29,760	17.8	19,656
Tennessee	25,950	32,850	26.6	19,552
Virginia	24,969	30,763	23.2	17,732
West Virginia				
Great Lakes	30,871	38,666	25.3	17,617
Illinois	32,448	39,165	20.7	18,484
Indiana ¹	28,823	38,017	31.9	17,013
Michigan ¹	35,435	43,992	24.2	16,259
Ohio	28,237	35,128	24.4	20,105
Wisconsin	29,411	37,034	25.9	19,065
Plains	25,533	31,565	23.6	17,376
Iowa	26,946	30,584	13.5	16,372
Kansas	25,474	33,639	32.1	14,571
Minnesota	29,695	36,200	21.9	18,550
Missouri	25,760	29,859	15.9	16,705
Nebraska	24,859	29,156	17.3	18,185
Nebraska	23,159	25,596	10.5	21,834
North Dakota	22,841	24,493	7.2	15,813
South Dakota				
Southwest	26,824	29,979	11.8	18,347
Arizona	28,733	32,897	14.5	17,866
New Mexico	28,083	26,757	-4.7	16,051
Oklahoma	24,208	26,449	9.3	16,968
Texas	26,272	30,392	15.7	18,908
Rocky Mountains	28,251	30,675	8.6	18,839
Colorado	29,929	34,053	13.8	21,296
Colorado	25,238	27,570	9.2	17,041
Idaho	26,650	28,949	8.6	16,774
Montana ¹	28,170	27,409	-2.7	16,114
Utah	31,267	31,321	0.2	18,905
Wyoming				
Far West	35,619	40,448	13.6	21,891
Alaska ¹	48,522	47,081	-3.0	23,122
California ¹	34,626	42,032	21.4	22,145
California ¹	35,324	37,027	4.8	22,462
Hawaii	29,566	34,640	17.2	21,953
Nevada	30,146	35,976	19.3	18,997
Oregon ¹	35,526	36,417	2.5	21,749
Washington				

¹Estimated.

SOURCE: National Education Association, *Estimates of State School Statistics, 1991-1992* (Copyright © 1992 by NEA. All rights reserved.).

Table 56-3 Average amounts of compensation (in current dollars) that full-time public school teachers received, by selected school characteristics: 1990-91

School characteristics	Average amount teachers received					
	Total earnings	Base salary	Other school year compensation	Summer supplemental	Non-school income	Other earned income
Total	\$33,578	\$31,296	\$1,942	\$1,993	\$4,404	\$1,754
Central city	34,571	32,202	1,918	2,283	4,555	1,978
School level						
Elementary	33,119	31,234	1,358	2,127	4,346	1,999
Secondary	37,228	33,960	2,475	2,450	4,896	1,975
Combined	36,693	33,794	2,853	2,915	3,899	1,534
Minority enrollment						
Less than 20 percent	33,163	30,815	2,010	1,930	4,100	1,751
20 percent or more	34,984	32,610	1,885	2,361	4,711	2,052
School size						
Less than 150	31,098	29,288	1,787	2,277	2,534	1,333
150 to 499	32,386	30,607	1,429	2,097	4,355	1,644
500 to 749	33,450	31,438	1,403	2,197	4,377	1,956
750 or more	36,434	33,544	2,296	2,393	4,775	2,154
Urban fringe/large town	37,238	34,935	2,019	1,935	4,350	1,918
School level						
Elementary	35,312	33,776	1,284	1,705	3,536	2,005
Secondary	40,042	36,605	2,594	2,170	4,937	1,833
Combined	40,990	37,418	2,783	2,477	8,896	1,294
Minority enrollment						
Less than 20 percent	37,496	35,503	2,056	1,675	3,952	1,752
20 percent or more	36,924	34,487	1,970	2,194	4,859	2,143
School size						
Less than 150	32,825	30,459	2,266	2,838	4,432	—
150 to 499	36,773	35,103	1,607	1,564	4,292	1,616
500 to 749	35,572	33,786	1,485	1,840	3,709	1,700
750 or more	38,658	35,638	2,427	2,108	4,684	2,129
Rural/small town	29,931	27,748	1,913	1,740	4,267	1,530
School level						
Elementary	28,993	27,494	1,582	1,482	3,738	1,407
Secondary	31,573	28,351	2,164	1,997	4,830	1,724
Combined	28,892	26,552	1,844	1,914	3,873	1,606
Minority enrollment						
Less than 20 percent	30,547	28,258	1,929	1,661	4,313	1,527
20 percent or more	28,479	26,544	1,862	1,915	4,135	1,537
School size						
Less than 150	25,964	23,617	1,978	1,678	3,602	1,390
150 to 499	28,926	26,818	1,861	1,684	4,278	1,606
500 to 749	30,697	28,736	1,767	1,728	4,216	1,379
750 or more	32,103	29,545	2,125	1,863	4,506	1,584

—Too few cases for reliable estimate.

NOTE: The averages were computed using only teachers with that type of compensation; consequently, the average in total earnings does not equal the sum of the averages for the various types of compensation.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1990-91 (School, Administrator, and Teacher Questionnaire).

Table 56-4 Average amounts of compensation (in current dollars) that full-time private school teachers received, by selected school characteristics: 1990-91

School characteristics	Average amount teachers received					
	Total earnings	Base salary	Other school year compensation	Summer supplemental	Non-school income	Other earned income
Total	\$21,673	\$19,783	\$1,712	\$1,864	\$3,302	\$1,146
Central city	22,446	20,402	1,685	1,791	3,481	1,199
School level						
Elementary	19,764	18,237	1,466	1,607	3,405	1,018
Secondary	26,900	24,162	1,824	1,954	3,886	1,832
Combined	23,047	20,739	1,629	1,869	3,249	1,018
Minority enrollment						
Less than 20 percent	22,290	20,363	1,639	1,629	3,227	1,337
20 percent or more	22,705	20,465	1,774	2,013	3,921	1,029
School size						
Less than 150	19,219	17,528	1,727	1,975	3,050	612
150 to 499	21,010	19,197	1,412	1,837	3,283	1,248
500 to 749	24,260	22,066	1,888	1,607	3,578	701
750 or more	28,193	25,239	1,900	1,690	4,520	2,000
Urban fringe/large town	22,221	20,412	1,794	2,024	3,217	926
School level						
Elementary	19,413	18,197	1,872	1,661	2,463	805
Secondary	26,260	23,345	1,962	2,077	4,397	957
Combined	24,610	22,400	1,621	2,364	3,612	1,097
Minority enrollment						
Less than 20 percent	21,358	19,621	1,871	1,860	3,225	872
20 percent or more	24,272	22,291	1,614	2,256	3,196	1,050
School size						
Less than 150	20,015	18,504	1,743	1,951	2,388	797
150 to 499	21,387	19,690	1,778	1,751	3,288	797
500 to 749	21,387	19,690	1,778	—	3,539	—
750 or more	26,521	24,674	1,126	—	4,557	—
Rural/small town	19,101	17,412	1,559	1,637	3,108	1,259
School level						
Elementary	17,857	16,678	1,372	1,744	2,527	1,126
Secondary	25,930	23,751	1,275	1,308	3,246	2,037
Combined	18,269	16,201	1,801	1,681	3,543	1,109
Minority enrollment						
Less than 20 percent	18,606	16,934	1,589	1,526	3,131	1,195
20 percent or more	22,122	20,330	—	1,917	2,946	—
School size						
Less than 150	16,799	14,996	1,450	1,953	2,869	1,504
150 to 499	19,730	18,067	1,657	1,447	3,355	1,041
500 to 749	25,392	23,992	—	—	—	—
750 or more	—	—	—	—	—	—

—Too few cases for reliable estimate.

NOTE: The averages were computed using only teachers with that type of compensation; consequently, the average in total earnings does not equal the sum of the averages for the various types of compensation.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1990-91 (School, Administrator, and Teacher Questionnaires).

Table 56-5 Percentage of public school districts and private schools with salary schedules, average scheduled salary (in current dollars) for full-time teachers by highest degree earned and years of teaching experience, percentage of schools without salary schedules, and average lowest and highest schedules: 1990-91

School characteristics	Average scheduled salary					Schools without schedules		
	Percent with salary schedules	Bachelor's, no experience	Master's, no experience	Master's, 20 years experience	Highest step on schedule	Percent without schedules	Average lowest	Average highest
Public districts	94.4	\$19,783	\$21,698	\$33,199	\$36,065	5.6	\$17,376	\$24,573
Region								
Northeast	95.2	22,534	24,378	39,797	43,846	4.8	—	—
Midwest	91.1	18,755	20,598	31,402	33,794	8.9	15,933	18,733
South	98.7	18,903	20,154	28,901	31,382	1.3	—	—
West	95.0	20,568	22,801	34,809	37,798	5.0	—	—
District size								
Less than 1,000	90.3	19,001	20,649	30,557	32,478	9.7	17,058	23,187
1,000 to 4,999	98.9	20,691	22,570	35,644	39,269	1.1	—	—
5,000 to 9,999	99.8	21,486	23,601	37,384	41,960	—	—	—
10,000 or more	99.9	21,829	23,961	37,728	42,842	—	—	—
Minority enrollment								
Less than 20 percent	93.4	19,631	21,430	32,890	35,614	6.6	17,218	24,180
20 percent or more	97.0	20,731	22,480	34,127	37,416	3.0	—	—
Minority teachers								
Less than 20 percent	93.6	19,798	21,581	33,143	35,896	6.4	17,347	23,409
20 percent or more	98.2	20,512	22,301	33,488	36,937	1.8	—	—
Private schools	67.7	15,141	16,511	23,253	25,499	32.3	12,618	19,384
Region								
Northeast	72.5	15,101	16,239	23,748	26,208	27.5	13,171	21,765
Midwest	70.2	14,637	15,879	22,821	25,403	29.8	10,327	15,407
South	60.8	14,592	15,961	22,016	23,637	39.2	11,867	18,941
West	67.3	16,565	18,400	24,710	26,880	32.7	15,987	22,607
School size								
Less than 1,000	50.7	14,798	16,163	21,718	24,147	49.3	11,907	17,417
1,000 to 4,999	86.9	15,092	16,478	23,626	25,613	13.1	14,705	24,726
5,000 to 9,999	84.4	16,648	17,912	26,966	29,639	15.6	17,959	35,601
10,000 or more	89.5	17,725	19,115	30,255	33,765	10.5	—	—
Minority enrollment								
Less than 20 percent	66.1	14,568	15,776	22,474	24,715	33.9	11,994	18,719
20 percent or more	71.3	16,313	18,017	24,848	27,104	28.7	14,213	21,125
Minority teachers								
Less than 20 percent	66.7	14,836	16,160	22,936	25,145	33.3	12,369	18,931
20 percent or more	71.5	16,261	17,805	24,420	26,802	28.5	13,730	21,408

—Too few cases for reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey; 1990-91 (Private School and Teacher Demand and Shortage Questionnaires).

Table 57-1 Average salaries in constant (1993) dollars of full-time faculty in institutions of higher education, by academic rank and control and type of institution: Selected academic years ending 1972-92

Year	All institutions			Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
All institutions									
1972	\$63,520	\$48,102	\$39,760	\$64,166	\$48,956	\$40,454	\$62,249	\$46,183	\$38,145
1973	62,515	47,491	39,203	63,371	48,559	40,037	60,836	45,118	37,290
1975	57,191	43,378	35,745	58,049	44,569	36,729	55,408	40,570	33,453
1976	57,499	43,298	35,517	58,363	44,501	36,485	55,769	40,485	33,357
1977	56,810	42,753	35,010	57,527	43,830	35,886	55,282	40,093	33,006
1978	55,778	42,138	34,466	56,577	43,241	35,412	54,016	39,329	32,265
1979	52,758	39,956	32,635	53,397	40,986	33,546	51,285	37,311	30,529
1980	49,851	37,669	30,670	50,550	38,705	31,585	48,232	35,086	28,629
1981	48,954	36,953	30,088	49,470	37,842	30,931	47,746	34,755	28,283
1982	50,291	37,973	30,931	50,512	38,745	31,749	49,763	36,031	29,205
1983	51,633	39,111	32,043	51,536	39,729	32,743	51,867	37,593	30,587
1985	53,446	40,270	33,173	53,147	40,822	33,829	54,169	38,950	31,826
1986	55,805	41,967	34,693	55,884	42,732	35,583	55,607	40,136	32,862
1988	57,545	43,094	35,605	57,606	44,028	36,517	57,460	41,153	33,570
1990	58,467	43,611	36,190	58,528	44,491	37,075	58,335	41,868	34,623
1991*	59,006	43,999	36,583	58,827	44,728	37,330	59,400	42,478	35,183
1992	59,234	44,275	36,866	58,345	44,556	37,303	61,180	43,693	36,063
4-year institutions									
1972	\$63,957	\$48,135	\$39,725	\$64,727	\$48,992	\$40,428	\$62,499	\$46,350	\$38,251
1973	62,974	47,458	39,065	63,995	48,547	39,901	61,104	45,252	37,373
1975	57,592	43,238	35,490	58,628	44,449	36,468	55,610	40,698	33,555
1976	57,927	43,279	35,440	58,948	44,562	36,476	56,023	40,616	33,461
1977	57,121	42,739	34,955	57,956	43,907	35,905	55,435	40,175	33,083
1978	56,056	42,101	34,313	56,963	43,299	35,318	54,180	39,415	32,336
1979	53,067	39,962	32,522	53,826	41,096	33,494	51,428	37,403	30,612
1980	50,202	37,701	30,575	51,044	38,865	31,558	48,390	35,169	28,710
1981	49,373	37,034	30,033	50,051	38,042	30,950	47,898	34,841	28,361
1982	50,724	38,052	30,891	51,102	38,949	31,791	49,886	36,093	29,279
1983	52,140	39,245	32,042	52,182	39,968	32,816	52,051	37,699	30,681
1985	54,127	40,466	33,259	54,028	41,143	34,006	54,342	39,065	31,948
1986	56,511	42,168	34,769	56,829	43,096	35,779	55,794	40,250	32,990
1988	58,296	43,299	35,727	58,610	44,367	36,740	57,643	41,267	34,055
1990	59,254	43,913	36,342	59,640	45,019	37,371	58,520	41,983	34,725
1991*	60,010	44,420	36,820	60,205	45,409	37,737	59,630	42,626	35,309
1992	60,313	44,689	37,104	59,764	45,151	37,661	61,374	43,848	36,201
2-year institutions									
1972	\$51,116	\$47,632	\$40,142	\$52,677	\$48,582	\$40,665	\$35,711	\$35,462	\$32,128
1973	54,314	47,891	40,462	55,664	48,654	40,917	34,852	36,090	32,365
1975	51,048	44,759	37,547	51,941	45,422	38,020	33,566	32,705	28,658
1976	50,277	43,485	36,108	51,507	44,084	36,541	31,536	32,083	28,210
1977	50,124	42,889	35,447	50,991	43,264	35,776	33,880	33,329	28,627
1978	50,647	42,489	35,558	51,537	42,853	35,858	31,383	32,009	27,615
1979	47,279	39,908	33,462	47,960	40,271	33,805	31,483	30,315	25,647
1980	44,079	37,390	31,376	44,755	37,708	31,715	29,070	28,417	23,856
1981	42,229	36,215	30,510	42,789	36,528	30,834	29,680	28,152	23,341
1982	43,771	37,264	31,239	44,167	37,474	31,537	32,095	30,158	24,398
1983	44,572	37,963	32,046	45,121	38,280	32,383	30,261	28,604	24,936
1985	45,048	38,595	32,512	45,460	38,914	32,911	31,711	28,747	24,798
1986	47,629	40,245	34,093	48,081	40,576	34,540	32,371	29,430	25,477
1988	47,899	41,376	34,578	48,248	41,475	34,885	32,775	29,615	26,184
1990	48,656	40,538	34,575	49,149	40,939	35,022	33,732	29,190	27,443
1991*	47,719	40,000	34,266	48,245	40,426	34,712	31,362	27,998	26,121
1992	47,772	40,223	34,461	48,145	40,652	34,931	33,300	29,075	26,276

*Revised from previously published figures.

NOTE: Salaries are for full-time instructional faculty on 9- or 10-month contracts. Data for academic years ending 1988 and 1990 include imputations for nonresponding institutions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1992* and earlier editions (based on IPEDS/HEGIS surveys of faculty salaries).

Table 58-1 Percentage distribution of public newly hired teachers, by region and school characteristics: 1991

Region and school characteristics	First-time teachers	Transfers	Reentrants
Region			
Northeast	37.7	27.5	34.8
Midwest	45.1	32.2	22.6
South	40.3	35.7	23.9
West	43.6	36.9	19.5
Urbanicity			
Urban	40.3	33.1	26.6
Suburban	43.9	32.2	23.8
Rural	41.9	35.7	22.3
Percent minority			
Less than 20%	43.1	32.9	24.0
Greater than 20%	41.1	35.0	23.9
School size			
Less than 150	40.0	38.4	21.6
150-499	39.3	36.1	24.6
500-749	46.5	30.3	23.2
750 or more	41.2	34.5	24.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1990-91 (Teacher Questionnaire).

Table 59-1 Percentage of full-time public secondary school teachers with selected professional characteristics, by urbanicity and assignment field: 1987-88 and 1990-91

Urbanicity and assignment field	Certified in main assignment field		Certified in other assignment field ¹		Majored in main assignment field		Majored or minored in main assignment field		Majored or minored in other assignment field ¹		Graduate degree	
	1987-88	1990-91	1987-88	1990-91	1987-88	1990-91	1987-88	1990-91	1987-88	1990-91	1987-88	1990-91
All teachers	93.3	95.2	66.7	64.2	68.7	65.8	79.0	76.8	52.3	45.1	51.5	52.1
Urbanicity												
Rural/small city	93.3	95.2	70.1	66.2	67.5	65.6	78.8	76.3	52.7	47.4	44.9	44.2
Urban	91.8	94.6	58.4	59.3	67.5	65.2	77.5	77.2	50.0	40.7	57.0	56.2
Suburban	95.3	95.5	65.8	64.6	71.9	66.4	81.2	77.0	53.6	44.9	59.1	59.6
Assignment field												
English and humanities	94.2	95.6	68.0	61.5	72.8	70.9	83.4	83.0	51.5	51.1	51.6	49.4
English	93.7	96.0	69.3	64.0	63.1	65.8	76.8	81.0	51.3	44.7	51.3	50.1
Arts and foreign languages	94.8	95.1	66.1	58.4	86.1	77.7	92.5	85.6	51.9	58.9	51.9	48.5
Social science	95.0	95.9	67.7	60.7	71.9	74.9	86.8	88.8	50.8	36.7	54.7	56.0
Math and science	91.8	94.6	71.4	68.8	54.4	53.2	69.5	68.7	49.7	42.4	52.7	54.1
Math	92.1	94.2	74.7	71.0	58.8	59.5	75.4	74.9	50.9	34.5	50.6	51.5
Science	91.6	95.0	70.3	68.1	49.6	46.3	62.9	62.0	49.3	45.1	55.0	56.8
Education specialties ²	93.2	95.0	58.3	59.7	74.7	68.1	79.8	73.4	54.3	44.0	49.6	51.5

¹Calculated only for teachers who have a secondary assignment field. Twenty-six percent of teachers reported having a secondary assignment field in 1987-88 and twenty-two percent in 1990-91.

²Education specialties are: elementary, home economics, physical, vocational and special vocational education.

NOTE: Certification includes standard and probationary certification by a state and full certification by an accrediting body other than the state. Those with an emergency certification are classified as not certified. See supplemental note for definition of major or minor field assignment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 and 1990-91 (Teacher Questionnaire).

Table 59-2 Percentage of full-time public secondary school teachers with selected professional characteristics, by main assignment field and urbanicity: 1987-88 and 1990-91

Main assignment field	Rural, small city		Urban		Suburban	
	1987-88	1990-91	1987-88	1990-91	1987-88	1990-91
Percentage certified in primary assignment field						
English and humanities	93.8	96.0	93.3	93.9	96.1	96.4
English	93.5	96.2	91.5	94.5	96.6	97.0
Arts and foreign languages	94.2	95.8	95.9	93.1	95.6	95.6
Social science	95.3	95.7	93.7	96.6	95.4	95.9
Math and science	92.6	94.9	88.5	93.6	93.5	94.8
Math	93.3	94.8	89.0	92.8	92.9	94.5
Science	92.0	95.0	87.9	94.6	94.1	95.0
Education specialties*	92.6	94.6	92.4	95.3	95.9	95.1
Percentage that majored in primary assignment field						
English and humanities	71.7	70.3	71.2	68.3	76.5	73.7
English	61.4	64.1	62.8	63.9	67.2	69.9
Arts and foreign languages	85.7	79.3	84.1	74.0	88.4	78.5
Social science	69.1	71.4	76.2	76.5	73.0	78.8
Math and science	53.0	54.9	53.7	53.8	58.1	50.9
Math	58.5	62.3	57.0	61.4	61.3	54.0
Science	47.0	47.2	49.9	44.2	54.4	47.1
Education specialties*	74.5	68.1	71.4	67.9	78.1	68.9
Percentage with graduate degree						
English and humanities	44.6	43.1	58.0	53.6	58.2	54.3
English	45.1	44.7	57.6	54.2	56.5	54.3
Arts and foreign languages	44.0	40.9	58.6	52.8	60.3	54.4
Social science	49.2	48.1	59.6	57.8	61.2	66.8
Math and science	46.0	45.1	57.7	57.7	61.5	62.4
Math	45.0	41.7	56.7	52.4	58.5	62.1
Science	47.0	48.6	58.9	64.4	64.9	62.8
Education specialties*	42.9	43.4	55.2	56.8	57.2	59.1

*Education specialties are: elementary, home economics, physical, vocational and special education.

NOTE: Certification includes standard and probationary certification by a state and full certification by an accrediting body other than the state. Those with an emergency certification are classified as not certified. See supplemental note to *Indicator 59* for definition of major or minor field assignment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 and 1990-91 (Teacher Questionnaire).

Table 59-3 Percentage of full-time public secondary school teachers who majored or minored in selected academic teaching assignment fields: 1990-91

Assignment field	Majored in main assignment field	Majored or minored in main assignment field ^a	Majored or minored in other assignment field*
English, arts and foreign language	29.7	36.5	25.6
English	29.9	37.6	27.9
English/language arts	29.8	37.4	27.8
Journalism	49.4	63.4	—
Arts	29.2	34.3	17.2
Drama/theatre	57.2	76.2	25.2
Art	21.4	25.1	13.7
Music	32.4	37.2	16.7
Foreign language	52.0	69.3	44.9
French	60.6	78.3	42.2
German	55.5	66.4	44.5
Latin	51.9	64.9	—
Spanish	46.9	64.8	46.1
Math and science	30.7	41.1	31.2
Biology/life sciences	51.7	64.9	30.6
Chemistry	34.9	60.1	36.2
Geology/earth science/space science	23.4	30.4	25.9
Physics	25.5	40.5	35.9
General science	29.2	44.0	34.6
Mathematics	23.7	30.1	27.2

—Too few observations for a reliable estimate.

*Calculated only for teachers who have a secondary assignment field. Twenty-two percent of teachers reported having a secondary assignment in 1990-91.

NOTE: Social Studies were excluded because the questionnaire did not subdivide the specific categories for teaching assignment fields. See supplemental note to *Indicator 59* for definition of major or minor field assignment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1990-91 (Teacher Questionnaire).

Note on definitions of certification and major/minor in assignment field

There are many ways to match major/minor field of study with teaching assignment fields. One method is to include both the general or specific field as well as the education major/minor parallel field as a match for a specific teaching assignment. For example, a teacher who majored or minored in mathematics or mathematics education would be defined as having majored or minored in the field of mathematics. A more strict definition would exclude the mathematics teachers who majored or minored in mathematics education. This stricter definition is used for the sciences (Biology, Chemistry, Geology/earth sciences, and Physics) in tables 59-1 and 59-2, as well as for table 59-3.

Certification in assignment field

Certification, as defined here, includes advanced, standard and probationary certification by a state or full certification by an accrediting body other than a state. Teachers with a temporary certification are classified as not certified.

Teachers excluded from tables 59-1 and 59-2

Teachers with the following assignment fields are excluded because of difficulties matching the assignment field with the appropriate major/minor or because, in the case of computer science, a major in the field has been possible for only a few years: Basic skills and remedial education; bilingual education; computer science; English as a second language; education of the gifted; reading; religion/philosophy; unspecified. In addition for 1990-91, the following fields were also excluded because comparable assignment fields that were not available on the 1987-88 questionnaire: American Indian studies; dance; drama/theater; military science; journalism.

Majored or minored in assignment field

Teachers are classified as having majored or minored in their assignment field if they have a major/minor field in the second column corresponding to their assignment in the first column. All degree levels* are considered in determining if a match has occurred.

<u>Assignment field(s)</u>	<u>Major/minor field(s)</u>
Art, Music	Art, fine and applied, art education, music education
English/language arts	English (literature, letters, speech, classics), english education
Foreign Language (1987-88)	Foreign languages, foreign language education
Foreign Languages (1990-91): French, German, Latin, Russian, Spanish and other foreign language	French, German, Latin, Russian, Spanish, other foreign language and foreign language education
Mathematics	Mathematics, mathematics education
General and all other sciences	Biological/life sciences, science education, chemistry, physics, geology/earth sciences and other physical sciences
Biology	Biological sciences

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Chemistry

Geology/earth sciences

Physics

Social studies/social sciences

Special education (1987-88):
Mentally retarded, emotionally
disturbed, learning disabled,
speech and hearing impaired,
other special education

Special education (1990-91):
Special education (general), emotionally
disturbed, mentally retarded, speech/
language impaired, deaf and hard-of-hearing,
visually handicapped, orthopedically impaired,
mildly handicapped, severely handicapped,
specific learning disabilities, other special
education

Vocational education (1987-88):
Business education, home economics,
industrial arts and vocational education

Vocational education (1990-91):
Business marketing, home economics,
industrial arts, accounting, agriculture,
health occupations, trade and industry,
technical and other vocational education

Health, physical education

Chemistry

Geology/earth sciences

Physics

Social studies/social sciences education, area
and ethnic studies, psychology, public affairs
and service, economics, history, political
science and government, sociology, other
social sciences

Special education (general), education of
emotionally disturbed, education of
mentally retarded, education of speech/
hearing/vision, specific learning disabilities,
other special education

Special education (general), emotionally
disturbed, mentally retarded, speech/
language impaired, visually handicapped,
deaf and hard-of-hearing, orthopedically
impaired, mildly handicapped, severely
handicapped, specific learning disabilities,
other special education

Agricultural education, home economics
education, industrial arts, vocational and
technical, agricultural and natural resources,
architecture and natural resources,
agriculture and environmental design,
engineering, health professions, business and
management, communications, business,
commerce, and distributive education

Agricultural and natural resources, business
and management, architecture and
environmental design, communications and
journalism, engineering, agricultural
educational, home economics education,
industrial arts, vocational and technical,
trade and industry education

Health profession and occupations,
physical education/health education

*Because there are fewer degree offering categories on the 1990-91 questionnaire than on the 1987-88 questionnaire, for comparability, only the following categories were used: Bachelor's degree, Master's

degree, Education specialist or professional diploma, Doctorate and First professional degree.

Teachers excluded from table 59-3

Teachers with the following assignment fields are excluded because of difficulties matching the assignment field with the appropriate major/minor or because, in the case of computer science, a major in the field has been possible for only a few years: Basic skills and remedial education; bilingual education; computer science; English as a second language; education of the gifted; reading; religion/philosophy; unspecified; American Indian studies; dance; military science.

Majored or minored in assignment field

Teachers are classified as having majored or minored in their assignment field if the assignment field listed in the left hand column below matches the major/minor field in the right hand column. All degree levels are considered in determining if a match has occurred.

<u>Assignment Field</u>	<u>Major/minor field(s)</u>
Art	Art, fine and applied
Drama/theater	Drama/theater
English/language arts	English (literature, letters, speech, classics)
Journalism	Communications and journalism
Mathematics	Mathematics
Music	Music
French	French
German	German
Latin	Latin
Spanish	Spanish
Biology/life sciences	Biology/Life sciences
Chemistry	Chemistry
Geology/earth science/space science	Geology/earth science
Physics	Physics
General science	Other natural sciences Science education

Table 60-1 Percentage of teachers engaging in various types of professional development activities, by control, urbanicity and percent minority: School years 1991-92 and 1990-91

Control and selected characteristics	1991-92		1990-91	
	Pursuing or completing new degree	Purpose of degree was "professional development in current field" ¹	Participating in teacher workshops or in-service training	Reporting training was relevant to current main assignment field ²
Public	15.7	41.7	61.4	86.1
Urbanicity				
Central city	14.2	35.4	64.2	86.4
Urban fringe/large town	15.7	46.1	62.0	89.3
Small town/rural	16.8	41.1	58.8	84.3
Minority enrollment				
Less than 20 percent	15.6	38.6	59.8	85.5
More than 20 percent	15.8	45.3	63.3	86.8
Private	14.6	57.4	48.7	87.0
Urbanicity				
Central city	13.3	59.3	52.0	85.6
Urban fringe/large town	17.0	56.1	44.9	87.0
Small town/rural	14.9	52.9	47.7	88.1
Minority enrollment				
Less than 20 percent	13.3	54.1	48.2	86.7
More than 20 percent	17.9	64.1	50.2	87.7

¹As a percent of those pursuing or completing a new degree.

²As a percent of those participating in teacher workshops or in-service training.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1990-91 and Teacher Follow-up Survey, 1991-92.

Table S1(a) Standard errors for first panel of text table in *Indicator 1*

October	Age															
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1970	0.9	1.1	1.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.2
1980	1.2	1.4	0.7	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.6	0.8	1.1
1992	1.2	1.4	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.7	1.3

October	Age															
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1970	1.2	1.3	1.2	1.0	0.9	1.0	0.9	0.8	0.8	0.7	0.8	0.7	0.8	0.7	0.7	0.7
1980	1.1	1.1	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.6
1992	1.4	1.4	1.3	1.1	1.1	1.0	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.6

Table S1(b) Standard errors for second panel of text table in *Indicator 1*

October	Age												
	3	4	5	16	17	18	19	20	21	22	23	24	
1970		0.9	1.1	1.0	0.5	0.8	1.2	1.2	1.3	1.2	1.0	0.9	1.0
1972		0.9	1.2	0.9	0.5	0.8	1.1	1.2	1.2	1.1	1.0	0.9	0.9
1974		1.0	1.2	0.8	0.5	0.8	1.1	1.1	1.1	1.1	1.0	0.9	0.8
1976		1.1	1.3	0.7	0.6	0.8	1.1	1.1	1.1	1.1	1.0	0.9	0.9
1978		1.2	1.4	0.8	0.5	0.8	1.1	1.1	1.1	1.0	1.0	0.9	0.8
1980		1.2	1.4	0.7	0.6	0.8	1.1	1.1	1.1	1.1	1.0	0.9	0.8
1982		1.2	1.4	0.8	0.6	0.8	1.2	1.2	1.2	1.1	1.0	0.9	0.8
1984		1.2	1.4	0.8	0.5	0.8	1.2	1.2	1.2	1.1	1.0	0.9	0.8
1986		1.2	1.3	0.7	0.5	0.8	1.2	1.3	1.2	1.1	1.1	0.9	0.8
1988		1.3	1.5	0.8	0.6	0.9	1.3	1.4	1.4	1.3	1.2	1.0	0.9
1990		1.3	1.4	0.7	0.6	0.9	1.3	1.3	1.3	1.3	1.2	1.1	1.0
1991		1.2	1.4	0.8	0.5	0.8	1.3	1.4	1.3	1.3	1.2	1.1	1.0
1992		1.2	1.4	0.7	0.5	0.7	1.3	1.4	1.4	1.3	1.1	1.1	1.0

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table S2 Standard errors for text table in *Indicator 2*

Year	Family income				Race/ethnicity		
	Total	White	Black	Hispanic	White	Black	Hispanic
1970	0.7	1.9	0.8	1.9	—	—	—
1971	0.7	1.9	0.7	1.8	—	—	—
1972	0.7	1.9	0.8	1.9	—	—	—
1973	0.7	1.9	0.7	1.8	0.5	1.2	1.4
1974	—	—	—	—	0.5	1.2	1.5
1975	0.8	2.0	0.9	1.9	0.6	1.3	1.5
1976	0.8	1.7	0.9	2.1	0.6	1.3	1.5
1977	0.8	1.9	2.0	2.0	0.6	1.4	1.5
1978	0.9	2.1	1.0	2.1	—	—	—
1979	0.9	2.1	1.0	2.1	—	—	—
1980	0.9	2.1	1.1	2.1	—	—	—
1981	0.9	1.9	1.1	2.0	0.7	1.4	1.4
1982	0.9	2.0	1.1	2.1	0.7	1.5	1.4
1983	0.9	1.8	1.1	2.1	0.7	1.4	1.4
1984	0.9	1.6	1.1	2.1	0.7	1.4	1.4
1985	0.9	1.7	1.1	2.2	0.7	1.4	1.5
1986	0.9	1.7	1.1	2.2	0.7	1.4	1.4
1987	0.9	1.7	1.1	2.1	0.7	1.4	1.4
1988	0.9	1.8	1.1	2.0	0.8	1.5	1.6
1989	1.0	2.1	1.2	2.4	0.8	1.6	1.7
1990	1.0	2.2	1.3	2.4	0.7	1.5	1.5
1991	1.0	1.9	1.1	1.8	0.7	1.5	1.4
1992	1.0	1.9	1.1	1.8	—	—	—

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Indicator 3

Table S3(a) Standard errors for the first panel of the text table in Indicator 3

School level	Total			Low income			Middle income			High income		
	1979	1985	1991	1979	1985	1991	1979	1985	1991	1979	1985	1991
Preschool	1.7	1.6	1.5	4.5	4.0	3.1	2.3	2.1	2.1	2.7	2.3	2.2
Kindergarten	1.0	0.9	0.9	1.3	1.2	1.1	1.2	1.2	1.1	2.7	2.6	2.5
Elementary	0.3	0.3	0.3	0.5	0.5	0.4	0.3	0.4	0.4	0.7	0.8	0.8
Secondary	0.3	0.4	0.4	0.6	0.7	0.6	0.4	0.4	0.4	0.7	0.9	0.9

Table S3(b) Standard errors for the second panel of the text table in Indicator 3

School level and type	Percentile distribution of tuition								
	1979			1985			1991		
	25th	50th	75th	25th	50th	75th	25th	50th	75th
Preschool	\$20	\$22	\$139	\$20	\$43	\$83	\$19	\$50	\$145
Church-related	26	30	189	28	33	168	21	51	147
Non-church-related	30	96	137	29	81	115	41	176	98
Kindergarten	43	65	194	52	72	168	67	139	279
Church-related	43	48	72	55	93	171	56	86	98
Non-church-related	115	264	349	139	266	192	303	303	267
Elementary (grades 1-8)	20	22	44	21	29	40	30	36	48
Church-related	18	22	28	21	28	29	31	34	52
Non-church-related	91	170	152	131	244	390	325	517	410
Secondary (grades 9-12)	31	31	59	37	45	51	62	112	353
Church-related	31	31	57	36	45	52	71	137	203
Non-church-related	118	464	734	212	962	374	540	484	405

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table S4(a) Standard errors for the first panel of the text table in Indicator 4

Retention and dropout rates	Number of grades repeated				Highest grade repeated			
	Never repeated	One or more	One	More than one	K-2	3-6	7-10	11-12
Percent repeating	—	0.3	0.3	0.1	0.2	0.2	0.2	0.1
Dropout rate	0.3	1.1	1.2	4.4	1.6	2.2	2.6	3.6

—Not applicable.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1992.

Table S4(b) Standard errors for the second panel of the text table in Indicator 4

Student characteristic	Percent retained in one or more grades	Dropout rate		
		Total	Never retained	Retained
Total	0.3	0.3	0.3	1.1
Family income				
Low	0.8	0.9	1.0	2.5
Middle	0.4	0.4	0.4	1.4
High	0.5	0.3	0.3	1.9
Disability status				
No disability	0.3	0.3	0.3	1.3
Disability	1.5	1.2	1.3	2.3
Learning disability only	3.2	2.3	3.3	3.4
Learning plus other disability	3.1	2.8	3.3	5.6
Other disability only	1.9	1.5	1.5	3.7

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1992.

Table S5 Standard errors for the text table in Indicator 5

October	Total	Sex		Race/ethnicity			Family income		
		Male	Female	White	Black	Hispanic	Low	Middle	High
1972	0.2	0.3	0.3	0.2	0.9	1.5	1.1	0.3	0.3
1973	0.2	0.4	0.3	0.2	1.0	1.5	1.2	0.3	0.2
1974	0.2	0.4	0.3	0.3	1.0	1.4	—	—	—
1975	0.2	0.3	0.3	0.2	0.9	1.4	1.1	0.3	0.3
1976	0.2	0.3	0.3	0.3	0.8	1.1	1.1	0.3	0.2
1977	0.2	0.4	0.3	0.3	0.9	1.2	1.1	0.4	0.3
1978	0.3	0.4	0.3	0.3	1.0	1.5	1.2	0.4	0.3
1979	0.3	0.4	0.4	0.3	1.0	1.4	1.2	0.3	0.3
1980	0.2	0.4	0.3	0.3	0.9	1.4	1.1	0.3	0.3
1981	0.2	0.3	0.3	0.3	1.0	1.3	1.1	0.3	0.3
1982	0.3	0.4	0.4	0.3	1.0	1.6	1.3	0.4	0.3
1983	0.3	0.4	0.4	0.3	1.0	1.6	1.1	0.4	0.3
1984	0.3	0.4	0.4	0.3	0.9	1.7	1.2	0.4	0.3
1985	0.3	0.4	0.4	0.3	1.1	2.3	1.3	0.4	0.3
1986	0.3	0.4	0.4	0.3	0.9	2.4	1.1	0.4	0.3
1987	0.3	0.4	0.4	0.3	1.0	1.7	1.1	0.4	0.2
1988	0.4	0.6	0.6	0.4	1.3	4.6	1.8	0.5	0.4
1989	0.4	0.6	0.6	0.4	1.6	3.9	1.6	0.6	0.4
1990	0.3	0.5	0.5	0.4	1.1	2.3	1.4	0.4	0.3
1991	0.3	0.5	0.5	0.4	1.2	2.2	1.4	0.4	0.3
1992	0.4	0.5	0.5	0.4	1.1	2.2	1.4	0.5	0.4

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys. U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1992*.

Indicator 6

Table S6 Standard errors for the text table in Indicator 6

Characteristics	Dropout rate for the eighth-grade class of 1988 in:		High school completion rates for the tenth-grade class of 1980:			
	1990	1992	Completed on time (June 1982)	Completed between 1982 and 1986	Completed between 1986 and 1992	Completion rates 1992
Total	0.4	0.5	0.6	0.4	0.2	0.4
Sex						
Male	0.6	0.6	0.8	0.6	0.2	0.5
Female	0.5	0.7	0.7	0.5	0.3	0.5
Race/ethnicity						
White	0.4	0.5	0.6	0.4	0.2	0.4
Black	1.5	1.4	1.7	1.2	0.7	1.4
Hispanic	0.8	1.3	2.1	1.2	0.9	1.7
Asian/Pacific Islander	1.0	1.5	1.6	1.5	1.0	0.8
American Indian	2.3	7.1	5.1	2.0	2.8	5.4
Metropolitan status						
Urban	0.9	1.1	1.6	1.0	0.7	1.3
Suburban	0.5	0.6	0.7	0.5	0.3	0.5
Rural	0.8	0.8	0.9	0.5	0.4	0.6
Region						
Northeast	0.8	0.8	1.3	0.9	0.4	0.7
North Central	0.7	0.7	1.0	0.6	0.4	0.6
South	0.7	0.8	1.0	0.7	0.3	0.6
West	1.1	1.3	1.4	1.0	0.5	1.3
Control of school						
Public	0.5	0.5	0.6	0.4	0.2	0.4
Catholic	0.4	1.0	1.3	1.0	0.2	0.6
Other private	0.9	0.8	2.3	2.3	0.4	1.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond (Sophomore Cohort) and National Education Longitudinal Study of 1988 (Student and Dropout Surveys).

Table S7 Standard errors for the text table in *Indicator 7*

Characteristics	Father		Mother		Guidance counselors		Teachers	
	1980	1990	1980	1990	1980	1990	1980	1990
All sophomores	0.6	0.7	0.6	0.6	0.6	0.7	0.5	0.7
Sex								
Male	0.8	1.0	0.8	0.9	0.7	1.0	0.6	1.0
Female	0.7	0.9	0.6	0.9	0.7	1.0	0.6	0.9
Race/ethnicity								
White	0.7	0.8	0.7	0.7	0.7	0.8	0.5	0.8
Black	1.3	2.4	1.3	2.4	1.1	2.4	1.7	2.5
Hispanic	1.3	1.7	1.3	1.5	1.3	1.9	1.3	1.9
Asian	2.8	1.8	3.0	1.6	3.4	2.4	3.3	2.3
American Indian	3.2	7.1	3.3	7.4	5.6	9.0	4.2	7.8
SES quartile								
Lowest	0.9	1.6	0.9	1.6	0.8	1.5	0.8	1.5
Middle	0.6	0.9	0.7	0.8	0.6	1.0	0.6	1.0
Highest	0.6	0.5	0.5	0.4	1.0	1.1	0.8	1.1
Control of school								
Public	0.6	0.7	0.6	0.7	0.6	0.8	0.5	0.7
Catholic	1.7	1.1	1.5	1.0	2.4	2.3	1.9	2.4
Other private	4.7	2.1	5.2	1.6	6.1	2.9	4.4	3.0
Test quartile								
Lowest	0.9	1.5	0.9	1.6	0.9	1.6	0.9	1.5
Second	0.9	1.4	0.9	1.3	0.7	1.4	0.7	1.5
Third	0.9	1.0	0.8	0.8	0.8	1.2	0.8	1.3
Highest	0.7	0.7	0.6	0.4	1.0	1.1	0.8	1.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, *America's High School Sophomores: A Ten Year Comparison*, High School and Beyond, Base Year Survey (1980) and National Education Longitudinal Study of 1988, First Follow-up Student Survey (1990).

Table S9 Standard errors for the text table in *Indicator 9*

October	Type of college			Family income			Race/ethnicity		
	Total	2-year	4-year	Low	Middle	High	White	Black	Hispanic
1973	0.9	0.7	0.9	2.3	1.2	1.5	—	—	—
1974	0.9	0.7	0.9	—	—	—	0.6	1.9	2.8
1975	0.9	0.7	0.8	2.6	1.2	1.5	0.6	1.9	2.7
1976	0.9	0.7	0.9	3.0	1.3	1.5	0.6	1.9	2.6
1977	1.0	0.7	0.9	2.6	1.3	1.5	0.6	2.0	2.6
1978	1.0	0.7	0.9	2.8	1.3	1.5	0.6	2.0	2.6
1979	1.0	0.7	0.9	2.8	1.3	1.5	0.6	1.9	2.7
1980	1.0	0.8	0.9	2.6	1.3	1.5	0.6	1.9	2.7
1981	1.0	0.8	0.9	2.9	1.3	1.6	0.6	1.9	2.6
1982	1.2	0.9	1.1	3.3	1.6	1.8	0.8	2.2	3.3
1983	1.2	1.0	1.1	3.5	1.6	1.9	0.8	2.1	3.2
1984	1.2	0.9	1.2	3.1	1.6	1.8	0.8	2.2	3.3
1985	1.3	1.0	1.2	3.6	1.8	1.9	0.8	2.2	4.6
1986	1.2	1.0	1.2	3.1	1.7	2.0	0.8	2.4	4.7
1987	1.3	1.0	1.2	3.4	1.8	1.9	0.8	2.3	4.5
1988	1.3	1.0	1.2	3.4	1.8	1.9	0.8	2.3	4.5
1989	1.8	1.5	1.8	5.1	2.6	2.9	1.2	3.3	9.4
1990	1.6	1.3	1.6	4.8	2.1	2.5	1.0	3.0	5.7
1991	1.6	1.4	1.6	4.5	2.2	2.4	1.1	2.9	5.5
1992	1.6	1.4	1.6	4.6	2.3	2.5	—	—	—

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table S10 Standard errors for the text table in *Indicator 10*

Student characteristics	Degree objective:										
	Vocational certificate			Associate's degree				Bachelor's degree			
	Completed in:			Not completed	Continuously enrolled	Reenrolled after interruption	No reenrollment after interruption	Continuously enrolled	Reenrolled after interruption	No reenrollment after interruption	
	Nine months or less	Over nine months	Completed								
Total	2.4	1.9	2.6	1.3	2.0	2.1	2.1	1.4	1.1	1.2	
Race/ethnicity											
White	2.6	2.4	3.0	1.4	2.1	2.2	2.2	1.5	1.2	1.4	
Black	6.1	4.3	6.2	3.3	4.2	6.2	6.1	3.9	3.7	3.2	
Hispanic	6.0	2.9	7.4	5.6	7.4	7.6	7.9	5.5	5.6	5.2	
Time between high school graduation and entry into postsecondary education											
12 months or less	3.0	3.1	4.0	1.9	2.5	2.4	2.6	1.4	1.2	1.1	
More than 12 months	3.0	2.3	3.2	1.2	2.5	3.4	3.8	4.7	3.9	4.0	
Degree of involvement in academic and social activities in school											
Never involved	4.0	2.7	4.3	2.1	3.2	4.1	4.3	4.4	4.3	4.4	
Once	3.9	3.4	4.5	2.0	3.0	3.0	3.3	2.7	2.1	2.3	
Sometimes	4.6	4.0	5.3	2.7	3.6	3.7	4.1	1.8	1.6	1.4	
Often	9.0	9.0	7.9	5.1	5.4	5.5	7.4	2.3	1.9	2.0	
Type of postsecondary institution first enrolled in											
4-year	8.2	4.9	8.8	1.8	3.5	2.9	3.9	1.3	0.9	1.0	
2-year	4.3	2.5	4.4	1.4	2.2	2.3	2.3	4.5	3.7	3.8	
Less than 2-year	2.5	2.6	2.9	(*)	(*)	(*)	(*)	(*)	(*)	(*)	

*Too few observations for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992 (data analysis system).

Table S11 Standard errors for the text table in *Indicator 11*

Characteristic	In the last 12 months	At any time while on current job	
	1991	1983	1991
Total	1.0	0.4	0.4
Sex			
Men	1.4	0.6	0.5
Women	1.2	0.7	0.6
Work status			
Full-time	1.2	—	—
Part-time	1.4	—	—
Age			
20–24	2.3	1.2	1.3
25–34	1.7	0.8	0.7
35–44	2.2	0.9	0.7
45–54	2.5	1.1	0.9
55–64	3.3	1.3	1.3
65 and over	4.8	2.9	2.6
Educational attainment			
High school graduate or less	1.1	0.6	0.6
Some postsecondary education	1.7	0.9	0.8
College graduate	2.3	0.8	0.6
Occupation			
Executive, professional, technical	2.0	0.7	0.6
Sales and administrative support	1.2	0.8	0.7
Service	2.2	1.3	1.1
Farming, forestry, fishing	2.8	2.8	2.8
Precision production, craft and repair	2.6	1.3	1.2
Operators, fabricators, laborers	2.3	1.2	1.2

—Not available.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *How Workers Get Their Training: A 1991 Update*, Bulletin 2407, August 1992. U.S. Department of Education, National Center for Education Statistics, 1991 National Household Education Survey (NHES:91).

Table S12(a) Standard errors for the first panel of the text table in Indicator 12

Year	Total			Male			Female		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1971	1.0	0.9	1.2	1.1	1.0	1.2	1.0	0.9	1.3
1975	0.7	0.8	0.8	0.8	0.8	1.0	0.8	0.9	1.0
1980	1.0	0.9	1.2	1.1	1.1	1.3	1.1	0.9	1.2
1984	0.7	0.5	0.6	0.8	0.6	0.6	0.8	0.6	0.8
1988	1.1	1.0	1.0	1.4	1.3	1.5	1.3	1.0	1.5
1990	1.2	0.8	1.1	1.7	1.1	1.6	1.2	1.1	1.2
1992	0.9	1.2	1.1	1.3	1.7	1.6	0.9	1.2	1.1

Table S12(b) Standard errors for the second panel of the text table in Indicator 12

Year	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1971	0.9	0.7	1.0	1.7	1.2	1.7	—	—	—
1975	0.7	0.7	0.6	1.2	1.2	2.0	2.2	3.0	3.6
1980	0.8	0.7	0.9	1.8	1.5	1.8	2.3	2.0	2.7
1984	0.8	0.6	0.7	1.1	1.0	1.0	2.1	1.7	2.2
1988	1.4	1.1	1.2	2.4	2.4	2.4	3.5	3.5	4.3
1990	1.3	0.9	1.2	2.9	2.2	2.3	2.3	2.3	3.6
1992	1.0	1.2	1.4	2.2	2.3	2.1	3.1	3.5	3.7

—Not available.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1970 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.***Table S13(a) Standard errors for the first panel of the text table in Indicator 13**

Year	Total			Male			Female		
	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11
1984	1.5	2.0	1.6	2.8	2.3	1.4	3.1	2.4	2.5
1988	1.6	1.3	1.3	2.3	1.5	2.0	2.0	1.7	1.2
1990	1.5	1.2	1.0	1.9	1.5	1.6	2.2	1.3	1.5
1992	1.5	1.3	1.4	1.7	1.9	1.2	1.7	1.3	2.0

Table S13(b) Standard errors for the second panel of the text table in Indicator 13

Year	White			Black			Hispanic		
	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11
1984	1.9	2.1	1.8	5.0	5.7	3.6	5.8	6.4	6.6
1988	1.9	1.3	1.3	4.7	3.5	2.9	3.5	2.5	4.4
1990	2.0	1.6	1.2	5.4	2.3	2.3	4.1	2.8	2.6
1992	1.7	1.3	1.2	3.8	4.0	3.2	3.6	2.2	3.8

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.*

Table S14(a) Standard errors for the first panel of the text table in Indicator 14

Year	Total			Male			Female		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1973	0.8	0.8	1.1	0.7	1.3	1.2	1.1	1.1	1.1
1978	0.8	1.1	1.0	0.7	1.3	1.0	1.0	1.1	1.0
1982	1.1	1.1	0.9	1.2	1.4	1.0	1.2	1.1	1.0
1986	1.0	1.2	0.9	1.1	1.1	1.2	1.2	1.5	1.0
1990	0.8	0.9	0.9	0.9	1.2	1.1	1.1	0.9	1.1
1992	0.8	0.9	0.9	1.0	1.1	1.1	1.0	1.0	1.1

Table S14(b) Standard errors for the second panel of the text table in Indicator 14

Year	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1973	1.0	0.9	1.1	1.8	1.9	1.3	2.4	2.2	2.2
1978	0.9	0.8	0.9	1.1	1.9	1.3	2.2	2.0	2.3
1982	1.1	1.0	0.9	1.6	1.6	1.2	1.3	1.7	1.8
1986	1.1	1.3	1.0	1.6	2.3	2.1	2.1	2.9	2.9
1990	0.8	1.1	1.0	2.2	2.3	2.8	2.1	1.8	2.9
1992	0.8	0.9	0.8	2.0	1.9	2.2	2.3	1.8	2.6

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.*

Table S15(a) Standard errors for the first panel of the text table in Indicator 15

Year	Total			Male			Female		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1970	1.2	1.1	1.0	1.3	1.3	1.2	1.2	1.2	1.1
1973	1.2	1.1	1.0	1.3	1.3	1.2	1.2	1.2	1.1
1977	1.2	1.1	1.0	1.3	1.3	1.2	1.2	1.2	1.1
1982	1.8	1.3	1.2	2.3	1.5	1.4	2.0	1.3	1.3
1986	1.2	1.4	1.4	1.4	1.6	1.9	1.4	1.5	1.5
1990	0.8	0.9	1.1	1.1	1.1	1.3	1.0	1.1	1.6
1992	1.0	0.8	1.3	1.2	1.2	1.7	1.0	1.0	1.5

Table S15(b) Standard errors for the second panel of the text table in Indicator 15

Year	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1970	0.9	0.8	0.8	1.9	2.4	1.5	—	—	—
1973	0.9	0.8	0.8	1.9	2.4	1.5	—	—	—
1977	0.9	0.8	0.7	1.8	2.4	1.5	2.7	1.9	2.2
1982	1.9	1.1	1.0	3.0	1.3	1.7	4.2	3.9	2.3
1986	1.2	1.4	1.7	1.9	2.5	2.9	3.1	3.1	3.8
1990	0.8	0.9	1.1	2.0	3.1	4.5	2.2	2.6	4.4
1992	1.0	1.0	1.3	2.7	2.7	3.2	2.8	2.6	5.6

—Not available.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992, Mathematics, 1973 to 1992, Reading, 1971 to 1992, Writing, 1984 to 1992, 1994.*

Table S16 Standard errors for the text table in *Indicator 16*

Larger countries	Average overall score			Average domain scale score			Nonschool language spoken at home		School language spoken at home	
	Total	Male	Female	Narrative	Expository	Documents	Percentage of students	Average score	Percentage of students	Average score
age 9										
United States	2.8	3.6	3.4	3.1	2.6	2.7	—	12.3	—	2.5
France	4.0	5.7	5.6	4.1	4.1	3.9	—	12.2	—	4.2
Italy	4.3	5.2	5.1	4.0	4.0	4.9	—	6.9	—	4.1
Spain	2.5	3.4	3.3	2.4	2.3	2.7	—	6.2	—	2.5
West Germany	3.0	3.9	3.8	2.8	2.9	3.2	—	8.1	—	2.9
age 14										
France	4.3	5.0	4.2	4.2	4.3	4.2	—	16.1	—	3.3
United States	4.8	6.3	5.9	4.9	5.6	4.0	—	21.0	—	4.4
West Germany	4.4	4.4	4.4	4.9	4.5	3.9	—	10.7	—	3.2
Italy	3.4	4.0	3.9	3.6	3.2	3.3	—	5.1	—	3.3
Spain	2.5	3.3	3.1	3.0	2.6	2.0	—	6.8	—	2.4

—Not available.

SOURCE: International Association for the Evaluation of Educational Achievement, *Study of Reading Literacy, How in the World Do Students Read?*, 1992.**Table S20(a)** Standard errors for the first panel of the text table in *Indicator 20*

Race/ethnicity	Total	Level of educational attainment							
		0-8 years	9-12 years, no diploma	GED	High school diploma	Some college, no degree	2-year college degree	4-year college degree	Graduate/professional degree
Total	0.6	2.6	1.5	1.8	1.1	1	2.4	1.6	1.4
White	0.7	3.1	1.6	2.0	1.2	1.2	2.6	1.7	1.4
Black	1.4	3.9	2.3	4.1	1.6	1.9	4.8	3.3	5.2
Hispanic	2.2	3.6	4.8	6.8	4.4	3.5	6.5	8.2	9.2

Table S20(b) Standard errors for the second panel of the text table in *Indicator 20*

Race/ethnicity	Total	Age					
		16-18	19-24	25-39	40-54	55-64	65 and over
Total	0.6	1.8	1.3	0.9	1.4	1.9	2.1
White	0.7	2.0	1.5	0.9	1.6	2.1	2.1
Black	1.4	3.6	1.7	2.0	2.3	4.0	4.5
Hispanic	2.2	6.7	4.9	3.5	4.5	7.4	8.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey*, 1993.

Table S21(a) Standard errors for the first panel of the text table in Indicator 21

Age	High school diploma or equivalency certificate						Some college or associate's degree					
	Total	White	Black	Hispanic	Men	Women	Total	White	Black	Hispanic	Men	Women
20-24	0.4	0.4	1.4	2.0	0.6	0.6	0.6	0.7	1.8	1.9	0.8	0.8
25-29	0.4	0.4	1.4	1.9	0.6	0.5	0.6	0.7	1.8	1.8	0.8	0.8
30-34	0.4	0.4	1.3	2.0	0.5	0.5	0.5	0.6	1.7	1.9	0.8	0.8
35-39	0.3	0.3	1.4	2.1	0.5	0.5	0.5	0.6	1.8	2.0	0.8	0.8
40-44	0.4	0.3	1.6	2.4	0.5	0.5	0.6	0.6	2.0	2.2	0.8	0.8
45-49	0.4	0.4	2.0	2.7	0.6	0.6	0.6	0.7	2.3	2.4	0.9	0.9
50-54	0.5	0.5	2.4	3.1	0.8	0.7	0.7	0.8	2.4	2.6	1.0	1.0
55-59	0.6	0.7	2.6	3.5	0.9	0.9	0.7	0.8	2.4	3.0	1.1	1.0
60-64	0.7	0.7	2.9	3.7	1.0	1.0	0.7	0.8	2.2	2.6	1.1	1.0

Table S21(b) Standard errors for the second panel of the text table in Indicator 21

Age	Bachelor's degree						Advanced degree					
	Total	White	Black	Hispanic	Men	Women	Total	White	Black	Hispanic	Men	Women
20-24	—	—	—	—	—	—	—	—	—	—	—	—
25-29	0.5	0.6	1.2	1.1	0.7	0.7	0.2	0.3	0.5	0.4	0.3	0.3
30-34	0.5	0.5	1.2	1.2	0.7	0.6	0.3	0.3	0.5	0.6	0.4	0.3
35-39	0.5	0.6	1.3	1.3	0.7	0.7	0.3	0.4	0.7	0.7	0.4	0.4
40-44	0.5	0.6	1.5	1.4	0.8	0.7	0.4	0.4	0.9	0.8	0.5	0.5
45-49	0.6	0.6	1.7	1.7	0.8	0.7	0.4	0.5	1.2	1.0	0.6	0.5
50-54	0.6	0.7	1.6	1.8	0.9	0.8	0.4	0.5	1.1	1.2	0.7	0.5
55-59	0.6	0.7	1.6	2.0	1.0	0.7	0.4	0.5	1.0	1.1	0.7	0.5
60-64	0.6	0.7	1.6	1.7	0.9	0.7	0.4	0.5	0.8	0.8	0.7	0.5

—Age group is too young for a meaningful estimate of attainment at this level.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey, 1993.

Table S23 Standard errors for the text table in Indicator 23

Student characteristic	Total				Academic				Vocational				Personal use			
	1969	1982	1987	1992	1969	1982	1987	1992	1969	1982	1987	1992	1969	1982	1987	1992
Total	0.23	0.06	0.09	0.09	0.28	0.07	0.11	0.09	0.29	0.06	0.07	0.06	0.02	0.15	0.07	0.04
Sex																
Male	0.23	0.07	0.09	0.10	0.29	0.08	0.12	0.12	0.39	0.07	0.08	0.08	0.02	0.04	0.07	0.05
Female	0.21	0.07	0.09	0.10	0.29	0.08	0.11	0.10	0.29	0.07	0.08	0.08	0.02	0.04	0.07	0.04
Race/ethnicity																
White	0.23	0.07	0.10	0.10	0.28	0.08	0.13	0.10	0.29	0.06	0.09	0.07	0.14	0.04	0.08	0.04
Black	0.54	0.16	0.15	0.27	0.18	0.19	0.15	0.35	0.31	0.14	0.10	0.12	0.15	0.08	0.11	0.11
Hispanic	0.25	0.11	0.14	0.13	0.34	0.11	0.20	0.16	0.60	0.10	0.16	0.13	0.12	0.07	0.10	0.07
Asian	0.23	0.17	0.63	0.20	0.81	0.25	0.62	0.28	0.48	0.18	0.26	0.23	0.14	0.12	0.29	0.08
American Indian	—	0.29	0.54	0.34	—	0.26	0.34	0.38	—	0.27	0.18	0.37	—	0.13	0.18	0.20
Parents' highest education level																
Didn't finish high school	—	0.11	—	0.16	—	0.11	—	0.19	—	0.10	—	0.13	—	0.06	—	0.08
High school graduate	—	0.18	—	0.19	—	0.23	—	0.22	—	0.18	—	0.13	—	0.11	—	0.05
Some college	—	0.08	—	0.10	—	0.10	—	0.12	—	0.07	—	0.09	—	0.05	—	0.06
College graduate	—	0.12	—	0.10	—	0.17	—	0.10	—	0.11	—	0.07	—	0.07	—	0.05

—Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction, High School and Beyond Transcript Study, 1987 NAEP High School Transcript Study, and National Education Longitudinal Study Transcripts, 1992.

Table S24 Standard errors for the text table in *Indicator 24*

Characteristic	1982	1987	1990	1992	Percentage point change			
					1982-87	1987-90	1990-92	1982-92
Total	0.6	1.2	1.7	1.3	1.4	2.1	2.1	1.4
Sex								
Male	0.8	1.4	1.9	1.8	1.6	2.3	2.6	2.0
Female	0.7	1.3	1.7	1.4	1.5	2.1	2.2	1.6
Race/ethnicity								
White	0.7	1.5	1.8	1.5	1.6	2.3	2.3	1.6
Black	1.3	3.0	3.8	3.5	3.2	4.9	5.2	3.7
Hispanic	0.9	2.2	2.7	2.4	2.3	3.4	3.6	2.6
Asian	2.5	4.4	3.0	3.6	5.0	5.3	4.7	4.4
American Indian	2.2	2.5	3.6	6.1	3.3	4.4	7.1	6.5
Urbanicity								
Urban	1.5	—	—	2.2	—	—	—	2.7
Suburban	0.9	—	—	2.1	—	—	—	2.2
Rural	1.1	—	—	2.0	—	—	—	2.3
Control of school								
Public	0.6	1.2	1.8	1.2	1.4	2.2	2.2	1.4
Private	4.3	4.6	3.4	4.5	6.3	5.7	5.6	6.2
Parents' highest education level								
Didn't finish high school	0.8	—	—	2.8	—	—	—	2.9
High school graduate	1.8	—	—	2.0	—	—	—	2.7
Some college	1.0	—	—	1.4	—	—	—	1.7
College graduate	1.7	—	—	2.5	—	—	—	3.0

—Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, 1987 and 1990 NAEP High School Transcript Studies, National Education Longitudinal Transcripts, 1992.

Table S25 Standard errors for the text table in *Indicator 25*

Mathematics and science courses	1982	1987	1990	1992	Percentage point change			
					1982-87	1987-90	1990-92	1982-92
Mathematics								
Remedial/below grade level math	1.0	1.3	1.6	0.8	1.6	2.0	1.8	1.3
Algebra I	0.9	0.8	1.2	0.8	1.2	1.4	1.4	1.2
Algebra II	1.0	1.8	1.4	1.1	2.0	2.3	1.8	1.5
Geometry	1.0	0.9	1.3	1.0	1.4	1.6	1.6	1.4
Trigonometry	0.6	1.5	1.3	1.0	1.6	2.0	1.6	1.2
Analysis/pre-calculus	0.5	0.9	1.0	1.0	1.0	1.3	1.4	1.1
Calculus	0.4	0.4	0.5	0.8	0.6	0.6	0.9	0.9
Algebra II and geometry	0.9	1.7	1.4	1.2	1.9	2.2	1.8	1.5
Algebra II, geometry, trigonometry, and calculus	0.1	0.4	0.3	0.2	0.4	0.5	0.4	0.3
Science								
Biology	0.8	0.9	0.9	0.5	1.2	1.3	1.0	1.0
Chemistry	0.8	1.1	1.3	1.1	1.4	1.7	1.7	1.4
Physics	0.6	0.9	0.8	1.0	1.0	1.2	1.3	1.2
Biology and chemistry	0.8	1.1	1.3	1.1	1.4	1.7	1.7	1.4
Biology, chemistry and physics	0.5	0.8	0.7	1.0	0.9	1.1	1.2	1.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, 1987 and 1990 NAEP High School Transcript Studies, National Education Longitudinal Study Transcripts, 1992.

Table S26 Standard errors for the text table in Indicator 26

Student characteristics	1982					1992				
	Average number of course units	Percentage earning course units				Average number of course units	Percentage earning course units			
		1 or more	2 or more	3 or more	4 or more		1 or more	2 or more	3 or more	4 or more
All graduates	0.03	1.03	1.07	0.79	0.42	0.04	0.90	1.20	1.20	0.70
Sex										
Male	0.04	1.24	1.24	0.89	0.46	0.04	1.50	1.70	1.70	0.50
Female	0.04	1.20	1.29	0.98	0.54	0.04	1.00	1.30	1.40	1.30
Race/ethnicity										
White	0.04	1.15	1.23	0.91	0.51	0.04	1.10	1.40	1.50	0.90
Black	0.06	2.48	2.33	1.71	0.30	0.08	3.00	2.90	2.20	1.00
Hispanic	0.04	1.71	1.46	0.87	0.52	0.06	2.30	2.50	2.10	1.00
Asian	0.10	3.21	3.95	2.19	2.03	0.12	3.40	3.50	3.60	2.60
American Indian	0.10	4.44	3.41	1.79	0.86	0.12	6.10	5.70	2.20	0.70
SES quartile										
Lowest	0.03	1.39	1.04	0.63	0.25	0.05	2.00	2.00	1.20	0.70
Middle	0.03	1.21	1.17	0.77	0.38	0.04	1.20	1.40	1.40	0.70
Highest	0.06	1.51	1.84	1.71	1.09	0.07	1.50	2.00	2.60	1.90

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Transcript Study, National Education Longitudinal Study Transcripts, 1992.

Table S27 Standard errors for the text table in Indicator 27

Family background characteristics	Field of major						
	Humanities	Social and behavioral sciences	Natural sciences	Computer science	Engineering	Education	Business
All bachelor's degree students	0.7	0.4	0.3	0.3	0.5	0.5	0.6
Parents' highest education level							
High school graduate or less	0.8	0.6	0.5	0.5	0.8	0.7	0.9
Trade/vocational school	1.6	1.9	1.0	0.9	1.4	1.5	2.1
Some college	1.2	0.7	0.6	0.4	0.7	0.8	1.1
Bachelor's degree	1.0	0.7	0.6	0.5	0.8	0.7	1.0
Advanced degree	1.1	0.8	0.7	0.3	0.8	0.7	0.9
Father's occupation							
Professional	1.0	0.7	0.7	0.5	0.9	0.7	0.9
Executive	0.9	0.8	0.5	0.3	0.8	0.5	1.0
Marketing/sales	1.4	1.1	0.8	0.4	0.9	1.0	1.6
Administrative support	1.7	1.3	1.3	0.9	1.4	1.5	1.8
Technical	1.6	1.6	1.3	1.1	1.5	1.6	2.0
Service	1.6	1.8	1.2	0.9	1.4	1.3	1.9
Blue collar	0.9	0.8	0.6	0.6	0.9	0.8	1.0
1988 family income (dependent students)							
Low	1.4	0.8	0.7	0.5	0.8	0.7	1.2
Lower middle	1.3	0.8	0.7	0.6	0.8	0.8	1.1
Middle	1.1	0.8	0.7	0.5	1.0	0.9	1.0
Upper middle	1.2	0.8	0.7	0.4	0.9	0.7	1.1
Upper	1.1	0.9	0.7	0.3	0.8	0.6	1.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table S28 Standard errors for the text table in *Indicator 28*

Subject	Sex			Race/ethnicity				
	Total	Men	Women	White	Black	Hispanic	Asian	American Indian
Arts	1.16	1.28	1.15	1.23	3.77	3.50	3.37	5.09
English literature/letters	0.69	0.64	0.78	0.73	4.72	2.16	2.66	4.08
Foreign language	1.10	1.08	1.26	1.14	3.25	3.49	2.86	4.95
Philosophy and religion	1.26	1.37	1.32	1.40	4.04	4.54	3.88	5.66
Area and ethnic studies	0.76	0.45	0.84	0.81	2.09	1.81	2.79	2.55
Psychology	0.91	1.01	0.93	0.92	2.76	3.97	3.49	5.48
Economics	1.11	1.05	1.20	1.23	4.03	2.49	3.39	5.21
Geography	0.60	0.65	0.65	0.67	1.55	1.80	2.64	4.41
Political science	1.06	1.13	1.13	1.11	3.45	4.43	3.32	5.41
Sociology/anthropology	0.88	1.06	0.93	0.94	4.00	3.62	3.79	6.49
History	1.05	1.04	1.17	1.10	4.24	3.64	4.10	5.13
Life sciences	1.01	1.06	1.13	1.03	4.13	2.99	3.23	5.32
Physical sciences	1.18	1.12	1.27	1.16	4.22	3.78	3.17	5.91
Mathematics	0.97	0.86	1.12	1.00	4.49	2.52	3.26	4.82
Computer and information sciences	1.10	1.01	1.36	1.19	3.70	2.89	3.48	6.13
Engineering	0.96	1.41	0.61	1.06	1.98	2.20	3.35	4.11
Education	1.19	1.13	1.25	1.29	3.88	3.25	3.09	4.40
Business/management	1.00	1.10	1.09	1.21	3.29	2.91	3.33	5.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 Survey of Recent College Graduates (Transcript Data File).

Table S32 Standard errors for the text table in *Indicator 32*

Year	Recent high school graduates not enrolled in college				Recent high school dropouts			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1973	1.6	1.7	5.6	(*)	2.5	3.1	6.6	(*)
1974	1.6	1.7	6.3	(*)	2.5	3.1	6.1	(*)
1975	1.7	1.8	6.0	(*)	2.6	3.2	6.0	11.0
1976	1.7	1.8	6.3	(*)	2.6	3.1	6.0	(*)
1977	1.6	1.7	6.5	10.8	2.5	3.0	6.6	(*)
1978	1.6	1.6	6.1	10.4	2.5	3.1	6.6	11.4
1979	1.6	1.7	6.4	9.9	2.5	3.2	6.2	(*)
1980	1.7	1.8	5.7	(*)	2.6	3.3	6.0	10.7
1981	1.8	1.9	5.5	(*)	2.6	3.5	4.3	10.9
1982	1.9	2.1	5.1	10.6	2.8	3.7	5.9	(*)
1983	2.0	2.1	5.4	(*)	3.1	4.1	7.2	(*)
1984	2.0	2.2	5.4	10.3	3.1	3.9	7.5	11.0
1985	2.2	2.4	6.1	(*)	3.0	4.1	7.2	11.6
1986	2.0	2.3	5.6	11.4	3.2	4.3	9.4	10.3
1987	2.1	2.3	7.0	10.7	3.3	4.2	7.4	(*)
1988	2.2	2.4	6.6	15.4	3.5	4.4	7.4	13.5
1989	2.4	2.5	7.7	15.8	3.9	5.0	7.9	(*)
1990	2.4	2.7	6.9	(*)	3.9	5.1	9.4	(*)
1991	2.7	3.1	6.7	(*)	3.9	5.3	8.3	(*)
1992	2.5	2.9	6.6	12.7	3.8	5.1	(*)	12.2

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table S33 Standard errors for the text table in *Indicator 33*

Age	Male					Female				
	Total	Grades 9 to 11	High school diploma	Some college	Bachelor's degree	Total	Grades 9 to 11	High school diploma	Some college	Bachelor's degree
20-24	0.8	2.3	1.2	1.2	2.3	0.8	2.4	1.4	1.2	1.8
25-29	0.6	2.4	1.0	1.1	1.0	0.7	2.5	1.3	1.3	1.2
30-34	0.5	2.2	0.9	1.0	0.7	0.7	2.5	1.2	1.2	1.3
35-39	0.5	2.4	0.9	1.0	0.7	0.7	2.8	1.2	1.2	1.2
40-44	0.6	2.8	1.1	1.0	0.7	0.7	3.0	1.2	1.3	1.2
45-49	0.6	3.1	1.2	1.2	0.8	0.8	3.0	1.3	1.5	1.3
50-54	0.8	2.9	1.3	1.6	1.2	0.9	2.9	1.4	1.8	1.7
55-59	1.0	3.1	1.7	2.2	1.5	1.0	2.8	1.6	2.2	2.4
60-64	1.1	3.0	1.9	2.7	2.3	1.0	2.4	1.6	2.7	2.9

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey, 1993.

Table S34 Standard errors for the text table in *Indicator 34*

Year	9-11 years of school				16 or more years of school			
	Male		Female		Male		Female	
	White	Black	White	Black	White	Black	White	Black
1970	0.02	0.06	0.07	0.08	0.03	(*)	0.12	0.22
1972	0.02	0.07	0.06	0.11	0.02	0.14	0.09	0.20
1974	0.03	0.09	0.06	0.08	0.02	0.12	0.08	0.15
1976	0.03	0.09	0.06	0.08	0.02	0.16	0.07	0.16
1978	0.03	0.06	0.05	0.07	0.03	0.15	0.06	0.11
1980	0.03	0.04	0.06	0.11	0.02	0.11	0.05	0.13
1982	0.03	0.08	0.05	0.09	0.03	0.13	0.06	0.11
1984	0.03	0.05	0.05	0.13	0.04	0.12	0.04	0.12
1986	0.04	0.06	0.04	0.08	0.03	0.14	0.05	0.16
1987	0.03	0.08	0.05	0.07	0.04	0.16	0.05	0.10
1988	0.03	0.05	0.05	0.07	0.04	0.06	0.04	0.10
1989	0.03	0.07	0.06	0.10	0.03	0.09	0.04	0.13
1990	0.03	0.05	0.05	0.08	0.03	0.08	0.05	0.15
1991	0.04	0.06	0.06	0.16	0.02	0.13	0.06	0.12
1992	0.03	0.08	0.05	0.15	0.04	0.23	0.07	0.17

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Table S35 Standard errors for the text table in Indicator 35

Type of election and year	Total	1-3 years of high school	4 years of high school	1-3 years of college	4 or more years of college
Voting rates					
Congressional elections					
1974	0.3	0.8	0.5	0.8	0.8
1982	0.4	1.0	0.6	0.9	0.8
1990	0.3	0.8	0.5	0.7	0.6
Presidential elections					
1964	0.7	1.3	0.9	1.4	1.2
1976	0.3	0.9	0.5	0.8	0.6
1984	0.5	1.3	0.7	0.9	0.8
1988	0.4	1.1	0.6	0.7	0.6
1992	0.3	0.9	0.5	0.5	0.5
Ratio of voting rates to those of high school graduates					
Congressional elections					
1974	0.02	0.02	—	0.03	0.03
1982	0.02	0.03	—	0.03	0.04
1990	0.02	0.02	—	0.03	0.03
Presidential elections					
1964	0.01	0.02	—	0.02	0.02
1976	0.01	0.02	—	0.02	0.02
1984	0.02	0.03	—	0.02	0.02
1988	0.02	0.02	—	0.02	0.02
1992	0.02	0.02	—	0.02	0.02

—Not applicable.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Voting and Registration in the Election of November...", Series P-20, Nos. 143, 293, 322, 383, 440, 453, and 466.

Table S36 Standard errors for the text table in Indicator 36

Question	1985					1990				
	All education levels	1-3 years high school	4 years high school	1-3 years college	4 or more years college	All education levels	1-3 years high school	4 years high school	1-3 years college	4 or more years college
Aware high blood pressure increases chances of heart disease	0.1	0.4	0.2	0.2	0.2	0.1	0.4	0.2	0.2	0.2
Exercise or play sports regularly	0.3	0.8	0.5	0.7	0.7	0.3	0.8	0.5	0.6	0.6
Told more than once that they had high blood pressure	0.2	0.7	0.4	0.5	0.5	0.2	0.7	0.3	0.4	0.4
Aware cigarettes increase chances of heart disease	0.1	0.4	0.2	0.2	0.2	0.1	0.4	0.2	0.2	0.2
Smoke cigarettes daily	0.3	0.9	0.5	0.6	0.6	0.3	0.8	0.4	0.5	0.4

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, National Health Interview Survey, 1985 and 1990.

Table S37 Standard errors for the text table in *Indicator 37*

Year	Pre-k				Kindergarten			
	Percent private	Percent full-day	Percent minority	Percent low income	Percent private	Percent full-day	Percent minority	Percent low income
1970	2.1	2.0	—	1.2	1.0	0.9	—	0.7
1971	2.1	2.1	—	1.3	1.0	0.9	—	0.8
1972	2.0	2.0	1.7	1.3	2.0	1.0	1.1	0.8
1973	1.9	1.9	1.7	1.2	1.0	1.1	1.1	0.8
1974	1.7	1.8	1.5	—	1.0	1.1	1.1	—
1975	1.7	1.7	1.5	1.2	1.0	1.1	1.1	0.8
1976	1.8	1.8	1.5	1.2	0.9	1.1	1.1	0.9
1977	1.8	1.8	1.5	1.2	1.0	1.2	1.1	0.9
1978	1.7	1.7	1.5	1.1	1.0	1.3	1.2	0.9
1979	1.7	1.7	—	1.1	1.0	1.3	—	1.0
1980	1.6	1.6	1.4	1.1	1.0	1.3	1.2	1.0
1981	1.7	1.6	1.4	1.2	1.1	1.3	1.2	1.0
1982	1.7	1.6	1.3	1.2	1.1	1.3	1.2	1.1
1983	1.6	1.5	1.3	1.1	1.1	1.3	1.2	1.0
1984	1.6	1.6	1.3	1.0	1.0	1.3	1.2	1.1
1985	1.5	1.5	1.3	1.0	1.0	1.3	1.1	1.0
1986	1.5	1.5	1.3	1.0	0.9	1.3	1.2	1.0
1987	1.6	1.6	1.4	1.0	1.0	1.3	1.3	1.0
1988	1.6	1.6	1.3	1.1	1.0	1.4	1.2	1.1
1989	1.5	1.5	1.2	1.1	1.0	1.3	1.2	1.1
1990	1.4	1.4	1.2	1.0	1.0	1.3	1.2	1.1
1991	1.5	1.5	1.2	1.1	0.9	1.3	1.2	1.1
1992	1.5	1.5	1.3	1.1	0.9	1.3	1.2	1.1

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table S39 Standard errors for the index in the text table for *Indicator 39*

Fall of year	Index of high school graduates aged 20–24 (1981=100)
1972	1.2
1973	1.2
1974	1.2
1975	1.3
1976	1.3
1977	1.3
1978	1.3
1979	1.4
1980	1.4
1981	1.4
1982	1.4
1983	1.5
1984	1.5
1985	1.4
1986	1.4
1987	1.4
1988	1.4
1989	1.4
1990	1.3
1991	1.3
1992	1.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years. U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table S42 Standard errors for the text table in Indicator 42

Year	Black					Hispanic				
	Public schools					Public schools				
	Total	Central cities	Other metropolitan	Non-metropolitan	Private schools	Total	Central cities	Other metropolitan	Non-metropolitan	Private schools
1970	0.3	0.8	0.3	0.5	0.5	—	—	—	—	—
1971	0.3	0.8	0.3	0.5	0.5	—	—	—	—	—
1972	0.3	0.7	0.3	0.5	0.5	0.2	0.6	0.3	0.4	0.6
1973	0.3	0.7	0.3	0.5	0.6	0.2	0.6	0.3	0.4	0.6
1974	0.3	0.7	0.3	0.5	0.5	0.3	0.6	0.3	0.4	0.8
1975	0.3	0.7	0.3	0.5	0.5	0.3	0.6	0.3	0.4	0.7
1976	0.3	0.8	0.4	0.5	0.6	0.3	0.6	0.4	0.4	0.7
1977	0.3	0.8	0.3	0.5	0.6	0.3	0.6	0.4	0.3	0.8
1978	0.3	0.8	0.4	0.5	0.6	0.3	0.7	0.4	0.3	0.7
1979	0.3	0.8	0.4	0.5	0.7	0.3	0.7	0.4	0.4	0.7
1980	—	—	—	—	—	—	—	—	—	—
1981	0.3	0.8	0.4	0.5	0.6	0.3	0.8	0.4	0.4	0.8
1982	0.3	0.9	0.4	0.6	0.7	0.3	0.8	0.4	0.5	0.9
1983	0.3	0.9	0.4	0.6	0.7	0.3	0.8	0.5	0.5	0.8
1984	0.3	—	—	—	0.7	0.3	—	—	—	0.8
1985	0.3	0.9	0.4	0.6	0.6	0.4	1.0	0.5	0.5	0.9
1986	0.3	0.8	0.4	0.6	0.7	0.4	0.9	0.5	0.6	0.9
1987	0.3	0.8	0.4	0.6	0.7	0.4	0.9	0.5	0.6	1.0
1988	0.4	0.9	0.4	0.6	0.9	0.4	1.0	0.6	0.7	1.1
1989	0.4	0.9	0.4	0.6	0.9	0.4	1.1	0.6	0.7	1.1
1990	0.4	0.8	0.4	0.6	0.8	0.4	0.9	0.6	0.6	1.0
1991	0.4	0.8	0.4	0.6	0.8	0.4	0.9	0.5	0.6	1.0
1992	0.3	0.8	0.4	0.5	0.8	0.4	0.9	0.6	0.6	1.0

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, "School Enrollment" various years; October Current Population Surveys.

Table S43 Standard errors for the text table in Indicator 43

Type of parent involvement	Sex			Race/ethnicity					Urbanicity		
	Total	Male	Female	White	Black	Hispanic	Asian	American Indian	Urban	Suburban	Rural
Talked about:											
selecting courses	0.4	0.5	0.4	0.4	1.0	0.9	1.3	2.9	0.7	0.5	0.8
school activity	0.2	0.4	0.3	0.3	0.6	0.8	1.0	2.1	0.5	0.4	0.4
class studies	0.3	0.4	0.3	0.3	0.7	0.8	1.0	2.0	0.5	0.4	0.5
Checked homework	0.2	0.3	0.3	0.3	0.5	0.7	1.0	1.9	0.4	0.3	0.5
Limited T.V. viewing	0.4	0.6	0.6	0.5	1.1	1.0	1.3	4.5	0.8	0.7	0.8
Limited going out with friends	0.3	0.4	0.3	0.3	0.8	0.7	1.0	2.8	0.4	0.4	0.5
Spoke with teacher/counselor	0.5	0.6	0.6	0.6	1.1	1.2	1.9	3.2	0.9	0.8	0.9
Visited classes	0.5	0.6	0.6	0.5	1.3	1.7	1.6	2.8	1.1	0.7	1.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year Student Survey (1988).

Table S44 Standard errors for the text table in *Indicator 44*

Characteristics	Come to school without books		Come to school without paper, pen, or pencil		Come to school without homework completed	
	1980	1990	1980	1990	1980	1990
All sophomores	0.24	0.30	0.28	0.38	0.32	0.33
Sex						
Male	0.38	0.41	0.43	0.65	0.50	0.45
Female	0.26	0.38	0.32	0.34	0.39	0.45
Race/ethnicity						
White	0.23	0.32	0.30	0.47	0.34	0.34
Black	0.78	0.87	0.81	0.96	0.87	1.30
Hispanic	0.84	1.08	0.91	1.10	0.97	1.05
Asian	2.69	1.48	2.09	1.40	2.42	1.44
American Indian	2.60	3.25	2.70	2.64	2.64	2.36
Control						
Public	0.25	0.32	0.30	0.35	0.33	0.48
Catholic	0.56	0.82	1.05	1.60	1.06	1.61
Other private	1.09	1.40	1.25	5.13	2.35	4.52
SES quartile						
Lowest	0.45	0.69	0.55	0.63	0.62	0.90
Middle	0.30	0.42	0.36	0.47	0.41	0.69
Highest	0.33	0.34	0.48	1.02	0.55	1.05
Test quartile						
Lowest	0.55	0.80	0.64	0.82	0.68	0.80
Second	0.40	0.55	0.52	0.65	0.59	0.73
Third	0.32	0.42	0.48	0.59	0.57	0.52
Highest	0.25	0.30	0.44	0.86	0.50	0.39

SOURCE: U.S. Department of Education, National Center for Education Statistics, *America's High School Sophomores: A Ten Year Comparison*, High School and Beyond, Base Year Survey (1980), and National Education Longitudinal Study of 1988, First Follow-up Student Survey (1990).

Table S47 Standard errors for the text table in *Indicator 47*

Year	Percent of children living in poverty				Percent of children living in poverty who live with a female householder			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1960	0.4	0.4	1.4	—	0.8	1.0	1.7	—
1965	0.4	0.4	1.3	—	1.0	1.2	1.9	—
1970	0.4	0.3	1.3	—	1.3	1.6	2.0	—
1975	0.4	0.4	1.3	1.7	1.2	1.5	1.9	2.8
1980	0.4	0.4	1.3	1.7	1.2	1.5	1.8	2.8
1981	0.4	0.4	1.3	1.7	1.2	1.5	1.8	2.7
1982	0.4	0.4	1.3	1.7	—	—	—	—
1983	0.4	0.4	1.3	1.6	1.1	1.4	1.7	2.5
1984	0.4	0.4	1.3	1.6	1.1	1.4	1.7	2.5
1985	0.4	0.4	1.3	1.5	1.2	1.4	1.7	2.4
1986	0.4	0.4	1.3	1.5	1.2	1.5	1.6	2.4
1987	0.4	0.4	1.3	1.5	1.2	1.5	1.6	2.4
1988	0.4	0.4	1.3	1.5	1.2	1.5	1.6	2.3
1989	0.4	0.4	1.3	1.5	1.2	1.5	1.7	2.4
1990	0.4	0.4	1.3	1.4	1.1	1.5	1.5	2.3
1991	0.4	0.4	1.3	1.5	1.1	1.4	1.8	2.2
1992	0.4	0.4	1.3	1.5	1.1	1.4	1.8	2.3

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, series P-60, "Poverty in the United States....," various years (based on March Current Population Surveys).

Table S48(a) Standard errors for the first panel of the text table in Indicator 48

Type of drug	1980	1985	1990	1991	1992
Alcohol	1.4	0.7	0.9	0.9	0.9
Marijuana	1.2	1.1	0.7	0.7	0.7
Amphetamines	0.5	0.5	0.5	0.5	0.5
LSD	0.4	0.3	0.3	0.3	0.3
Cocaine	0.4	0.4	0.3	0.3	0.3
Other narcotics	0.4	0.3	0.3	0.3	0.3
Tranquilizers	0.4	0.3	0.3	0.3	0.3

Table S48(b) Standard errors for second panel of text table in Indicator 48

Control of school	8th-graders in 1988		10th-graders in 1990		12th-graders in 1992	
	Once or twice	More than twice	Once or twice	More than twice	Once or twice	More than twice
All students	0.2	0.1	0.4	0.3	0.3	0.3
Public	0.2	0.2	0.5	0.3	0.3	0.4
Catholic	0.4	0.2	1.7	0.8	1.3	1.0
Private, other religious affiliation	0.4	0.3	0.5	1.1	1.0	0.3
Private, no religious affiliation	0.6	0.5	1.1	1.2	0.9	2.2

SOURCE: University of Michigan, Survey Research Center, Institute for Social Research, *Monitoring the Future Study*. U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year (1988), First Follow-up (1990), and Second Follow-up (1992) Student Surveys.

Table S49 Standard errors for text table in *Indicator 49*

October	All students			White			Black			Hispanic		
	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours
1970	0.8	0.5	0.3	0.9	0.6	0.3	2.0	1.1	0.7	—	—	—
1971	0.8	0.5	0.2	0.8	0.6	0.3	1.8	1.2	0.7	—	—	—
1972	0.8	0.6	0.3	0.9	0.7	0.3	1.6	1.1	0.7	4.7	3.1	1.7
1973	0.8	0.6	0.3	0.9	0.7	0.3	1.7	1.2	0.6	5.1	3.5	2.2
1974	0.8	0.6	0.3	0.9	0.7	0.3	1.8	1.4	0.7	4.6	3.4	1.8
1975	0.8	0.5	0.3	0.9	0.7	0.3	1.6	1.0	0.5	4.2	3.1	1.8
1976	0.8	0.6	0.3	0.9	0.7	0.3	1.6	1.1	0.7	4.2	3.2	1.7
1977	0.8	0.6	0.3	0.9	0.7	0.3	1.6	1.1	0.6	4.5	3.7	2.2
1978	0.8	0.6	0.3	0.9	0.7	0.3	1.8	1.2	0.6	4.9	4.0	1.9
1979	0.8	0.6	0.3	0.9	0.7	0.3	1.7	1.1	0.5	4.5	3.4	2.0
1980	0.8	0.6	0.2	0.9	0.7	0.3	1.7	1.1	0.7	4.4	3.2	2.2
1981	0.8	0.5	0.2	0.9	0.7	0.3	1.5	1.0	0.5	4.0	3.0	1.4
1982	0.8	0.5	0.2	1.0	0.7	0.3	1.5	0.8	0.1	3.7	2.5	1.3
1983	0.8	0.5	0.2	1.0	0.7	0.3	1.3	0.8	0.2	4.1	3.2	1.8
1984	0.8	0.6	0.2	1.0	0.7	0.2	1.8	1.2	0.4	4.5	3.2	2.0
1985	0.8	0.6	0.2	1.0	0.7	0.3	1.8	1.2	0.3	3.7	2.6	0.7
1986	0.8	0.6	0.2	1.0	0.8	0.3	1.8	1.3	0.5	4.2	3.5	1.2
1987	0.8	0.6	0.2	1.0	0.8	0.3	2.0	1.4	0.6	4.0	2.9	1.5
1988	0.9	0.7	0.2	1.1	0.8	0.3	2.2	1.5	0.6	4.7	3.4	1.8
1989	1.0	0.7	0.3	1.2	0.9	0.3	2.3	1.5	0.6	4.6	3.8	2.3
1990	0.9	0.6	0.3	1.2	0.8	0.3	2.1	1.2	0.6	4.2	3.3	2.0
1991	0.9	0.6	0.2	1.2	0.8	0.3	1.9	1.2	0.2	3.9	2.9	1.2
1992	0.9	0.6	0.2	1.1	0.8	0.3	1.9	1.2	0.3	3.7	2.8	1.4

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Table S51 Standard errors for the text table in *Indicator 51*

Characteristic	Public			Private, nonprofit			Private for profit
	2-year	4-year		2-year	4-year		
		Non-Ph.D.-granting	Ph.D.		Non-Ph.D.-granting	Ph.D.	
Attended part-time	1.3	1.6	2.1	4.7	2.2	1.7	2.1
Lived off campus	0.3	1.8	1.5	4.3	2.6	3.0	1.0
24 years of age or older	1.3	1.4	1.2	2.8	2.2	1.9	1.9
Married	1.0	1.0	1.0	1.9	1.5	1.3	1.2
Financially independent	1.2	1.5	1.5	3.0	2.3	2.2	1.9
Family income (dependent students)							
Low	1.4	1.2	1.0	2.6	1.7	1.3	2.5
Lower middle	1.2	0.8	0.7	2.1	0.8	0.7	1.5
Middle	1.2	1.0	0.7	1.7	0.8	0.7	1.4
Upper middle	1.2	0.8	0.7	1.6	0.8	0.9	1.2
Upper	1.2	1.3	1.1	2.9	1.4	2.0	0.9
Parents' highest educational level							
High school graduate or less	1.1	1.1	1.1	2.9	1.4	1.7	1.4
Bachelor's degree or higher	1.1	1.3	1.2	3.0	1.6	2.3	1.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table S52 Standard errors for text table in Indicator 52

Characteristic	Percent performing community service	Average hours of community service
Total	0.5	0.2
Type and control of institution		
Public	0.5	0.2
4-year non-PhD-granting	0.7	0.3
4-year PhD-granting	0.8	0.3
Private, non-profit	0.8	0.2
4-year non-PhD-granting	0.9	0.3
4-year PhD-granting	1.1	0.3
Sex		
Men	0.5	0.3
Women	0.6	0.2
Age		
Under 24	0.5	0.2
24 or older	1.2	0.3
Field of major		
Humanities	1.2	0.5
Social/behavioral sciences	1.3	0.3
Natural sciences	1.5	0.6
Computer science and engineering	0.9	0.5
Education	1.2	0.5
Business	0.8	0.4
Health services/sciences	1.5	0.6
Parents' highest education level		
High school graduate or less	0.3	0.7
Trade/vocational school	0.5	1.8
Some college	0.3	1.0
Bachelor's degree	0.3	0.8
Advanced degree	0.4	0.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1990 National Postsecondary Student Aid Study (data analysis system).

Table S58 Standard errors in text table for *Indicator 58*

Source of supply and prior year activity	Public schools		Private schools	
	1988	1991	1988	1991
Supply source				
First time teachers	1.0	1.3	1.4	1.8
Transfers	1.3	1.3	1.8	2.1
Within state and sector	1.0	1.0	1.9	1.6
Across state	0.6	0.6	1.2	1.3
Across sector	0.8	0.9	1.3	1.2
Reentrants	1.1	1.2	2.1	2.0
Prior year activity				
First-time teachers				
Work in education	1.0	0.8	1.4	1.4
Work outside education	1.2	1.3	3.4	2.7
College	1.9	2.3	3.0	3.0
Homemaking/childrearing	0.8	0.9	3.5	1.6
Other				
Substitute teaching	—	1.8	—	2.4
Reentrants				
Work in education	1.0	3.3	2.2	1.9
Work outside education	1.2	1.7	2.8	3.7
College	1.8	1.6	3.0	1.3
Homemaking/childrearing	2.1	3.0	3.2	3.7
Other				
Substitute teaching	—	2.7	—	2.5

—Substitute teaching was not a response option in the 1988 Teacher Questionnaire.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 and 1990–91 (Teacher Questionnaire).

Table S59 Standard errors for the text table in *Indicator 59*

Assignment field	Certified in main assignment field		Certified in other assignment field		Majored or minored in main assignment field		Graduate degree	
	1987–88	1990–91	1987–88	1990–91	1987–88	1990–91	1987–88	1990–91
All teachers	0.24	0.19	1.07	0.99	0.35	0.45	0.39	0.59
English and humanities	0.43	0.48	2.02	2.25	0.68	0.65	0.84	1.13
English	0.53	0.50	2.83	3.19	0.90	1.04	1.17	1.19
Arts and foreign languages	0.61	0.84	3.19	3.60	0.77	0.77	1.36	1.62
Social science	0.53	0.61	3.97	4.14	0.83	0.80	1.22	1.36
Mathematics and science	0.52	0.41	1.58	1.67	0.79	1.00	0.73	0.85
Mathematics	0.72	0.78	2.89	4.04	1.02	1.44	1.20	1.15
Science	0.64	0.58	1.63	1.93	1.21	1.50	1.01	1.19
Education specialties	0.37	0.30	1.98	1.88	0.49	0.75	0.63	0.78

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 and 1990–91 (Teacher Questionnaire).



Sources of Data

General Information

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 many research methods including surveys of a universe (such as all school districts) or of a sample, compilations of administrative records, and statistical projections. Users of *The Condition of Education* should take particular care when comparing data from different sources. Differences in procedures, timing, phrasing of questions, interviewer training, and so forth mean that the results are not strictly comparable. Following the general discussion of data accuracy below, descriptions of the information sources and data collection methods are presented, grouped by sponsoring organization. More extensive documentation of procedures used in one survey as compared to another does not imply more problems with the data, only that more information is available.

Unless otherwise noted, all comparisons cited in the text were tested for significance using t-tests and are significant at the .05 level. However, when multiple comparisons are cited, a Bonferroni adjustment to the significance level was made. When other tests were used, they are described in a note on the indicator page or in the supplemental note for the indicator.

The accuracy of any statistic is determined by the joint effects of "sampling" and "nonsampling" errors. Estimates based on a sample will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. In addition to such sampling errors, 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 more difficult to gauge than those produced by sampling variability.

The estimated standard error of a statistic is a measure of the variation due to sampling and can be used to examine the precision obtained in a particular sample. The sample estimate and an estimate of its standard error permit the construction of interval estimates with prescribed confidence that the interval includes the average result of all possible samples. If all possible samples were selected, each of these surveyed under essentially the same conditions, and an estimate and its standard error were calculated from each sample, then approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average value from all possible samples; 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average value of all possible samples; and 99 percent of all intervals from 2.5 standard errors below the estimate to 2.5 standard errors above the estimate would include the average value of all possible samples. These intervals are called 90 percent, 95 percent, and 99 percent confidence intervals, respectively.

To illustrate this further, consider the text table for *Indicator 1* and the standard error table S1 for estimates of standard errors from Census Current Population Surveys. For the 1992 estimate of the percentage of 3-year-olds enrolled in school (27.7 percent), table S1 shows a standard error of 1.2. Therefore, we can construct a 95 percent confidence interval from 25.3 to 30.1 ($27.7 \pm 2 \times 1.2$). If this procedure were followed for every possible sample, about 95 percent of the intervals would include the average for all possible samples.

Standard errors can help assess how valid a comparison between two estimates might be. 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 (se) of the difference between sample estimate "a"

and sample estimate "b" (if "a" and "b" are approximately independent) is:

$$se_{a-b} = \sqrt{se_a^2 + se_b^2}$$

It should be noted that most of the standard errors presented in the indicators 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 that could be prepared at a moderate cost, a number of approximations were required. As a result, most of 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. Determining the accuracy of statistical projections is more difficult. In general, the further away the projection date is from the date of the actual data being used for the projection, the greater the possible error in the projection. If, for instance, annual data from 1977 to 1990 are being used to project enrollment in elementary and secondary education, the further beyond 1990 one projects, the more variability in the projection. One will be less sure of the 1996 enrollment projection than of the 1991 projection. A detailed discussion of the projections methodology is contained in *Projections of Education Statistics to 2004* (National Center for Education Statistics, 1993).

Both universe and sample surveys are subject to nonsampling errors. Nonsampling errors can arise in various ways: from respondents or interviewers interpreting questions differently, from respondents estimating the values that they provide, from partial to total nonresponse, from imputation or reweighting to adjust for nonresponse, from inability or unwillingness on the part of respondents to provide correct information, from recording and keying errors, or from overcoverage or undercoverage of the target universe.

Sampling and nonsampling error combine to yield total survey error. Since estimating the magnitude of nonsampling errors would require special experiments or access to independent

data, these magnitudes are seldom available. In almost all situations, the sampling error represents an underestimate of the total survey error, and thus an overestimate of the precision of the survey estimates.

To compensate for suspected nonrandom errors, adjustments of the sample estimates are often made. For example, adjustments are frequently made for nonresponse, both total and partial. An adjustment made for either type of nonresponse is often referred to as an imputation—substitution of the "average" questionnaire response for the nonresponse. Imputations are usually made separately within various groups of sample members which have similar survey characteristics. Imputation for item nonresponse is usually made by substituting for a missing item the response to that item of a respondent having characteristics that are similar to those of the nonrespondent.

In editions prior to 1992 of *The Condition of Education*, when reporting race-specific data from the Current Population Survey, Hispanics were usually included among whites and blacks (i.e., "Hispanics may be of any race."). Beginning with the 1992 edition, racial/ethnic data from the Current Population Survey excludes Hispanics from whites and blacks (e.g., whites are non-Hispanic whites and blacks are non-Hispanic blacks).

Unless otherwise noted, all dollar values in this volume are expressed in constant 1993 dollars. The consumer price index (CPI) is used to convert current dollars for earlier years to 1993 dollars. The CPI index for 1993 is 144.7.

How to obtain standard errors for the supplemental tables

To obtain estimates of standard errors for the statistics in the supplemental tables write to:

Editor, *The Condition of Education 1994*
(Standard Errors Request)
National Center for Education Statistics
555 New Jersey Ave., NW Room 517
Washington, DC 20208-5650

Please specify WK1 or ASCII format on 3.5 or 5.25 inch disks.

1. Federal Agency Sources

National Center for Education Statistics U.S. Department of Education

Adult Literacy in America

The National Adult Literacy Survey was created as a new measure of literacy and funded by the Department of Education. It is the third and largest assessment of adult literacy funded by the federal government. The aim of the survey is to profile the English literacy of adults in the United States based on their performance across a wide array of tasks that reflect the types of materials and demands they encounter in their daily lives.

To gather the information on adults' literacy skills, trained staff interviewed nearly 13,600 individuals age 16 and older during the first eight months of 1992. These participants had been randomly selected to represent the adult population in the country as a whole. Black and Hispanic households were oversampled to ensure reliable estimates of literacy proficiencies and to permit analyses of the performance of these smaller subgroups. In addition, some 1,100 inmates from 80 federal and state prisons were interviewed to gather information on the proficiencies of the prison population. In total, over 26,000 adults were surveyed.

Each survey participant was asked to spend approximately an hour responding to a series of diverse literacy tasks as well as questions about his or her demographic characteristics, educational background, reading practices, and other areas related to literacy. Based on their responses to the survey tasks, adults received proficiency along three scales, which reflect varying degrees of skill in prose, document, and quantitative literacy.

Beginning Postsecondary Student Longitudinal Study

The Beginning Postsecondary Student Longitudinal Study (BPS) provides information concerning persistence, progress, and attainment from initial time of entry into postsecondary education through leaving school and entering the workforce. BPS includes traditional and nontraditional (e.g., older) students and is representative of all beginning students in postsecondary education. BPS follows first-time, beginning students for at least 6 years at 2-year intervals, collecting student data, postsecondary transcripts, and financial aid reports. By starting with a cohort that has already entered postsecondary education, and following it for 6 years, BPS will be able to determine to what extent, if any, students who start postsecondary education later differ in their progress, persistence, and attainment.

Common Core of Data

The National Center for Education Statistics (NCES) uses the Common Core of Data (CCD) survey to acquire and maintain statistical data on the 50 states, the District of Columbia, and the outlying areas from the universe of state-level education agencies. Information about staff and students is collected annually at the school, LEA (local education agency or school district), and state levels. Information about revenues and expenditures is also collected at the state level. Data are collected for a particular school year (July 1 through June 30) via survey instruments sent to the states by October 15 of the subsequent school year. States have 2 years in which to modify the data originally submitted.

Since the CCD is a universe survey, the CCD information presented in this edition of *The Condition of Education* is not subject to sampling error. However, nonsampling error could come from two sources—nonreturn and inaccurate reporting. Almost all of the states submit the six CCD survey instruments each year, but there are many delays in submitting data and the submissions are sometimes incomplete.

Understandably, when 57 education agencies compile and submit data for over 85,000 public schools and approximately 15,800 local school districts, misreporting can occur. Typically, this results from varying interpretation of NCES definitions and differing recordkeeping systems. NCES attempts to minimize these errors by working closely with the Council of Chief State School Officers (CCSSO) and its Committee on Evaluation and Information Systems (CEIS). The state education agencies report data to NCES from data collected and edited in the states' regular reporting cycles. NCES encourages the agencies to incorporate into their own survey systems the NCES items they do not already collect so that those items will also be available for the subsequent CCD survey. Over time this has meant fewer missing data cells in each state's response, reducing the need to impute data.

NCES subjects data from the education agencies to a comprehensive edit. Where data are determined to be inconsistent, missing, or out of range, NCES contacts the education agencies for verification. NCES-prepared state summary forms are returned to the state education agencies for verification. States are also given an opportunity to revise their state-level aggregates from the previous survey cycle.

Questions concerning the Common Core of Data can be directed to:

John Sietsema
Elementary and Secondary Education
Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5651

Federal Support for Education

NCES prepares an annual compilation of Federal Funds for Education. Data for U.S. Department of Education program totals come from the *Budget of the U.S. Government*. Budget offices of other federal agencies provide information for all other federal program support except for research funds, which are obligations reported by the National Science Foundation in *Federal*

Funds for Research and Development, fiscal years 1965 to 1992. Some data are estimated, based on reports from the federal agencies contacted and the *Budget of the U.S. Government*.

Except for money spent on research, outlays were used to report program funds to the extent possible. Some tables are obligations as noted in the title of the table. Some federal program funds not commonly recognized as education assistance are also included in the totals reported. For example, portions of federal funds paid to some states and counties as shared revenues resulting from the sale of timber and minerals from public lands have been estimated as funds used for education purposes. Parts of the funds received by states (in 1980) and localities under the General Revenue Sharing Program are also included, as are portions of federal funds received by the District of Columbia. The share of these funds allocated to education was assumed equal to the share of general funds expended for elementary and secondary education by states and localities in the same year as reported by the U.S. Bureau of the Census in its annual publication, *Governmental Finances*.

All state intergovernmental expenditures for education were assumed earmarked for elementary/secondary education. Contributions of parent governments of dependent school systems to their public schools amounted to approximately 9 percent of local government revenues and local government revenue sharing in each year. Therefore, 9 percent of local government revenue-sharing funds were assumed allocated each fiscal year to elementary and secondary education. Parent government contributions to public school systems were obtained from the U.S. Bureau of the Census, *Finances of Public School Systems*.

The amount of state revenue-sharing funds allocated for postsecondary education in 1980 was assumed to be 13 percent, the proportion of direct state expenditures for institutions of higher education reported in *Governmental Finances* for that year.

The share of federal funds for the District of Columbia assigned to education was assumed

equal to the share of the city's general fund expenditures for each level of education.

For the job training programs conducted by the Department of Labor, only estimated sums spent on classroom training have been reported as educational program support.

During the 1970s, The Office of Management and Budget (OMB) prepared annual reports on federal education program support. These were published in *Budget of the U. S. Government [Special Analyses]*. The information presented in this report is not, however, a continuation of the OMB series. A number of differences in the two series should be noted. OMB required all federal agencies to report outlays for education-related programs using a standardized form, thereby assuring agency compliance in reporting. The scope of education programs reported here differs from that of OMB. Off-budget items such as the annual volume of guaranteed student loans were not included in OMB's reports. Finally, while some mention is made of an annual estimate of federal tax expenditures, OMB did not include them in its annual analysis of federal education support. Estimated federal tax expenditures for education are the difference between current federal tax receipts and what these receipts would be without existing education deductions to income allowed by federal tax provisions.

Recipients' data are estimated based on *Estimating Federal Funds for Education: A New Approach Applied to Fiscal Year 1980*, U.S. Department of Education, "Federal Support for Education, Fiscal Years 1980 to 1984," and *Catalog of Federal Domestic Assistance*. The recipients' data tend to undercount institutions of higher education (IHEs), students, and local education agencies (LEAs). This is because some of the federal programs have more than one recipient receiving funds. In these cases the recipients were put into a "mixed recipients" category, because there was no way to disaggregate the amount each recipient received.

Questions concerning "Federal Support for Education" can be directed to:

Charlene Hoffman
Data Development Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5650

High School and Beyond

High School and Beyond (HS&B) is a national longitudinal survey of 1980 high school sophomores and seniors. The base-year survey was a probability sample of 1,015 high schools with a target number of 36 sophomores and 36 seniors in each of the schools. A total of 58,270 students participated in the base-year survey. Substitutions were made for noncooperating schools—but not for students—in those strata where it was possible. Overall, 1,122 schools were selected in the original sample and 811 of these schools participated in the survey. An additional 204 schools were drawn in a replacement sample. Student refusals and student absences resulted in an 82 percent completion rate for the survey.

Several small groups in the population were oversampled to allow for special study of certain types of schools and 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.

HS&B first followup activities took place in the spring of 1982. The sample design of the first followup survey called for the selection of approximately 30,000 people who were sophomores in 1980. The completion rate for sophomores eligible for on-campus survey administration was about 96 percent. About 89 percent of the students who left school between the base year and first followup surveys (dropouts, transfer students, and early graduates) completed the first followup sophomore questionnaire.

In designing the senior cohort first followup survey, one of the goals was to reduce the size of the retained sample, while still keeping sufficient numbers of minorities to allow important policy analyses. A total of 11,227 (94

percent) of the 11,995 persons subsampled completed the questionnaire. Information was obtained about the respondents' school and employment experiences, family status, and attitudes and plans.

The sample for the second followup, which took place in spring 1984, consisted of about 12,000 members of the senior cohort and about 15,000 members of the sophomore cohort. The completion rates were 91 percent for the senior cohort and 92 percent for the sophomore cohort.

HS&B third followup data collection activities were performed in spring 1986. Both the sophomore and senior cohort samples for this round of data collection were the same as those used for the second followup survey. The completion rates for the sophomore and senior cohort samples were 91 percent and 88 percent, respectively.

Further information on the High School and Beyond survey may be obtained from:

Aurora M. D'Amico
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

High School Transcript Studies

As part of the first followup survey of High School and Beyond, transcripts were requested in fall 1982 for an 18,152-member subsample of the sophomore cohort. Of the 15,941 transcripts actually obtained, 1,969 were excluded because the students had dropped out of school before graduation, 799 were excluded because they were incomplete, and 1,057 were excluded because the students graduated before 1982 or the transcript indicated neither a dropout status nor graduation. Thus 12,116 transcripts were used for the overall curriculum analysis presented in this publication.

All courses in each transcript were assigned a six-digit code based on *A Classification of Secondary School Courses* (developed by Evaluation Technologies, under contract with

NCES). Credits earned in each course were expressed in Carnegie units. (The Carnegie unit is a standard of measurement that represents 1 credit for the completion of a 1-year course. To receive credit for a course, the student must have received a passing grade—"pass," "D," or higher.) Students who transferred from public to private schools or from private to public schools between their sophomore and senior years were eliminated from public/private analyses.

Transcripts of 1987 high school graduates were compared with transcripts of 1982 graduates to describe changes in course taking across this 5-year period. The analyses were based on approximately 22,700 transcripts of 1987 graduates obtained as part of the 1987 High School Transcript Study and 12,000 transcripts of 1982 graduates who participated in the High School and Beyond (HS&B) project. A brief description of each study is provided below.

The sample of schools for the 1987 High School Transcript Study (conducted by Westat, Inc. for the U.S. Department of Education, NCES) consisted of a nationally representative sample of 471 eligible secondary schools selected for 1986 National Assessment of Educational Progress (NAEP) for grade 11/age 17 students, of which 433 schools participated.

The 1990 High School Transcript Study was conducted using methodology and techniques nearly identical to those used in the 1987 study. The sample of schools was a nationally representative sample of schools teaching grade 12 or having 17-year-old students, and the sample of students was a representative sample of seniors graduating from each school. Approximately three-fourths of the sample for the transcript study had participated in NAEP assessments in 1990.

These analyses focused on high school graduates, so only those students who had graduated from high school were included—from the 1990 study, the 1987 High School Transcript Study, and from High School and Beyond. Because the methods of identifying and defining handicapped students were different for the later studies, and in order to

make the samples as comparable as possible, it was necessary to restrict the samples to those students whose records indicated they had not participated in a special education program.

Further information on this survey may be obtained from:

Patrica Dabbs
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5653

Integrated Postsecondary Education Data System

The Integrated Postsecondary Education Data System (IPEDS) surveys all postsecondary institutions, including universities and colleges, as well as institutions offering technical and vocational education beyond the high school level. This survey, which began in 1986, replaces and supplements the Higher Education General Information Survey (HEGIS).

IPEDS consists of several integrated components that obtain information on where postsecondary education is available (institutions), who participates in it and completes it (students), what programs are offered and what programs are completed, and what human and financial resources are involved in the provision of institutionally based postsecondary education. Specifically, these components include: institutional characteristics, including institutional activity; fall enrollment, including age and residence; fall enrollment in occupationally specific programs; completions; finance; staff; salaries of full-time instructional faculty; and academic libraries.

The higher education portion of this survey is a census of accredited 2- and 4-year colleges, while data from the technical and vocational institutions are collected through a sample survey. Thus, some portions of the data will be subject to sampling and nonsampling errors, while some portions will be subject only to nonsampling errors.

Prior to the establishment of IPEDS in 1986, HEGIS acquired and maintained statistical data on the characteristics and operations of institutions of higher education. Implemented in 1966, HEGIS was an annual universe survey of institutions listed in the latest NCES *Education Directory of Colleges and Universities*.

The trend tables presented in this report draw on IPEDS and HEGIS surveys, which solicited information concerning institutional characteristics, faculty salaries, finances, enrollment, and degrees. Since these surveys were distributed to all higher education institutions, the data presented were not subject to sampling error. However, they were subject to nonsampling error, the sources of which varied with the survey instrument. Information concerning the nonsampling error of the enrollment and degrees surveys draws extensively on the "HEGIS Post-Survey Validation Study" conducted in 1979.

Further information on IPEDS may be obtained from:

William H. Freund
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

Fall Enrollment. This survey has been part of the IPEDS or HEGIS series since 1966. The enrollment survey response rate was relatively high; the 1990 response rate was 87.2 percent. Major sources of nonsampling error for this survey were classification problems, the unavailability of needed data, interpretation of definitions, the survey due date, and operational errors. Of these, the classification of students appears to have been the main source of error. Institutions had problems in correctly classifying first-time freshmen, other first-time students, and unclassified students for both full-time and part-time categories. These problems occurred most often at 2-year institutions (private and public) and private 4-year institutions. In the 1977-78 HEGIS validation studies, the classification problem led to an estimated overcount of 11,000 full-time students and an

undercount of 19,000 part-time students. Although the ratio of error to the grand total was quite small (less than 1 percent), the percentage of errors was as high as 5 percent for detailed student levels and even higher at certain aggregation levels.

Beginning with fall 1986, the survey system was redesigned with the introduction of IPEDS (see above). The new survey system comprises all postsecondary institutions, but also maintains comparability with earlier surveys by allowing HEGIS institutions to be tabulated separately. The new system also provides for preliminary and revised data releases. This allows the Center flexibility to release early data sets while still maintaining a more accurate final database.

Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty. This survey has been conducted for most years from 1966–67 to 1985–86, and in 1987–88 and 1989–90. Although the survey form was changed a number of times during those years, only comparable data are presented in this report. The data were collected from the individual colleges and universities.

Between 1966–67 and 1985–86 this survey differed from other HEGIS surveys in that imputations were not made for nonrespondents. Thus, there is some possibility that the salary averages presented in this report may differ from the results of a complete enumeration of all colleges and universities. Beginning with the surveys for 1987–88, the IPEDS data tabulation procedures included imputations for survey nonrespondents. The response rate for the 1989–90 survey was 80.5 percent. The response rate for public colleges was substantially higher than the response rate for private colleges. Thus, it is probable that the public colleges' salary data are more accurate than the data for private colleges. Although data from these surveys are not subject to sampling error, sources of nonsampling error included computational errors and misclassification in reporting and processing. NCES checked individual colleges' data for internal and longitudinal consistency and contacted the colleges to check inconsistent data.

Completions. This survey was part of the HEGIS series throughout its existence. However, the degree classification taxonomy was revised in 1970–71 and 1982–83. Collection of degree data has been maintained through the IPEDS system.

Though information from survey years 1970–71 through 1981–82 is directly comparable, care must be taken if information before or after that period is included in any comparison. For example, degrees-conferred trend tables arranged by the 1982–83 classification were added to the *Digest of Education Statistics, 1992* to provide consistent data from 1970–71 to 1988–89. However, data on associate and other formal awards below the baccalaureate, by field of study after 1982–83, are not comparable with figures for earlier years. The nonresponse rate did not appear to be a significant source of nonsampling error for this survey. The return rate over the years was high, with the response rate for the 1989–90 survey at 92.3 percent. Because of the high return rate, nonsampling error caused by imputation was also minimal.

The major sources of nonsampling error for this survey were differences between the NCES program taxonomy and taxonomies used by the colleges, classification of double majors and double degrees, operational problems, and survey timing. In the 1979 HEGIS validation study, these sources of nonsampling were found to contribute to an error rate of 0.3 percent overreporting of bachelor's degrees and 1.3 percent overreporting of master's degrees. The differences, however, varied greatly among fields. Over 50 percent of the fields selected for the validation study had no errors identified. Categories of fields that had large differences were business and management, education, engineering, letters, and psychology. It was also shown that differences in proportion to the published figures were less than 1 percent for most of the selected fields that had some errors. Exceptions to these 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 and commerce, and in distributive education (5 percent and 9 percent); master's

programs in philosophy (8 percent); and Ph.D. programs in psychology (11 percent).

Financial Statistics. This survey was part of the HEGIS series and has been continued under the IPEDS system. Changes were made in the financial survey instruments in fiscal years (FY) 1976, 1982, and 1987. The FY 76 survey instrument contained numerous revisions to earlier survey forms and made direct comparisons of line items very difficult. Beginning in FY 82, Pell Grant data were collected on federal restricted grants and contracts revenues and restricted scholarships and fellowships expenditures. The introduction of IPEDS in the FY 87 survey included several important changes to the survey instrument and data processing procedures. While these changes were significant, considerable effort has been made to present only comparable information on trends in this report and to note inconsistencies. Finance tables for this publication have been adjusted by subtracting the largely duplicative Pell Grant amounts from the later data to maintain comparability with pre-FY 82 data.

Possible sources of nonsampling error in the financial statistics include nonresponse, imputation, and misclassification. The response rate has been about 85 to 90 percent for most of the years reported. The response rate for the FY 1989 survey was 83.5 percent.

Two general methods of imputation were used in HEGIS. If the 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. 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. In most cases estimates for nonreporting institutions in IPEDS were made using data from peer institutions.

Beginning with FY 87, the new survey system (IPEDS, see above) has comprised all postsecondary institutions, but has also maintained comparability with earlier surveys by allowing 2- and 4-year HEGIS institutions to

be tabulated separately. The finance data tabulated for this publication reflect totals for the HEGIS or higher education institutions only. For FY 87 through FY 89, in order to maintain comparability with the historical time series of HEGIS institutions, data were combined from two of the three different survey forms that make up the IPEDS survey system. The vast majority of the data were tabulated from Form 1, which was used to collect information from public and private nonprofit 2- and 4-year colleges. Form 2, a condensed form, was used to gather data for the 2-year proprietary institutions. Because of the differences in the data requested on the two forms, several assumptions were made about the Form 2 reports so that their figures could be included in the institutions of postsecondary education totals.

In IPEDS, the Form 2 institutions were not asked to separate appropriations from grants and contracts, nor state from local sources of funding. For the Form 2 institutions, all the federal revenues were assumed to be federal grants and contracts and all of the state and local revenues were assumed to be restricted state grants and contracts. All other Form 2 sources of revenue, except for tuition and fees and sales and services of educational activities, were included under "other." Similar adjustments were made to the expenditures accounts. The Form 2 institutions reported instruction, scholarship, and fellowship expenditures only. All other educational and general expenditures were allocated to academic support.

To reduce reporting error, NCES used national standards for reporting financial 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 consistent with those in these three accounting texts.

Fall Staff. The fall staff data presented in this publication were collected in cooperation with the U.S. Equal Employment Opportunity Commission (EEOC). In 1989, survey instruments were mailed to 6,669 in-scope postsecondary education institutions, including 2,576 4-year schools, 2,739 2-year schools, and 273 public less-than-2-year schools. The universe of 5,002 less-than-2-year private institutions were represented by a sample of 1,071 institutions.

EEOC collects staff data through the Higher Education Staff Information (EEO-6) report from all higher education institutions with 15 or more full-time employees. NCES, through the IPEDS system, collects data from all other postsecondary institutions, including higher education institutions with less than 15 full-time employees. NCES and EEOC collect staff data biennially in odd numbered years in institutions of postsecondary education.

The IPEDS file combines data from the two surveys to create the IPEDS "Fall Staff" data tape. For example, the IPEDS "Fall Staff" questionnaires were mailed out in July 1989 by NCES; the respondents reported the number of employees in their institution as of October 1, 1989. The EEO-6 questionnaires were mailed out by EEOC between October and November 1989; the respondents reported the employment statistics in their institution that cover the payroll period closest to October 1 or the survey year.

The 3,589 institutions of higher education (in the 50 states and the District of Columbia) in operation in 1989 form a subset of the universe of postsecondary institutions in this report. These institutions are accredited at the college level by an agency recognized by the Secretary, U.S. Department of Education; these institutions previously were surveyed under HEGIS, which IPEDS supersedes.

The "Fall Staff" survey had an overall response rate of 77.4 percent. This response rate was calculated as the ratio of the number of completed survey forms divided by the number of in-scope institutions. The response rate for higher education institutions was 89.6 percent.

Institutional Characteristics. This survey provided the basis for the universe of institutions presented in the *Education Directory, Colleges and Universities*. The universe comprised institutions that met certain accreditation criteria and offered at least a 1-year program of college-level studies leading toward a degree. All of these institutions were certified as eligible by the U.S. Department of Education's Division of Eligibility and Agency Evaluation. Each fall, institutions listed in the previous year's *Directory* were asked to update a computer printout of their information.

National Assessment of Educational Progress

The National Assessment of Educational Progress (NAEP) is a Congressionally mandated study funded by the Office of Educational Research and Improvement, U.S. Department of Education. 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. Periodically, NAEP has gathered information about levels of educational achievement across the country. NAEP has surveyed the educational accomplishments of 9-, 13-, and 17-year-old students (and in recent years, grades 4, 8, and 12), and occasionally young adults, in 10 learning areas. Different learning areas were assessed annually and, as of 1980-81, biennially. Most areas have been periodically reassessed in order to measure possible changes in education achievement.

The reading, writing, mathematics, and science assessments presented in this publication were conducted by either the Education Commission of the States (1969-1983) or the Educational Testing Service (1983 to the present). NAEP in-school assessments were based on a deeply stratified three-stage sampling design to obtain a nationally representative sample by age and, beginning in 1983-84, by grade. The first stage of sampling entails defining and selecting primary sampling units (PSUs). For each grade level (4, 8, or 12), the second stage entails enumerating, stratifying, and randomly selecting schools, both public and private, within each PSU selected at the first stage. The third stage

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involves randomly selecting students within a school for participation in NAEP. Assessment exercises were administered to small groups of students by specially trained personnel.

Information from NAEP is subject to both nonsampling and sampling error. Two possible sources of nonsampling error are nonparticipation and faulty instrumentation. The effects of nonparticipation are in some ways reduced through oversampling, although this does not assess the bias of nonparticipants. Instrumentation nonsampling error includes whether the NAEP assessment instruments measure what is being taught and in turn what is being learned by the students, ambiguous items or instructions, and insufficient time limits.

For further information on NAEP, contact:

Gary Phillips
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5653

National Education Longitudinal Study of 1988

The National Education Longitudinal Study of 1988 (NELS:88) is the third major longitudinal study sponsored by the National Center for Education Statistics. The two studies that preceded NELS:88, the National Longitudinal Study of the High School Class of 1972 (NLS-72) and High School and Beyond (HS&B) surveyed high school seniors (and sophomores in HS&B) through high school, postsecondary education, and work and family formation experiences. Unlike its predecessors, NELS:88 began with a cohort of eighth grade students.

NELS:88 is designed to provide trend data about critical transitions experienced by young people as they develop, attend school, and embark on their careers. It complements and strengthens state and local efforts by furnishing new information on how school policies, teacher practices, and family involvement affect student educational outcomes (i.e., academic achievement, persistence in school, and participation in postsecondary education). The

base-year NELS:88 was a multi-faceted study questionnaire with four cognitive tests, and questionnaires for students, teachers, parents, and the school.

Sampling was first conducted at the school level and then at the student level within schools. The data were drawn from a nationally representative sample of 1,000 schools (800 public schools and 200 private schools, including parochial institutions). Within this school sample, 26,000 eighth grade students were selected at random. The first and second followups revisited the same sample of students in 1990 and 1992, when the 1988 8th graders were in the 10th and 12th grades. Similar follow-ups are being conducted in 1994 and 1997.

For more information on NELS, contact:

Jeffrey A. Owings
Elementary and Secondary Education Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5651

National Household Education Survey

The National Household Education Survey (NHES) is the first major attempt by the National Center for Education Statistics to go beyond its traditional, school-based data collection to a household survey. Historically, NCES has collected data from teachers, students, and schools through school-based surveys and from administrative records data through surveys of school districts and state education agencies. NHES has the potential to address many issues in education that have not been addressed previously by NCES data collection activities.

NHES is designed as a mechanism for collecting detailed information on educational issues from a relatively large and targeted sample of households in a timely fashion. Data for the NHES are being collected through telephone interviews, a relatively new approach for gathering data related to education issues. NHES uses Random Digit Dialing (RDD) to

select households and Computer Assisted Telephone Interviewing (CATI) to collect information from household members. The sample for the NHES is drawn from the non-institutionalized civilian population in households with a telephone in the 50 states and the District of Columbia.

During the spring of 1991, NCES fielded a full-scale NHES on early education. Approximately 60,000 households were screened to identify a sample of children 3- to 8-years old. The parents of these children were interviewed in order to collect information about their children's educational activities and the role of the family in children's learning. At the same time, an adult education supplement was fielded. Adult household members were sampled and questioned about their participation in adult education.

The adult education component was, for the most part, adapted from the previous Current Population Survey (CPS) adult education supplements. However, unlike the CPS, it collects information on both adult education participants and nonparticipants. At present, NCES plans to field the adult education component once every 4 years after 1991. The NHES:91 survey identified and screened more than 60,000 households. A knowledgeable adult was asked a series of questions to screen all household members for adult education participation in a sample of about 20,000 of these 60,000 households, resulting in interviews with approximately 9,800 adult education participants and 2,750 non-participants. The adult education component of NHES can be used to address many questions about the patterns of participation by demographic and labor force characteristics. It includes data on reasons for taking courses, on the providers of the courses, and the cost of the courses. Information was also collected from non-participants concerning barriers to their participation.

For further information on the adult education component of NHES contact:

Peter Stowe
Elementary and Secondary Education Statistics
Division

National Center for Education Statistics
555 New Jersey Avenue, NW
Washington, DC 20208-5651

National Longitudinal Study of the High School Class of 1972

The National Longitudinal Study (NLS) of the high school class of 1972 began with the collection of base-year survey data from a sample of about 19,000 high school seniors in spring of 1972. Five more followup surveys of these students were conducted in 1973, 1974, 1976, 1979, and 1986. The NLS was designed to provide the education community with information on the transitions of young adults from high school through postsecondary education and the workplace.

The sample design for the NLS is a stratified, two-stage probability sample of students from all schools, public and private, in the 50 states and the District of Columbia, with a 12th-grade enrollment during the 1971-72 school year. During the first stage of sampling, about 1,070 schools were selected for participation in the base-year survey. As many as 18 students were selected at random from each of the sample schools. The sizes of the school and student samples were increased during the first followup survey. Beginning with the first followup and continuing through the fourth followup, about 1,300 schools participated in the survey, and slightly under 23,500 students were sampled. The response rates for each of the different rounds of data collection have been 80 percent or higher.

Sample retention rates across the survey years have been quite high. For example, of the individuals responding to the base-year questionnaire, the percentages who responded to the first, second, third, and fourth followup questionnaires were about 94, 93, 89, and 83 percent, respectively.

Further information may be obtained from:

Aurora D'Amico ✓
Postsecondary Education Statistics Division
National Center for Education Statistics

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555 New Jersey Avenue NW
Washington, DC 20208-5652

National Postsecondary Student Aid Study

The National Center for Education Statistics conducted the National Postsecondary Student Aid Study (NPSAS) for the first time during the 1986-87 school year. This survey established the first comprehensive student financial aid database. Data were gathered from 1,074 postsecondary institutions and approximately 60,000 students and 24,000 parents. These data provided information on the cost of postsecondary education, the distribution of financial aid, and characteristics of both aided and non-aided students and their families, and the nature of aid packages.

In response to the continuing need for these data, NCES conducted the second cycle of NPSAS for the 1989-90 school year. In addition to replicating the earlier study, the 1990 NPSAS contains enhancements to the 1987 methodology that will fully meet the data needs of the financial aid community and of policymakers.

The 1990 in-school sample involved about 70,000 students selected from registrar lists of enrollees at 1,200 postsecondary institutions. The sample included both aided and nonaided students. Student information such as field of study, education level, and attendance status (part-time or full-time) was obtained from registrar records. Types and amounts of financial aid and family financial characteristics were abstracted from school financial aid records. Also, approximately 26,000 parents of students were sampled. Data concerning family composition and parent financial characteristics was compiled. Followup data collections are expected at 2-year intervals. Students enrolled in postsecondary education for the first time in 1990 will serve as the base for the longitudinal component of NPSAS.

Further information about this survey may be obtained from:

Andrew G. Malizio
Postsecondary Education Statistics Division

National Center for Educational Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

National Survey of Postsecondary Faculty

The National Survey of Postsecondary Faculty (NSOPF-88) was a comprehensive survey of higher education instructional faculty in the fall of 1987. It was the first such survey conducted since 1963. It gathered information regarding the backgrounds, responsibilities, workloads, salaries, benefits, and attitudes of both full- and part-time instructional faculty in 2- and 4-year institutions under both public and private control. In addition, information was gathered from institutional and department-level respondents on such issues as faculty composition, new hires, departures and recruitment, retention, and tenure policies.

There were three major components of the study: a survey of institutional-level respondents at a stratified random sample of 480 U.S. colleges and universities; a survey of a stratified random sample of 3,029 eligible department chairpersons (or their equivalent) within the participating 4-year institutions; and a survey of a stratified random sample of 11,013 eligible faculty members within the participating institutions. Response rates to the three surveys were 88 percent, 80 percent, and 76 percent, respectively.

The universe of institutions from which the sample was selected was all accredited nonproprietary U.S. postsecondary institutions that grant a 2-year (AA) or higher degree and whose accreditation at the higher education level is recognized by the U.S. Department of Education. This includes religious, medical, and other specialized postsecondary institutions as well as 2- and 4-year nonspecialized institutions. According to the 1987 Integrated Postsecondary Education Data System (IPEDS), this universe comprised 3,159 institutions. The universe does not include proprietary 2- and 4-year institutions or less-than-2-year postsecondary institutions.

Further information about this survey may be obtained from:

Linda Zimbler
 Postsecondary Education Statistics Division
 National Center for Education Statistics
 555 New Jersey Avenue NW
 Washington, DC 20208-5652

Projections of Education Statistics

Since 1964, NCES has published *Projections of Education Statistics*, projecting key statistics for elementary and secondary schools and institutions of higher education. Data are included for enrollments, instructional staff, graduates, and earned degrees. *Projections* includes several alternative projection series and a methodology section describing the techniques and assumptions used to prepare them. Data in this edition of *The Condition of Education* reflect the intermediate projection series only.

Differences between the reported and projected values are, of course, almost inevitable. An evaluation of past projections revealed that, at the elementary and secondary level, projections of enrollment have been quite accurate: mean absolute percentage differences for enrollment projections from 1 to 5 years into the future were less than 1 percent, while those for teachers were less than 4 percent.

Since projections of time series are subject to errors both by the nature of statistics and the properties of projection methodologies, users are cautioned not to place too much confidence in the numerical values of the projections. Important but unforeseeable economic and social changes may lead to differences. Projections are to be considered as indicators of broad trends.

For further information about projection methodology and accuracy, contact:

Debra E. Gerald
 Statistical Standards and Methodology Division
 National Center for Education Statistics
 555 New Jersey Avenue NW
 Washington, DC 20208-5654

Survey of Recent College Graduates

NCES has conducted periodic surveys of persons, about 1 year after graduation, to collect information on college outcomes. The "Recent College Graduates" surveys have concentrated on those graduates entering the teaching profession. To obtain accurate results on this smaller subgroup, graduates who are newly qualified to teach have been oversampled in each of the surveys. The survey involves a two-stage sampling procedure. First, a sample of institutions awarding bachelor's and master's degrees is selected and stratified by percentage of education graduates, control, and type of institution. Second, for each of the selected institutions, a sample of degree recipients is chosen. The response rates on the recent college graduates survey have tended to be low because of the great difficulty in tracing the students after graduation. Much more of the nonresponse can be attributed to invalid mailing addresses than to refusals to participate. Despite their shortcomings, the data are presented in this report because they provide valuable information not available elsewhere about college outcomes. Users should be cautious about drawing conclusions based on data from small samples. It is also likely that the data are somewhat biased since the more mobile students, such as graduate students, are the most difficult to track for the survey.

The 1976 survey of 1974-75 college graduates was the first and smallest of the series. The sample consisted of 209 schools, of which 200 (96 percent) responded. Of the 5,506 graduates in the sample, 4,350 responded, for a response rate of 79 percent.

The 1981 survey was larger, with a coverage of 301 institutions and 15,852 graduates. Responses were obtained from 286 institutions, for an institutional response rate of 95 percent, and from 9,312 graduates (716 others were determined to be out of scope), for a response rate of 62 percent.

The 1985 survey requested data from 18,738 graduates from 404 colleges. Responses were obtained from 13,200 students, for a response

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rate of 74 percent (885 were out of scope). The response rate for the colleges was 98 percent.

The 1987 survey form was sent to 21,957 graduates. Responses were received from 16,878, for a response rate of 79.7 percent. The 1987 *Transcript Study* collected transcripts for each student who was part of the 1987 sample.

The 1991 survey sampled 18,135 graduates and 400 institutions. The response rates were 83 percent for the graduates and 95 percent for institutions.

Further information on this survey may be obtained from:

Peter Stowe
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

International Assessment of Educational Progress

In 1990-91, a total of 20 countries assessed the mathematics and science achievement of 13-year-old students and 14 of the 20 countries assessed 9-year-old students in these same subjects. Some countries assessed virtually all age-eligible children in the appropriate age group; others confined their samples to certain geographic regions, language groups, or grade levels. The definition of populations often followed the structure of school systems, political divisions, and cultural distinctions. In some countries, significant proportions of age-eligible children were not represented because they did not attend school (see notes to supplemental tables 15:1-4 and 16:1-4). Also, in some countries, low rates of school or student participation mean results may be biased.

Typically, a random sample of 3,300 students from about 110 different schools was selected from each population at each age level; half were assessed in mathematics and half in science. A total of about 175,000 9- and 13-year-olds (those born in calendar years 1981 and

1977, respectively) were tested in 13 different languages in March 1991.

The achievement tests lasted one hour. The tests given to 9-year-olds included 62 questions in mathematics and 60 questions in science. Those for 13-year-olds included 76 questions in mathematics and 72 questions in science. In addition, students of each age group spent about 10 minutes responding to questions about their backgrounds and home and school experiences. School administrators completed a school questionnaire.

Initial analyses involved the calculation of the percentage of correct answers and standard errors for individual questions. For each population, the weighted percentage of correct answers was calculated for each question. The results of students who omitted questions at the end of sections because they did not reach them were excluded from the calculations for those questions. For each percentage correct, an estimate of its standard error was calculated using the jackknife procedure. Percentage and standard errors were calculated for subgroups within each population, including gender and grade. Statistics for Canada were calculated using an appropriately weighted sample of responses drawn from the individual Canadian populations.

Further information on this survey can be obtained from:

Maureen E. Treacy
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5653

Schools and Staffing Survey

The school work force and teacher supply and demand are fundamental features of America's public and private school landscape. Yet, until recently, there has been a lack of data on the characteristics of our children's teachers and administrators and their workplace conditions. The Schools and Staffing Survey (SASS) was designed to meet this need. This survey is a

comprehensive public and private, elementary/secondary education database that combines and expands three separate surveys NCES has conducted in the past. These included surveys of teacher demand and shortage, of public and private schools, and of public and private school teachers. The school administrator survey is a new addition to the NCES database.

Schools were the primary sampling unit for SASS, and a sample of teachers was selected in each school; public school districts were included in the sample when one or more of their schools was selected. The 1990-91 SASS included approximately 12,800 schools (9,300 public and 3,500 private), 65,000 teachers (52,000 public and 13,000 private), and 5,600 public school districts. The survey was conducted by mail with telephone followups.

The SASS sample has been designed to support the following types of estimates and comparisons: national and state estimates for public schools and teachers; estimates for private schools and teachers at the national level and for selected orientation groupings; and national comparisons of elementary, secondary, and combined schools and teachers. SASS was first conducted in the 1987-1988 school year. Data collection at 2-year intervals began in 1990-91.

Another component of SASS is the Teacher Followup Survey (TFS). It consists of a subsample of SASS, and is implemented 1 year after the base-year survey. The survey identifies and collects data from various groups of teachers who were interviewed the previous year: (1) those persons who remain in the teaching profession, including those who remain in the same school as well as those who have moved; and (2) those persons who have left the teaching profession. These data are used to provide information about teacher attrition and retention in the public and private schools and to project teacher demand during the 1990s.

Further information on this survey may be obtained from:

Dan Kasprzyk
Elementary and Secondary Education Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, D. C. 20208-5651

Office for Civil Rights U.S. Department of Education

Elementary and Secondary School Civil Rights Survey

The Office for Civil Rights (OCR) in the U.S. Department of Education conducts periodic surveys of elementary and secondary schools to obtain data on the characteristics of students enrolled in public schools throughout the nation. Racial/ethnic status, gender, limited English proficiency, and handicapping conditions are among the characteristics covered by recent surveys. Such information is required by 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 1976 survey was a complete census of public school districts in the nation. The 1984, 1986, and 1988 surveys were based on samples. The universe, from which the districts were to be sampled, was defined to be all public schools in the nation (50 states and the District of Columbia). A universe file maintained by the National Center for Education Statistics from its Common Core of Data was used. The selection factors used in selecting the sample were (1) minimum percent coverage of a specific population variable, and (2) maximum percent standard deviation of a projection of a population variable from the sample to the universe total.

Stratification also included district size and state. The 1984, 1986, 1988, 1990, and 1992 surveys are subject to sampling and nonsampling errors.

For further information about these surveys contact

Sharon Tuchman
Surveys and Statistical Support Branch
Room 5058, Switzer Building
330 C Street SW
Washington, DC 20202

Office of Special Education and Rehabilitative Services U.S. Department of Education

Annual Report to Congress on the Implementation of the Education of the Handicapped Act

The Education of the Handicapped Act (EHA) requires the Secretary of Education to transmit to Congress annually a report describing the progress in serving the nation's handicapped children. The annual report contains information on such children served by the public schools under the provisions of Part B of the EHA and on children served in state-operated programs (SOP) for the handicapped under Chapter I of the Education Consolidation and Improvement Act (ECIA). Statistics on children receiving special education and related services in various settings and on school personnel providing such services are reported in an annual submission of data to the Office of Special Education and Rehabilitative Services (OSERS) by the 50 states, the District of Columbia, and the outlying areas. The child count information is based on the number of handicapped children receiving special education and related services on December 1 of each year for EHA and October 1 for Chapter I of ECIA/SOP.

Since each participant in programs for the handicapped is reported to OSERS, the data are not subject to sampling error. However, nonsampling error can occur from a variety of sources. Some states follow a noncategorical approach to the delivery of special education services but produce counts by handicapping condition only because EHA-B requires it. In those states that do categorize their handicapped students, definitions and labeling practices vary. In each case, even though states must use the federal definitions of the handicapping categories for reporting purposes, there is no way to judge the accuracy of these states' relabeling of their students for the federal count. Some states also have reported combined counts for some of the smaller categories of handicap.

These variations in labeling practices may help explain why there have been inconsistencies

both year to year within a given state and from state to state in the ways in which students with more than one handicapping condition have been categorized. However, federal and state efforts to ensure that children are being classified and reported appropriately, and efforts to achieve greater consistency in classification and reporting among states help minimize these variations.

Further information on the *Annual Report to Congress* may be obtained from:

Lou Danielson
Office of Special Education and
Rehabilitative Services
Office of Special Education Programs
Room 3523, Switzer Building
330 C Street SW
Washington, DC 20202

Bureau of the Census
U.S. Department of Commerce

Current Population Survey

Current estimates of school enrollment and social and economic characteristics of students are based on data collected in the Census Bureau's monthly household survey of about 60,000 households, the Current Population Survey (CPS). The CPS covers 729 sample areas consisting of 1,973 counties, independent cities, and minor civil divisions throughout the 50 states and the District of Columbia. The current sample was selected from 1980 census files and is periodically updated to reflect new housing construction.

The primary function of the monthly CPS is to collect data on labor force participation of the civilian noninstitutional population. (It excludes military personnel and inmates of institutions.) In October of each year, questions on school enrollment by grade and other school characteristics are asked about each member of the household.

The estimation procedure employed for the monthly CPS data involves inflating weighted sample results to independent estimates for the

total civilian noninstitutional population by age, sex, race, and Hispanic origin. These independent estimates are derived from statistics from decennial censuses of the population: statistics on births, deaths, and immigration and emigration; and statistics on the strength of the Armed Forces. Generalized standard error tables are provided in the *Current Population Reports*. The data are subject to both nonsampling and sampling errors.

Further information is available in the *Current Population Reports*, Series P-20, or by contacting:

Education and Social Stratification Branch
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

School Enrollment. Each October, the Current Population Survey (CPS) includes supplemental questions on the enrollment status of the population aged 3 and over. Annual reports documenting school enrollment of the population have been produced by the Bureau of the Census since 1946. The latest report is *Current Population Reports*, Series P-20, No. 469, *School Enrollment—Social and Economic Characteristics of Students: October 1991*. All sample surveys are subject to sampling and nonsampling error. The main sources of nonsampling error in the supplement are those inherent in any household survey. When a household respondent reports for all individuals in the household, is that person knowledgeable about the grade or level of school, type of school, or full-time status? In addition, some analysts believe social acceptability of response causes biased reporting, such as reluctance to report lack of a high school diploma; some dismiss it. Household-reported data may not be consistent with administrative data because definitions may not be the same. An additional source of variation in statistics reported may be a change in the survey universe over time. For example, a significantly larger proportion of young men were members of the Armed Forces in the late 1960s and early 1970s than before or after and, therefore, were not in the CPS universe. That caused a short-term increase in the school enrollment *rate* of young men, which

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was greater than the increase in numbers of enrollees would indicate. Other events may similarly affect survey data. The user must be mindful of external events as well as the character of the population being measured when describing survey trends.

An advantage of household survey data over administrative data is the availability of demographic, social, and economic data for the student and family. Beginning with data for October 1981, tabulations have been controlled to the 1980 census. Estimates for earlier years were controlled to earlier censuses.

Questions concerning the CPS school enrollment data may be directed to:

Education and Social Stratification Branch
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Educational Attainment. Data on years of school completed are derived from two questions on the CPS instrument. Biennial reports documenting educational attainment are produced by the Bureau of the Census using March CPS data. The latest report is *Current Population Reports, Series P-20, No. 451 Educational Attainment in the United States, March 1989 and 1988.*

The usual constraints on use of household survey data apply. Reliability of response may depend on whether a proxy respondent was used, the recency and importance of the event, and the number and clarity of response categories. There is some evidence that years of school completed in the CPS may not measure completion of degrees as clearly as they once did. The number of persons who have completed 4 years of college has been increasing more rapidly than the number of bachelor's degrees added each year would suggest. While the number of years completed is not deteriorating in quality (that is, respondents are not exaggerating the number of years), more students than in the past are taking more than 4 academic years to complete a bachelor's degree. Also, although interviewers are instructed to

count receiving a high school diploma by means of passing a GED exam as completion of the 12th grade, as the number of persons who have received a diploma in this way has increased the number counted appropriately may not have kept pace. The 1990 Census of Population contains a question on highest degree received rather than relying solely on a "years of school completed" item.

Beginning with the data for March 1980, tabulations have been controlled to the 1980 census. Estimates for earlier years were controlled to earlier censuses.

Questions concerning the CPS educational attainment data may be directed to:

Education and Social Stratification Branch
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Participation in Adult Education. In May of 1969, 1972, 1975, 1978, 1981, and 1984, the Current Population Survey (CPS) included a supplemental inquiry on "Participation in Adult Education" (PAE). In addition to the questions on the CPS, 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 filled out by the interviewer or left with a proxy member of the household 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 of 94 percent in 1981 must be viewed in conjunction with the 96 percent response rate of the CPS. The overall response rate for the PAE survey in 1981 is then 90 percent.

For more information, contact:

Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

Voting and Registration. In November of election years, the CPS includes supplemental questions on voting and registration within the civilian noninstitutional population. CPS voting estimates exceed counts of the actual number of votes cast. On balance, the CPS overstates voting in Presidential elections by 10 to 20 percent of the total number of persons reported as having voted. Some of the possible reasons for the discrepancies are: (a) understatement of actual number of votes cast; (b) possible reluctance of some CPS respondents to admit to not voting; (c) nonresponse to the CPS survey; (d) CPS undercoverage of certain groups in the population in which nonvoting may be high; (e) use of a single household respondent to report on the voting and registration of all persons in the household. These reasons are discussed in greater detail in *Current Population Reports, Series P-20, No. 453, "Voting and Registration in the Election of November 1990,"* pp. 9-11.

Data on voter participation by social and economic characteristics of the population of voting age have been published since 1964 in *Current Population Reports, Series P-20*. The latest report is "Voting and Registration in the Election of November 1990," No. 453.

For additional information about this survey, contact:

Jerry T. Jennings
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Bureau of Labor Statistics
U.S. Department of Labor

Educational Attainment of Workers

These data are collected by the March supplement to the Current Population Survey (CPS), sponsored by the Bureau of Labor Statistics and conducted by the Bureau of the Census. Sampling and nonsampling errors associated with the CPS are discussed under that heading.

For further information on employment and unemployment statistics contact:

Division of Labor Force Statistics
Bureau of Labor Statistics
441 G Street NW (Room 2486)
Washington, DC 20212

How workers get their training

In January 1983 and 1991, The Employment and Training Administration (ETA) funded supplements to the Census Bureau's Current Population Survey on worker training. The questions asked individuals to identify various types of training they needed to obtain their current or last job as well as the training used to improve their skills on those jobs.

In contrast with the 1983 survey, interviewers conducting the 1991 survey were instructed to obtain the information from each individual directly; proxy responses were not permitted. Primarily because individuals could not answer by proxy, a high proportion of eligible persons in the sample did not respond to the January 1991 training questions. In order to obtain data about the population based only on information provided by respondents, the sample weight originally assigned each respondent was adjusted based on factors for specific age, sex, race, employment status, and occupational status. The adjusted weights were used to prepare published estimates.

For more information, contact:

Office of Employment Projections
Bureau of Labor Statistics
U.S. Department of Labor
2 Massachusetts Avenue, N. E.
Washington, D. C. 20212

The National Longitudinal Study of Youth

The National Longitudinal Study of Youth (NLSY) is a nationally representative sample of 12,686 young men and young women who were ages 14-21 in 1979 when they were first interviewed. Three independent probability

samples, designed to represent the entire population of youth born in the United States between 1957 and 1964, were drawn for the NLSY: (1) a cross-sectional sample designed to be representative of the noninstitutionalized civilian segment of American young people age 14–21 as of January 1, 1979; (2) a supplemental sample designed to overrepresent civilian Hispanic, black, and economically disadvantaged non-Hispanic, non-black youth; and (3) a military sample designed to represent the population aged 17–21 as of January 1, 1979 and serving in the military as of September 30, 1978.

Response rates within the NLSY sample have remained at or above 90 percent for the first 12 years of interviews. By the end of 1990, 10,436 civilian and military respondents continued to be interviewed for an overall retention rate of 89.9 percent.

Further information is available by contacting:

The Center for Human Resource Research
The Ohio State University
921 Chatham Lane, Suite 200
Columbus, Ohio 43221-2418
(614) 442-7300

Equal Employment Opportunity Commission

Higher Education Staff Information Survey (EEO-6)

The United States Equal Employment Opportunity Commission (EEOC) requires all public and private institutions of higher education with at least 15 full-time employees to file the Higher Education Staff Information (EEO-6) report biennially. Higher education institutions are those accredited at the college level by an agency recognized by the Secretary, U.S. Department of Education.

The EEO-6 collects information on: (1) the number of full-time and part-time employees, by occupation, race/ethnicity and sex; (2) the number of full-time faculty, by academic rank, tenure status, race/ethnicity, and sex; and (3) the salaries of full-time staff, by occupation, race/ethnicity, and sex.

Beginning in 1987, data from the EEO-6 have been combined with data collected by the National Center for Education Statistics (NCES) to create the Fall Staff survey. The Fall Staff survey is discussed under IPEDS and is conducted by NCES.

For additional information on the EEO-6 survey, contact:

Betty Wright
U.S. Equal Employment Opportunity
Commission
1801 L Street, NW
Washington, DC 20507

Bureau of Justice Statistics U.S. Department of Justice

National Crime Survey, School Crime Supplement

The National Crime Survey (NCS) conducted by the Bureau of Justice Statistics (BJS) collects data from a nationally representative sample of households. When a household is selected for inclusion in the sample, household members age 12 or older are interviewed every 6 months for 3 years. During each interview, information is obtained about the personal victimizations, if any, experienced by the interviewee in the 6 months preceding the interview. One member, generally over the age of 18, is also designated the household respondent, from whom information is obtained about all crimes committed against the household during the preceding 6 months.

The NCS measures both attempted and completed incidents of the violent crimes of rape, robbery, and aggravated and simple assault; personal thefts with and without contact; and the household crimes of burglary, household larceny, and motor vehicle theft.

The School Crime Supplement to the NCS contains data collected in interviews conducted from January through June of 1989 as a supplement to the NCS data collection program. It focuses on personal crimes of violence and theft that were committed inside a school building or on school property only.

The only eligible respondents for this school crime supplement were those household members who were between the ages of 12 and 19, had attended school at any time during the 6 months preceding the interview, and were enrolled in a school that would advance them towards the eventual receipt of a high school diploma.

Further information on the School Crime Supplement to the National Crime Survey may be obtained from:

Bruce Taylor
Bureau of Justice Statistics
633 Indiana Avenue NW
Washington, DC 20531

**National Institute on Drug Abuse
U.S. Department of Health and Human
Services**

Monitoring the Future

The National Institute on Drug Abuse is the primary supporter of the long-term study entitled *Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth*, conducted by the University of Michigan, Institute for Social Research. One component of the study deals with student drug abuse, another investigates student victimization at school. Results of a national sample survey have been published annually since 1975.

Approximately 125 to 135 schools have participated each year. With the exception of 1975 when about 9,400 students participated in the survey, more than 15,000 students have participated annually. For the class of 1990, about 15,200 students responded to the survey. Over the years, the response rate has varied from 77 to 84 percent.

The data in this survey represent only high school seniors. Understandably, there will be some reluctance to admit illegal activities. Also, students who were out of school on the day of the survey were nonrespondents. The survey did not include high school dropouts. The inclusion of these two groups would tend to increase the proportion of individuals who had

used drugs. A 1983 study found that the inclusion of the absentees could increase some of the drug usage estimates by as much as 2.7 percent. (Details on that study and its methodology were published in *Drug Use Among American High School Students, College Students, and Other Young Adults*, by Lloyd D. Johnston, Patrick M. O'Malley, and Jerald G. Bachman, available from the National Clearinghouse on Drug Abuse Information, 5600 Fishers Lane, Rockville, MD 20857.)

Further information on this survey may be obtained from:

National Institute on Drug Abuse
Division of Epidemiology and
Statistical Analysis
5600 Fishers Lane
Rockville, MD 20857

**National Center for Health Statistics
U.S. Department of Health and Human
Services**

National Health Interview Survey

The National Health Interview Survey is a continuous cross-sectional household interview survey. Each week a probability sample of the civilian noninstitutionalized population of the United States is interviewed by personnel of the U.S. Bureau of the Census. Estimates for certain health characteristics, such as limited activity and respondent-assessed status, are compiled yearly. Information on special health topics, such as health care coverage, health promotion, and disease prevention, is periodically collected for all or a sample of household members.

All information collected in the survey results from reports by responsible family members or unrelated individuals residing in the household. When possible, all adult members participate in the interview. However, proxy responses are accepted for family members who are not at home, and are required for all children (those under 18 years of age) and for all household members who are physically or mentally incapable of responding for themselves.

Sources of Data

In 1982, the NHIS questionnaire and data preparation procedures of the survey were extensively revised. The basic concepts of NHIS changed in some cases, and in other cases the concepts were measured in a different way. Comparisons with earlier results should not be undertaken without carefully examining these changes.

In 1985, although several new sample design features were adopted for NHIS, conceptually the sampling plan remained the same. The major changes included (a) reducing the number of primary sampling locations from 376 to 198 for sampling efficiency, (b) oversampling the black population to improve the precision of the statistics, (c) subdividing the NHIS sample into four separate representative panels to facilitate linkage to other National Center for Health Statistics (NCHS) surveys, and (d) using an all-area frame not based on the decennial census to facilitate NCHS survey linkage and to conduct NHIS followback surveys.

The National Center for Health Statistics provides estimates and technical notes on methods for this survey in Series 10 publications, *Data from the National Health Interview Survey*.

For additional information about this survey, contact:

National Center for Health Statistics
Division of Health Interview Statistics
6525 Belcrest Road
Hyattsville, MD 20782
(301) 436-7089

National Science Foundation

Survey of Earned Doctorates

The Survey of Earned Doctorates (SED) has been conducted annually, under contract, by the National Research Council for the U.S. Department of Education, the National Endowment for the Humanities, the National Science Foundation, and other federal agencies since 1957. Information from the survey becomes part of the Doctorate Records File,

which includes records for doctorates awarded since 1920 by regionally accredited universities and colleges. The universe consists of all recipients of doctoral degrees such as Ph.D. or D.Sc., but excludes the recipients of first-professional degrees such as the J.D. or M.D. Approximately 95 percent of the annual cohort of doctorate recipients have responded to the questionnaire, which is distributed through the cooperation of the Graduate Deans. Partial data from public sources are added to the file for nonrespondents. The data for a given year include all doctorates awarded in the 12-month period ending on June 30th of that year.

Data for the SED are collected directly from individual doctorate recipients. In addition to the field and specialty of the degree, the recipient is asked to provide educational history, selected demographic data, and information on postgraduate work and study plans. The National Center for Education Statistics' "Survey of Earned Degrees," part of its Integrated Postsecondary Education Data System (IPEDS), collected data from institutions, not individuals. Therefore, the number of doctorates reported in SED differs slightly from IPEDS/HEGIS totals. Also, SED data are restricted to research doctorates.

The differences between the two data series have been generally consistent since 1960. The ratio of IPEDS/HEGIS to SED totals for all Ph.D.s has ranged from 1.01 to 1.06.

Further information on this survey can be obtained from Summary Report: *Doctorate Recipients from United States Universities*, various years, published by the National Research Council, or by contacting:

Office of Scientific and Engineering Personnel
National Research Council
2101 Constitution Avenue NW
Washington, DC 20418

Survey of Doctorate Recipients

The Survey of Doctorate Recipients (SDR) is a biennial survey of individuals who have received doctorates in the humanities, sciences, and engineering over the past four decades. It has surveyed scientists (including social scientists and psychologists) and engineers since 1973 and humanists since 1977. It is conducted by the National Research Council with support from the National Science Foundation, the National Endowment for the Humanities, the National Institutes of Health, the Department of Agriculture, and the Department of Energy.

The population for the survey consists of individuals who have received doctorates during a 42-year period. To maintain the length of this timespan for each biennial survey, the two most recent graduating cohorts of Ph.D.s are added to the population, and the two oldest are eliminated. It is a longitudinal survey—that is, individual members of the survey panel are resurveyed every 2 years—and contains historical data on employment status, employment sector, primary work activity, academic rank, tenure status, salary, and other characteristics.

For a more detailed discussion of the history of the SDR, the sample, and other methodological issues, see: National Research Council, *Methodological Report of the 1987 Survey of Doctorate Recipients*, National Research Council, April 1989 (prepared by Mary Belisle).

For further information, contact:

Survey of Doctorate Recipients Project
Office of Scientific and Engineering Personnel
National Research Council
2101 Constitution Avenue NW (Room GR 412)
Washington, DC 20418

Scientific and Engineering Expenditures at Universities and Colleges Survey

The National Science Foundation's Scientific and Engineering Expenditures at Universities and Colleges Survey originated in 1954 and has been conducted annually since 1972. The population

surveyed in most years has consisted of the 500 to 600 universities and colleges that grant a graduate science or engineering degree and/or annually perform at least \$50,000 in separately budgeted research and development (R&D). R&D is defined as current fund expenditures designed to produce specific research outcomes and is funded either by an external agency to an institution or is separately budgeted by an internal institution unit. The institutions included in this survey population expend over 95 percent of the nation's academic R&D funds. In addition, approximately 17 university-administered, federally funded research and development centers (FFRDCs) that are engaged in basic or applied research, development, or management of R&D activities are surveyed.

Since 1984 this survey has been conducted as a sample survey consisting of two strata: a certainty stratum including all doctorate-granting institutions, all historically black colleges and universities with R&D, and all university-administered FFRDCs; and a probability stratum including a random sample of all nondoctorate-granting institutions that perform significant levels of research and development.

Further information on this survey may be obtained from *Guide to the National Science Foundation's Surveys of Academic Science and Engineering*, December 1990, published by the National Science Foundation, or by contacting:

Science and Engineering Activities Program
Division of Science Resources Studies
National Science Foundation, Room L-611
1800 G Street NW
Washington, DC 20550

2. Other Organization Sources**American College Testing Program**

The American College Testing (ACT) Assessment is designed to measure educational development in the areas of English, mathematics, social studies, and natural sciences. The ACT Assessment is taken by college-bound high school students and the test results are

used to predict how well students might perform in college.

Prior to the 1984–85 school year, national norms were based on a 10 percent sample of the students taking the test. Since then, national norms have been based on the test scores of all students taking the test. Moreover, beginning with 1984–85 these norms have been based on the most recent ACT scores available from students scheduled to graduate in the spring of the year. Duplicate test records are no longer used to produce national figures.

ACT standard scores are reported for each subject area on a scale from 1 to 36. The four ACT standard scores have a mean (average) of about 19 and a standard deviation of about 6 for college-bound students nationally. A composite score is obtained by taking the simple average of the four standard scores and is an indication of student's overall academic development across these subject areas.

It should be noted that college-bound students who take the ACT Assessment are not representative in some respects of college-bound students nationally. First, students who live in the Midwest, Rocky Mountains and Plains, and the South are overrepresented among ACT-tested students compared with college-bound students nationally. Second, ACT-tested students tend to enroll in public colleges and universities more frequently than do college-bound students nationally.

The 1990 ACT assessment is significantly different from previous years. Consequently, it is not possible to make direct comparisons between scores earned in 1990 and those scores earned in previous years. To permit continuity in tracking of score trends, ACT has established links between scores earned on ACT tests administered before October 1989 and scores on the new ACT.

For further information, contact:

The American College Testing Program
2201 North Dodge Street
P.O. Box 168
Iowa City, IA 52243

American Federation of Teachers

The American Federation of Teachers (AFT) reports national and state average salaries and earnings of teachers, other school employees, government workers, and professional employees over the past 25 years. The AFT's survey of state departments of education obtains information on minimum salaries, experienced teachers reentering the classroom, and teacher age and experience. Most data from the survey are reported as received, although some data are confirmed by telephone. These data are available in the AFT's annual report *Survey and Analysis of Salary Trends*. While serving as the primary vehicle for reporting the results of the AFT's annual survey of state departments of education, several other data sources are also used in this report.

Further information on this survey can be obtained from:

American Federation of Teachers
555 New Jersey Avenue NW
Washington, DC 20001

College Entrance Examination Board

The Admissions Testing Program of the College Board comprises a number of college admissions tests, including the Preliminary Scholastic Aptitude Test (PSAT) and the Scholastic Aptitude Test (SAT). High school students participate in the testing program as sophomores, juniors, or seniors—some more than once during these 3 years. If they have taken the tests more than once, only the most recent scores are tabulated. The PSAT and SAT report subscores in the areas of mathematics and verbal ability.

The SAT results are not representative of high school students or college-bound students nationally since the sample is self-selected. Generally, tests are taken by students who need the results to attend a particular college or university. The state totals are greatly affected by the requirements of its state colleges. Public colleges in a number of states require ACT scores rather than SAT scores. Thus the

proportion of students taking the SAT in these states is very low and is inappropriate for any comparison. In recent years about 1 million high school students have taken the examination annually.

Further information on the SAT can be obtained from:

College Entrance Examination Board
Educational Testing Service
Princeton, NJ 08541

Gallup Poll

Each year the Gallup Poll conducts the "Public Attitudes Toward the Public Schools" survey, funded by Phi Delta Kappa. The survey includes interviews with approximately 1,600 adults representing the civilian noninstitutional population 18 years old and over.

The sample used in the 22nd annual survey was made up of a total of 1,594 respondents and is described as a modified probability sample of the nation. Personal, in-home interviewing was conducted in representative areas of the nation and types of communities. Approximately 67 percent of the respondents had no children in school, 30 percent were parents of children in public schools, and 6 percent had children attending nonpublic schools. This total is greater than 100 percent because some parents had children attending both public and nonpublic schools.

The survey is a sample survey and is subject to sampling error. The size of error depends largely on the number of respondents providing data. For example, an estimated percentage of about 10 percent based on the responses of 1,000 sample members has an approximate sampling error of 2 percent at the 95 percent confidence level. The sampling error for the difference in two percentages (50 percent versus 41 percent) based on two samples of 750 members and 400 members, respectively, is about 8 percent.

Further information on this survey can be obtained from:

Gallup Poll
Phi Delta Kappa
P.O. Box 789
Bloomington, IN 47402-0789

Graduate Record Examination Council

All students who have taken the Graduate Record Examinations (GRE) General Test were asked a series of background information questions. The responses and the test scores themselves form the basis for continuing GRE Program research. In addition, these data are compiled and included in an annual report. The 12th in the series is *A Summary of Data Collected From Graduate Record Examinations Test Takers During 1986-1987*.

The GRE cautions users of these data that "information in these reports is based solely on examinees who took the Graduate Record Examination (GRE) General Test and should not be interpreted as being representative of any other group. The report does not present data for all baccalaureate degree recipients, for all graduate school applicants, or for all first-time graduate school enrollees." Nevertheless, the test-taking group is a large subset (albeit a self-selected one) of each of these groups.

Further information on this and previous editions of the report may be obtained by contacting:

Office of the GRE Program Director
Educational Testing Service
Princeton, NJ 08541

National Education Association

Estimates of School Statistics

The National Education Association (NEA) reports revenues and expenditure data in its annual publication, *Estimates of School Statistics*. Each year NEA prepares regression-based estimates of financial and other education

statistics and submits them to the states for verification. Generally about 30 states adjust these estimates based on their own data. These preliminary data are published by NEA along with revised data from previous years. States are asked to revise previously submitted data as final figures become available. The most recent publication contains all changes reported to the NEA.

Some tables in *The Condition of Education* used revised estimates of financial data prepared by NEA because it was the most current source. Since expenditure data reported to NCES must be certified for use in the U.S. Department of Education formula grant programs (such as Chapter I of the Education Consolidation and Improvement Act), NCES data are not available as soon as NEA estimates.

Further information can be obtained from:

National Education Association—Research
1201 16th Street NW
Washington, DC 20036

United Nations Educational, Scientific, and Cultural Organization

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) conducts annual surveys of education statistics of its member countries. Besides official surveys, data are supplemented by information obtained by UNESCO through other publications and sources. Each year more than 200 countries reply to the UNESCO surveys. In some cases, estimates are made by UNESCO for particular items such as world and continent totals. While great efforts are made to make them as comparable as possible, the data still reflect the vast differences among the countries of the world in the structure of education. While there is some agreement about the reporting of first- and second-level data, the third level (postsecondary education) presents numerous substantial problems. Some countries report only university enrollment while other countries report all postsecondary, including vocational and technical schools and correspondence programs. A very high proportion of some

countries' third-level students attend institutions in other countries. While definition problems are many in this sort of study, other survey problems should not be overlooked. The member countries that provide data to UNESCO are responsible for their validity. Thus, data for particular countries are subject to nonsampling error and perhaps sampling error as well. Some countries may furnish only rough estimates while data from other countries may be very accurate. Other difficulties are caused by the varying periodicity of data collection among the countries of the world. In spite of such problems, many researchers use UNESCO data because they are the best available. Users should examine footnotes carefully to recognize some of the data limitations.

More complete information may be obtained from the *Statistical Yearbook* published by UNESCO or from:

Office of Statistics
UNESCO
Place de Fontenoy
75700 Paris, France

The International Association for the Evaluation of Educational Achievement

IEA Reading Literacy Study

In the period 1989 to 1992, the International Association for the Evaluation of Educational Achievement (IEA) conducted a Reading Literacy Study in 32 systems of education. The study focused on two levels in each of these systems, the grade level where most 9-year-olds were to be found and the grade level where most 14-year-olds were to be found.

To obtain comparable samples of students, multi-stage sampling was used in each country and schools or classes were typically drawn with a probability proportional to the size of the school or class.

Three major domains or types of reading literacy materials assessed at both age levels were as follows:

1. *Narrative prose*: Continuous texts in which the writers' aim is to tell a story—whether fact or fiction. They normally follow a linear time sequence and are usually intended to entertain or involve the reader emotionally. The selected extracts ranged from short fables to lengthy stories of more than 1,000 words.
2. *Expository prose*: Continuous texts designed to describe, explain, or otherwise convey factual information or opinion to the reader. The texts contained, for example, brief family letters and descriptions of animals as well as lengthy treatises on smoking and lasers.
3. *Documents*: Structured information presented in the form of charts, tables, maps, graphs, lists, or sets of instructions. These materials were organized in such a way that students had to search, locate, and process selected facts rather than read every word of continuous text. In some cases, students were required to follow detailed instructions in responding to such documents.

To obtain raw scores, all correct answers were totaled for each student in each domain. The Rausch procedure was used to produce scales for each domain. Each scale was given a mean of 500 and a standard deviation of 100.

Further information is available in the IEA report *How in the World Do Students Read?* by Warwick B. Elley.

Organization for Economic Cooperation and Development

The Organization for Economic Cooperation and Development (OECD) publishes analyses of national policies in education, training, and economics in 23 countries. The countries surveyed are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States, and Yugoslavia.

Since only developed nations, mostly European, are included in OECD studies, the range of analysis is limited. However, OECD data allow for some detailed international comparisons of financial resources or other education variables to be made for this selected group of countries.

Further information can be obtained from:

OECD
2, rue Andre-Pascal
75775 PARIS CEDEX 16, France

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Glossary

Academic support: (See Expenditures.)

Adult education: College, vocational, or occupational programs, continuing education or noncredit courses, correspondence courses and tutoring, as well as courses and other educational activities provided by employers, community groups, and other providers.

Advanced degree: Any formal degree attained after the bachelor's degree. Advanced degrees include Master's degrees, doctoral degrees, and professional degrees.

Advantaged urban: Students in this group live in metropolitan statistical areas and attend schools where a high proportion of the students' parents are in professional or managerial positions. Schools were placed into this category on the basis of information about the type of community, the size of its population, and an occupational profile of residents provided by school principals participating in the National Assessment of Educational Progress (NAEP).

Appropriations (federal funds): Budget authority provided through the congressional appropriation process that permits federal agencies to incur obligations and to make payments.

Appropriations (institutional revenues): An amount (other than a grant or contract) received from or made available to an institution through an act of a legislative body.

Associate's degree: A degree granted for the successful completion of a sub-baccalaureate program of studies, usually requiring at least 2 years (or equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work/study program.

Auxiliary enterprises: (See Revenues.)

Average daily attendance (ADA): The aggregate attendance of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers should be considered days in session.

Average daily membership (ADM): The aggregate membership of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers should be considered days in session. The average daily membership for groups of schools having varying lengths of terms is the average of the average daily memberships obtained for the individual schools.

Baccalaureate degree: (See Bachelor's degree.)

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. This includes degrees granted in a cooperative or work/study program.

Carnegie unit: A standard of measurement used for secondary education that represents the completion of a course that meets one period per day for one year.

Catholic school: (See Orientation.)

Cohort: A group of individuals who have a statistical factor in common, for example, year of birth.

College: A postsecondary school that offers general or liberal arts education, usually leading to an associate's, bachelor's, master's, doctor's, or first-professional degree. Junior colleges and community colleges are included under this terminology.

Combined elementary and secondary school: A school that encompasses instruction at both the elementary and the secondary levels. Examples of combined elementary and secondary school grade spans would be grades 1 through 12 or 5 through 12.

Computer and information science: A group of instructional programs that describes computer and information sciences, including computer programming, data processing, and information systems.

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.

Consumer price index (CPI): This price index measures the average change in the cost of a fixed-market basket of goods and services purchased by consumers.

Control of institutions: A classification of institutions of elementary/secondary or higher education by whether the institution is operated by publicly elected or appointed officials (public control) or by privately elected or appointed officials and derives its major source of funds from private sources (private control).

Core subjects: *A Nation at Risk* asked that all students seeking a diploma be required to enroll in a core curriculum called "New Basics." The core subjects included in this plan are 4 units of English, 3 units of science, 3 units of social studies, 3 units of mathematics, and 0.5 units of computer science.

Cost of college attendance: Cost of living for students attending postsecondary institutions, including: tuition and fees, books, room and board, childcare, transportation, and other miscellaneous expenses.

Current dollars: Dollar amounts that have not been adjusted to compensate for inflation.

Current expenditures per pupil in enrollment: (See Expenditures.)

Current-fund expenditures: (See Expenditures.)

Current-fund revenues: (See Revenues.)

Dependent student: A student who under federal criteria is considered to be financially dependent on her or his parents or guardians. Most full-time students are considered dependent until they are 24 years old.

Disadvantaged urban: Students in this group live in metropolitan statistical areas and attend schools where a high proportion of the students' parents are on welfare or are not regularly

employed. Schools were placed into this category on the basis of information about the type of community, the size of its population, and an occupational profile of residents provided by school principals participating in NAEP.

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 not included under this heading. (See First-professional degree.)

Dropout: The term is used both to describe an event—leaving school before graduating—and a status—an individual who is not in school and is not a graduate. Transferring schools, for example, from a public to a private school, is not regarded as a dropout event. A person who drops out of school may later return and graduate. At the time the person left school initially, he/she is called a *dropout*. At the time the person returns to school, he/she is called a *stopout*. Measures to describe these often complicated behaviors include the event dropout rate (or the closely related school persistence rate), the status dropout rate, and the high school completion rate.

Educational and general expenditures: (See Expenditures.)

Educational attainment: 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.

Elementary/secondary school: As reported in this publication, includes only regular schools (i.e., schools that are part of state and local school systems, and also most not-for-profit private elementary/secondary schools, both religiously affiliated and nonsectarian). Schools not reported include subcollegiate departments of institutions of higher education, residential schools for exceptional children, federal schools for Indians, and federal schools on military posts and other federal installations.

Employed: Includes civilian, noninstitutionalized persons who (1) worked during any part of the survey week as paid employees; worked in their own business, profession, or farm; or worked 15 hours or more as unpaid workers in a family-owned enterprise; or (2) were not working but had jobs or businesses from which they were temporarily absent due to illness, bad weather, vacation, labor-management dispute, or personal reasons, whether or not they were seeking another job.

Engineering and engineering technologies: Instructional programs that describe the mathematical and natural science knowledge gained by study, experience, and practice and applied with judgment to develop ways to utilize the materials and forces of nature economically for the benefit of mankind. Include programs that prepare individuals to support and assist engineers and similar professionals.

English: A group of instructional programs that describes the English language arts, including composition, creative writing, and the study of literature.

Enrollment: The total number of students registered in a given school unit at a given time, generally in the fall of a year.

Expected family contribution (EFC): The amount that a family is expected to pay toward meeting postsecondary costs of attendance (students and parents of dependent students are both expected to make contributions). This

amount is determined through an analysis of need (for example, the Congressional Methodology) and is based on taxable and nontaxable income and assets as well as family size, the number of family members attending postsecondary institutions, extraordinary medical expenses, and so forth. For dependent students, the EFC consists of both a parental contribution and a separately calculated student contribution. The minimum student contribution in 1988-89 was \$700 for freshmen and \$900 for other undergraduates.

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 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 transactions other than for retirement of debt, investment in securities, extension of credit, or as agency transaction. Also, 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.

Academic support: This category of college expenditures includes expenditures for support services that are an integral part of the institution's primary missions of instruction, research, or public service. Includes expenditures for libraries, galleries, audio/visual services, academic computing support, ancillary support, academic administration, personnel development, and course and curriculum development.

Current expenditures (elementary/secondary): The expenditures for operating local public schools, excluding capital outlay and interest on school debt. These expenditures include such items as salaries for school personnel, fixed charges, student transportation, school books and materials, and energy costs. Beginning in 1980-81, expenditures for state administration are excluded.

Current expenditures per pupil in enrollment: (See Expenditures.) Current expenditures for the regular school term divided by the total number of students registered in a given school unit at a given time, generally in the fall of a year.

Current-fund expenditures (higher education): Money spent to meet current operating costs, including salaries, wages, utilities, student services, public services, research libraries, scholarships and fellowships, auxiliary enterprises, hospitals, and independent operations. Excludes loans, capital expenditures, and investments.

Educational and general expenditures: The sum of current-fund expenditures on instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, and awards from restricted and unrestricted funds.

Instruction: That category including expenditures of the colleges, schools, departments, and other instructional divisions of higher education institutions, and expenditures for departmental research and public service which are not separately budgeted. Includes expenditures for both credit and noncredit activities. Excludes expenditures for academic administration where the primary function is administration (e.g., academic deans).

Scholarships and fellowships: This category of college expenditures applies only to money given in the form of outright grants and trainee stipends to individuals enrolled in formal coursework, either for credit or not. Aid to students in the form of tuition or fee remissions is included. College work-study funds are excluded and are reported under the program in which the student is working. In the tabulations in this volume, Pell Grants are not included in this expenditure category.

Expenditures per pupil: Charges incurred for a particular period of time divided by a student unit of measure, such as enrollment, average daily attendance, or average daily membership.

Family income: The combined income of all family members 14 years old and over living in the household for the period of one year. Income includes money income from jobs; net income from business, farm, or rent; pensions; dividends; interest; social security payments; and any other money income.

Federal aid: Student financial aid whose source is the federal government. This aid can either be provided by or administered by a federal agency. Federal agencies providing aid include the Department of Education, Department of Health and Human Services, Department of Defense, Veterans Administration, and the National Science Foundation. Federal aid can be in the form of grants, loans, and work-study aid.

Federal funds: Amounts collected and used by the federal government for the general purposes of the government. There are four types of federal fund accounts: the general fund, special funds, public enterprise funds, and intragovernmental funds. The major federal fund is the general fund, which is derived from general taxes and borrowing. Federal funds also include certain earmarked collections, such as those generated by and used to finance a continuing cycle of business-type operations.

First-professional degree: A degree that signifies both completion of the academic requirements for beginning practice in a given profession and 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. By NCES definition, first-professional degrees are awarded in the fields of dentistry (D.D.S or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), pharmacy (D.Pharm.), podiatric medicine (D.P.M.), veterinary medicine (D.V.M.), chiropractic (D.C. or D.C.M.), law (J.D.), and theological professions (M.Div. or M.H.L.).

First-time teachers: People who are teaching full-time in the nation's school system this year

for the first time. These teachers include recent college graduates, former substitute teachers, or people who had other jobs besides teaching either inside or outside of the field of education.

Fiscal year: The yearly accounting period for the federal government, which begins on October 1 and ends on the following September 30. The fiscal year is designated by the calendar year in which it ends; for example, fiscal year 1992 begins on October 1, 1991, and ends on September 30, 1992. (From fiscal year 1844 to fiscal year 1976 the fiscal year began on July 1 and ended on the following June 30.)

Foreign languages: A group of instructional programs that describes the structure and use of language that is common or indigenous to people of the same community or nation, the same geographical area, or the same cultural traditions. Programs cover such features as sound, literature, syntax, phonology, semantics, sentences, prose, and verse, as well as the development of skills and attitudes used in communicating and evaluating thoughts and feelings through oral and written language.

Free lunch eligibles: Families with school-aged children who fall below the poverty level and have no other significant assets are eligible to receive government assistance in the form of free or reduced-price school lunches.

Full-time enrollment: The number of students enrolled in higher education courses with total credit load equal to at least 75 percent of the normal full-time course load.

Full-time-equivalent (FTE) enrollment: For institutions of higher education, enrollment of full-time students, plus the full-time equivalent of part-time students as reported by institutions. In the absence of an equivalent reported by an institution, the FTE enrollment is estimated by adding one-third of part-time enrollment to full-time enrollment.

Full-time instructional faculty: Those members of the instruction/research staff who are employed full-time as defined by the institution, including faculty with released time for research and faculty on sabbatical leave. Full-time counts

exclude faculty who are employed to teach less than two semesters, three quarters, two trimesters, or two 4-month sessions; replacements for faculty on sabbatical leave or those on leave without pay; faculty for preclinical and clinical medicine; faculty who are donating their services; faculty who are members of military organizations and paid on a different pay scale from civilian employees; academic officers, whose primary duties are administrative; and graduate students who assist in the instruction of courses.

GED recipient: A person who has obtained certification of high school equivalency by meeting state requirements and passing an approved exam, which is intended to provide an appraisal of the person's achievement or performance in the broad subject matter areas usually required for high school graduation. (See General educational development test.)

General educational development (GED) test: A test administered by the American Council on Education as the basis for awarding a high school equivalent certification.

Geographic region: 1) The four regions used by the Bureau of Economic Analysis of the U.S. Department of Commerce, the National Assessment of Educational Progress, and the National Education Association are as follows (Note that the National Education Association designated the Central region as Middle region in its classification):

Northeast

Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Southeast

Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Virginia
West Virginia

<i>Central (Middle)</i>	<i>West</i>	<i>(East South Central)</i>	<i>(Pacific)</i>
Illinois	Alaska	Kentucky	Washington
Indiana	Arizona	Tennessee	Oregon
Iowa	California	Alabama	California
Kansas	Colorado	Mississippi	Alaska
Michigan	Hawaii		Hawaii
Minnesota	Idaho	<i>(West South Central)</i>	
Missouri	Montana	Arkansas	
Nebraska	Nevada	Louisiana	
North Dakota	New Mexico	Oklahoma	
Ohio	Oklahoma	Texas	
South Dakota	Oregon		
Wisconsin	Texas		
	Utah		
	Washington		
	Wyoming		

2) The regions used by the U.S. Bureau of the Census in Current Population Survey tabulations are as follows:

<i>Northeast</i>	<i>Midwest</i>
(New England)	(East North Central)
Maine	Ohio
New Hampshire	Indiana
Vermont	Illinois
Massachusetts	Michigan
Rhode Island	Wisconsin
Connecticut	
(Middle Atlantic)	(West North Central)
New York	Minnesota
New Jersey	Iowa
Pennsylvania	Missouri
	North Dakota
	South Dakota
	Nebraska
	Kansas
<i>South</i>	<i>West</i>
(South Atlantic)	(Mountain)
Delaware	Montana
Maryland	Idaho
District of Columbia	Wyoming
Virginia	Colorado
West Virginia	New Mexico
North Carolina	Arizona
South Carolina	Utah
Georgia	Nevada
Florida	

Government appropriation: An amount (other than a grant or contract) received from or made available to an institution through an act of a legislative body.

Government grant or contract: Revenues from a government agency for a specific research project or other program.

Graduate: An individual who has received formal recognition for the successful completion of a prescribed program of studies.

Graduate record examination (GRE): Multiple-choice examinations administered by the Educational Testing Service and taken by applicants who are intending to attend certain graduate schools. Two generalized tests are offered, plus specialized tests in a variety of subjects areas. Ordinarily, a student will take only the specialized test that applies to the intended field of study.

Grants: Also known as scholarships, these are funds for postsecondary education that do not have to be repaid.

Gross domestic product (GDP): Gross national product less net property income from abroad. Both gross national product and gross domestic product aggregate only the incomes of residents of a nation, corporate and individual, deriving directly from the current production of goods and services. However, gross national product also includes net property from abroad. (See also Gross national product.)

Gross national product (GNP): A measure of the money value of the goods and services

available to the nation from economic activity. GNP can be viewed in terms of expenditure categories which include purchases of goods and services by consumers and government, gross private domestic investment, and net exports of goods and services. The goods and services included are largely those bought for final use (excluding illegal transactions) in the market economy. A number of inclusions, however, represent imputed values, the most important of which is rental value of owner-occupied housing. GNP, in this broad context, measures the output attributable to the factors of production—labor and property—supplied by U.S. residents.

Guidance counselor: (See Staff assignments, elementary and secondary school.)

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).

High school program: A program of studies designed to prepare students for their postsecondary education and occupation. Four types of programs are usually distinguished—academic, vocational, general, and personal use. An academic program is designed to prepare students for continued study at a college or university. A vocational program is designed to prepare students for employment in one or more semiskilled, skilled, or technical occupations. A general program is designed to provide students with the understanding and competence to function effectively in a free society and usually represents a mixture of academic and vocational components. A personal use program provides a student with general skills in areas such as health, religion, and military science.

Higher education: Study beyond secondary school at an institution that offers programs terminating in an associate, baccalaureate, or higher degree.

Higher education institutions (general definition): Institutions providing education above the instructional level of the secondary schools, usually beginning with grade 13.

Typically, these institutions include colleges, universities, graduate schools, professional schools, and other degree-granting institutions.

Higher education price index: A price index which measures average changes in the prices of goods and services purchased by colleges and universities through current-fund education and general expenditures (excluding expenditures for sponsored research and auxiliary enterprises).

Humanities: Instructional programs in the following fields: area and ethnic studies, foreign languages, letters, liberal/general studies, multi/interdisciplinary studies, philosophy and religion, theology, and the visual and performing arts.

Independent operations: A group of self-supporting activities under control of a college or university. For purposes of financial surveys conducted by the National Center for Education Statistics, this category is composed principally of federally funded research and development centers (FFRDC).

Inflation: An upward movement in general price levels that results in a decline of purchasing power.

Institutional support: The category of higher education expenditures that includes day-to-day operational support for colleges, excluding expenditures for physical plant operations. Examples of institutional support include general administrative services, executive direction and planning, legal and fiscal operations, and community relations.

Instruction: (See Expenditures.)

Instructional staff: Full-time-equivalent number of positions, not the number of different individuals occupying the positions during the school year. In local schools, includes all public elementary and secondary (junior and senior high) day-school positions that are in the nature of teaching or in the improvement of the teaching-learning situation. Includes consultants or supervisors of instruction, principals, teachers, guidance personnel, librarians, psychological personnel, and other instructional staff.

Excludes administrative staff, attendance personnel, clerical personnel, and junior college staff.

Labor force: Persons employed as civilians, unemployed, or in the armed services during the survey week. The "civilian labor force" comprises all civilians classified as employed or unemployed. (See Employed and Unemployed.)

Life sciences: Life sciences are instructional programs that describe the systematic study of living organisms. Life sciences include biology, biochemistry, biophysics, and zoology.

Limited English proficient: A concept developed to assist in identifying those language-minority students (children from language backgrounds other than English) who need language assistance services, in their own language or in English, in the schools. The Bilingual Education Act, reauthorized in 1988 (P.L. 100-297), describes a limited English proficient (LEP) student as one who

- 1) meets one or more of the following conditions:
 - a) a student who was born outside of the United States or whose native language is not English;
 - b) a student who comes from an environment where a language other than English is dominant; or
 - c) a student who is American Indian or Alaskan Native and comes from an environment where a language other than English has had a significant impact on his/her level of English language proficiency; and
- 2) has sufficient difficulty speaking, reading, writing, or understanding the English language to deny him or her the opportunity to learn successfully in English-only classrooms.

In practice, many ways of making this determination about an individual student are being used by school systems across the United States. These include various combinations of

home language surveys, informal teacher determination, formal interviews, and a number of types of assessment tests for classification, placement, and monitoring of progress.

Literacy: See supplemental note to *Indicator 20*.

Loan: Borrowed money that must be repaid.

Local education agency (LEA): (See School district.)

Master's degree: A degree awarded for successful completion of a program generally requiring 1 or 2 years of full-time college-level study beyond the bachelor's degree. One type of master's degree, including the Master of Arts degree, or M.A., and the Master of Science degree, or M.S., 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, for example, an M.Ed. in education, an M.B.A. in business administration, an M.F.A. in fine arts, an M.M. in music, an M.S.W. in social work, and an M.P.A. in public administration. A third type of master's degree is awarded in professional fields for study beyond the first-professional degree, for example, the Master of Laws (LL.M.) and Master of Science in various medical specializations.

Mathematics: A group of instructional programs that describes the science of logical symbolic language and its applications.

Metropolitan population: The population residing in metropolitan statistical areas (MSAs). (See Metropolitan statistical area.)

Metropolitan statistical area (MSA): A large population nucleus and the nearby communities that have a high degree of economic and social integration with that nucleus. Each MSA consists of one or more entire counties (or county equivalents) that meet specified standards pertaining to population, commuting ties, and metropolitan character. In New England, towns and cities, rather than counties, are the basic units. MSAs are designated by the

Office of Management and Budget. An MSA includes a city and, generally, its entire urban area and the remainder of the county or counties in which the urban area is located. An MSA also includes such additional outlying counties that meet specified criteria relating to metropolitan character and level of commuting of workers into the central city or counties. Specified criteria governing the definition of MSAs recognized before 1980 are published in *Standard Metropolitan Statistical Areas: 1975*, issued by the Office of Management and Budget. New MSAs were designated when 1980 counts showed that they met one or both of the following criteria:

- 1) Included a city with a population of at least 50,000 within their corporate limits; or
- 2) Included a Census Bureau-defined urbanized area (which must have a population of at least 50,000) and a total MSA population of at least 100,000 (or, in New England, 75,000).

Minority: Any racial/ethnic group that is non-white is considered minority. (See Racial/ethnic group.)

Modal grade: The modal grade is the year of school in which the largest proportion of students of a given age is enrolled. Enrolled persons are classified according to their relative progress in school, that is, whether the grade or year in which they were enrolled was below, at, or above the modal (or typical) grade for persons of their age at the time of the survey.

A Nation at Risk: A report published by the Department of Education in 1983 highlighting deficiencies in knowledge of the nation's students and population as a whole in areas such as literacy, mathematics, geography, and basic science.

Natural sciences: A group of fields of study that includes the life sciences, physical sciences, and mathematics.

Nonmetropolitan residence group: The population residing outside metropolitan

statistical areas. (See Metropolitan Statistical Area.)

Nonsupervisory instructional staff: Persons such as curriculum specialists, counselors, librarians, remedial specialists, and others possessing education certification but not responsible for day-to-day teaching of the same group of pupils.

Nursery school: (See Preprimary.)

Obligations: Amounts of orders placed, contracts awarded, services received, or similar legally binding commitments made by federal agencies during a given period that will require outlays during the same or some future period.

Orientation (private school): The group or groups, if any, with which a private elementary/secondary school is affiliated, or from which it derives subsidy or support. Such organizations include

Catholic school: A private school over which a Roman Catholic church group exercises some control or provides some form of subsidy. Catholic schools for the most part include those operated or supported by: a parish, a group of parishes, a diocese, or a Catholic religious order.

Other religious school: A private school affiliated with an organized religion or denomination other than Roman Catholicism or which has a religious orientation other than Catholic in its operation and curriculum.

Nonsectarian school: A private school whose curriculum and operation are independent of religious orientation and influence in all but incidental ways.

Other technical/professional fields: A group of occupationally oriented fields, other than business, computer science, education, and engineering, which include agriculture and agricultural sciences, architecture, communications, communications technologies, home economics, law, library and archival sciences, military sciences, parks and recreation, protective services, and public affairs.

Outlays: The value of checks issued, interest accrued on the public debt, or other payments made, net of refunds and reimbursements.

Part-time enrollment: The number of students enrolled in higher education courses with a total credit load less than 75 percent of the normal full-time credit load.

Percentile (score): A value on a scale of zero to one hundred that indicates the percent of a distribution that is equal to or below it. A score in the 95th percentile is a score equal to or better than 95 percent of all other scores.

Personal income: Current income received by persons from all sources minus their personal contributions for social insurance. Classified as "persons" are individuals (including owners of unincorporated firms), nonprofit institutions serving individuals, private trust funds, and private noninsured welfare funds. Personal income includes transfers (payments not resulting from current production) from government and business such as social security benefits and military pensions, but excludes transfers among persons.

Physical sciences: Physical sciences are instructional programs that describe inanimate objects, processes, or matter, energy, and associated phenomena. Physical sciences include astronomy, astrophysics, atmospheric sciences, chemistry, geology, physics, planetary science, and science technologies.

Postsecondary education: The provision of formal instructional programs with a curriculum designed primarily for students who have completed the requirements for a high school diploma or equivalent. This includes programs of an academic, vocational, and continuing professional education purpose, and excludes vocational and adult basic education programs.

Poverty level: Poverty status is based on reports of family income on the March Current Population Survey. Families or individuals with gross incomes below the poverty threshold are classified as below the poverty level. Poverty thresholds in 1992 ranged from \$7,143 for a

person living alone to \$28,745 for a family of four or more.

Prekindergarten: (See Preprimary.)

Preprimary: Elementary education programs for children who are too young for first grade. The year before first grade is called kindergarten; the year(s) before kindergarten are called preschool, nursery school, or prekindergarten. Not included in prekindergarten is essentially custodial care provided in private homes. Prekindergarten programs may be provided in regular elementary schools (with kindergarten, first- and higher grade programs) or in preschools (with only prekindergarten programs.)

Private school or institution: A school or institution that is controlled by an individual or agency other than a state, a subdivision of a state, or the federal government, which is usually supported primarily by other than public funds, and the operation of whose program rests with other than publicly elected or appointed officials.

Proprietary institution: An educational institution that is under private control but whose profits derive from revenues subject to taxation.

Purchasing power parity: A method of converting other countries' expenditures to U.S. dollars in order to compare expenditure rates. Purchasing power parity indices are calculated by comparing the cost of a fixed-market basket of goods in each country.

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:

American Indian or Alaskan Native: A person having origins in any of the original peoples of North America and maintaining

cultural identification through tribal affiliation or community recognition.

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.

Black: A person having origins in any of the black racial groups in Africa. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly.

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

White: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly.

Reentrants: Teachers who left the school system for a period of time, and have now returned to classroom teaching.

Remedial education: Instruction for a student lacking those reading, writing, or mathematics skills necessary to perform college-level work at the level required by the attended institution.

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.

Auxiliary enterprises: This category includes those essentially self-supporting operations that exist to furnish a service to students, faculty, or staff, and that charge a fee that is directly related to, although not necessarily equal to, the cost of the service. Examples are residence halls, food services, college stores, and intercollegiate athletics.

Current-fund revenues (higher education): 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.

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.

Salary workers: Any person who worked one or more days during the previous year and was paid on the basis of a yearly salary is considered a salary worker.

Scholarships and fellowships: (See Expenditures.)

Scholastic Aptitude Test (SAT): An examination administered by the Educational Testing Service and used to predict the facility with which an individual will progress in learning college-level academic subjects.

School climate: The social system and culture of the school, including the organizational structure of the school and values and expectations within it.

School district: An education agency at the local level that exists primarily to operate public schools or to contract for public school services. Synonyms are "local basic administrative unit" and "local education agency."

School year: The 12-month period of time denoting the beginning and ending dates for school accounting purposes, usually from July 1 through June 30.

Science: The body of related courses concerned with knowledge of the physical and biological world and with the processes of discovering and validating this knowledge.

Secondary school: A school comprising any span of grades beginning with the next grade following an elementary or middle-school (usually 7, 8, or 9) and ending with or below grade 12. Both junior high schools and senior high schools are included.

Social and behavioral sciences: A group of scientific fields of study that includes anthropology, archeology, criminology, demography, economics, geography, history, international relations, psychology, sociology, and urban studies.

Social studies: A group of instructional programs that describes the substantive portions of behavior, past and present activities, interactions, and organizations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes.

Socioeconomic status (SES): The SES quartile variable used for both High School and Beyond and the National Education Longitudinal Study of 1988 was built using parental education level, parental occupation, family income, and household items. Students were placed in quartiles based on their standardized composite score. By definition, one quarter of each cohort will reside in the bottom SES quartile, even if education levels, income, and the number of persons in more prestigious occupations increase. The terms high, middle, and low SES refer to the upper, middle two, and lower quartiles of the weighted SES composite index distribution.

Staff assignments, elementary and secondary school:

District administrative support staff: Those personnel that are assigned to the staffs of the district administrators. They may be clerks, computer programmers and others concerned with the functioning of the entire district.

District administrators: The chief executive officers of education agencies (such as superintendents and deputies) and all others with district-wide responsibility. Such positions may be business managers, administrative assistants, coordinators and the like.

Guidance counselors: Professional staff whose activities involve counseling with students and parents, consulting with other staff members

on learning problems, evaluating the abilities of students, assisting students in personal and social development, providing referral assistance, and working with other staff members in planning and conducting guidance programs for students.

Instructional (teacher) aides: Those staff members assigned to assist a teacher with routine activities associated with teaching (i.e., those activities requiring minor decisions regarding students, such as monitoring, conducting rote exercises, operating equipment, and clerking). Volunteer aides are not included in this category.

Librarians: Staff members assigned to perform professional library service activities such as selecting, acquiring, preparing, cataloging, and circulating books and other printed materials; planning the use of the library by students, teachers, and other members of the instructional staff; and guiding individuals in their use of library books and materials that are maintained separately or as part of an instructional materials center.

Other support services staff: All staff not reported in other categories. This group includes media personnel, social workers, data processors, health maintenance workers, bus drivers, security, cafeteria workers, and other staff.

School administrators: Those staff members whose activities are concerned with directing and managing the operation of a particular school. They may be principals or assistant principals, including those who coordinate school instructional activities with those of the local education agency (LEA) and other appropriate units.

Stopout: (See Dropout.)

Tax expenditures: Losses of tax revenue attributable to provisions of the federal income tax laws that allow a special exclusion, exemption, or deduction from gross income or provide a special credit, preferential rate of tax, or a deferral of tax liability affecting individual or corporate income tax liabilities.

Technical/professional fields: A group of occupationally oriented fields of study, other than engineering and computer science, that includes agriculture and agricultural sciences, architecture, business and management, communications, education, health sciences, home economics, law, library and archival sciences, military sciences, parks and recreation, protective services, and public affairs.

Total expenditure per pupil in average daily attendance: Includes all expenditures allocable to per pupil costs divided by average daily attendance. These allocable expenditures include current expenditures for regular school programs, interest on school debt, and capital outlay. Beginning in 1980-81, expenditures for state administration are excluded and expenditures for other programs (summer schools, community colleges, and private schools) are included.

Tuition and fees: A payment or charge for instruction or compensation for services, privileges, or the use of equipment, books, or other goods.

Type of higher education institutions:

4-year institution: An 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. In some tables a further division between universities and other 4-year institutions is made. A "university" is a postsecondary institution that typically comprises one or more graduate professional schools. (See also University.)

2-year institution: An institution legally authorized to offer and offering at least a 2-year program of college-level studies that terminates in an associate degree or is principally creditable toward a baccalaureate degree.

Undergraduate students: Students registered at an institution of higher education in a program leading to a baccalaureate degree or other formal

award below the baccalaureate such as an associate degree.

Unemployed: Civilians who had no employment but were available for work and (1) had engaged in any specific job-seeking activity within the past 4 weeks, (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.

University: An institution of higher education consisting of a liberal arts college, a diverse graduate program, and usually two or more professional schools or faculties and empowered to confer degrees in various fields of study.

Urbanicity:

- (1) In the Schools and Staffing Survey school location is categorized based on the classification in both the Common Core of Data (CCD) and the Quality Education data (QED), as drawn from U.S. Census data and definition. The results are summarized in three variables:

Central city—central city of an MSA (Metropolitan Statistical Area).

Urban fringe/large town—area surrounding a central city but within a county constituting an MSA.

Rural/small town—outside an MSA.

- (2) In the High School and Beyond Survey, urbanicity is classified based on the Curriculum Information Center code as follows:

Urban—within a central city of an MSA.

Suburban—within an MSA but outside the central city area.

Rural—outside a designated MSA.

Vocational education: Organized educational programs, services, and activities that are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career, requiring other than a baccalaureate or advanced degree.

Work-study: A generic term for programs designed to provide part-time employment as a source of funds to pay for postsecondary education as well as a federal program that is administered through postsecondary institutions.

Year-round, full-time worker: One who worked primarily at a full-time civilian job for 50 weeks or more during the preceding calendar year.

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The **ED/OERI Gopher server** can be accessed by pointing your Gopher client software to:

gopher.ed.gov or select

North America—>**USA**—>**General**—>**U.S. Department of Education** from All/Other Gophers.

FTP users can access the information (same material available on Gopher server) by ftping to:

[ftp.ed.gov](ftp://ftp.ed.gov) (log on anonymous)

Please note that we do not offer public access Gopher or WWW clients. You cannot access our server by telneting to our site. You must either have an appropriate Gopher or WWW client, such as NCSA Mosaic or Lynx, at your site or be able to telnet to a public access client elsewhere.

Watch for a **Mail Server** capability by the end of June 1994, to better serve our e-mail only users.

Questions and Comments

If you have any suggestions or questions about the contents of the Gopher, FTP, and WWW servers, please use one of the following addresses:

E-mail: inetmgr@inet.ed.gov
gopheradm@inet.ed.gov
wwwadmin@inet.ed.gov

Telephone: (202) 219-1547

Fax: (202) 219-1817

Snail Mail: **INet Project Manager**
U.S. Department of Education
Office of Educational Research and Improvement/EIRD
555 New Jersey Ave., N.W., Room 214
Washington, D.C. 20208-5725



5/19/94

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