

## Commissioner's Statement

### INTRODUCTION

Reliable data are critical in guiding efforts to improve education in America. When the original Department of Education was created in 1867, the law stated that it should “gather statistics and facts on the condition and progress of education in the United States and Territories.” The National Center for Education Statistics (NCES) currently carries out this mission for the Department of Education through such work as *The Condition of Education*, a mandated annual report submitted to Congress on June 1 every year.

Drawing on numerous data sources, this annual report presents indicators of important developments and trends in American education. Recurrent themes underscored by the indicators include participation and persistence in education, student performance and other outcomes, the environment for learning, and societal support for education. In addition, this year's special feature focuses on the issue of providing equal educational opportunities to first-generation students (i.e., students whose parents did not attend college) and how academic preparation can increase the likelihood of these students' access to and persistence in postsecondary education.

### PARTICIPATION AND PERSISTENCE IN EDUCATION

Enrollments in the United States are growing at all levels of education, but for different reasons. At the preprimary level, growth is due to higher rates of enrollment; that is, larger percentages of 3- to 5-year-old children are enrolling in school. At the elementary and secondary levels, growth is due to demographic changes, which are also making the student body more diverse. At the postsecondary level, high enrollment rates and population growth are combining to swell enrollments. Among adults, rates of educational attainment and of continued participation in learning activities are on the rise.

- The preprimary enrollment rate of children ages 3–5 increased from 53 to 60 percent between 1991 and 1999 (*Indicator 1*).
- Public elementary and secondary enrollment is projected to reach 47.2 million in 2001, and to increase through 2005 before decreasing slowly. The West will experience the majority of this growth in the student population (*Indicator 2*).
- Private elementary and secondary school enrollment was higher in 1997–98 than in 1989–90. Despite increases in the West, private enrollment for grades K–12 was lowest in the West and higher in the South in 1997–98 (*Indicator 2*).
- Hispanic students are the fastest growing student group in the Nation's elementary and secondary schools (*Indicator 3*).
- The percentage of U.S. 16- to 24-year-olds who were high school dropouts (the status dropout rate) decreased from 1972 to 1999 for white and black young adults (*Indicator 23*).
- U.S. students' expectations for obtaining postsecondary credentials have increased substantially since 1983 (*Indicator 19*). The college enrollment rates for high school completers in the past decades have also risen for white and black students (*Indicator 26*). There has been no consistent growth for Hispanic students.
- Although part-time and 2-year enrollments in undergraduate education grew more rapidly than full-time and 4-year enrollments in the 1970s, future growth is expected to be greater in full-time and 4-year enrollments (*Indicator 5*).
- Participation in adult learning activities was higher in 1999 than in 1991. Rates of

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participation in credential programs in colleges and universities decline with age, while participation in all other types of adult learning activities, such as work-related learning and personal interest courses, remains about the same with age (*Indicator 7*).

### OUTCOMES OF EDUCATION

At the elementary and secondary levels, trends in student performance are mixed. Participation in advanced mathematics and science courses has increased, and there have been some improvements in mathematics and science performance. But issues of equal educational opportunity and international competitiveness remain.

- Children at risk begin kindergarten with markedly lower reading and mathematics skills than do more advantaged children. All children showed marked improvement in both reading and mathematics performance during the kindergarten year, but gaps persisted or grew for children at risk, particularly in more advanced skills (*Indicators 8 and 9*).
- Between 1971 and 1999, 9- and 13-year-olds improved their performance in reading, but there was no meaningful difference for 17-year-olds. The pattern of change has been similar for both 9- and 13-year-olds, with reading scores increasing in the 1970s and remaining stable since then (*Indicator 10*). The score gap between black and white students narrowed between the early 1970s and the late 1980s, but has remained fairly stable since then (*Indicator 11*). The relative performance of whites compared with Hispanics did not change significantly between the 1970s and 1999, except for a narrowing of the gap for 17-year-olds (NCES 2000-469).
- Between 1973 and 1999, 9-, 13-, and 17-year-olds all improved their performance in mathematics (*Indicator 12*).
- The trends in science performance are characterized by declines in the 1970s, increases during the 1980s and early 1990s, and mostly stable performance since then (*Indicator 13*).
- In both mathematics and science, the performance of U.S. students declined relative to the international average among those who were in the 4<sup>th</sup> grade in 1995 compared with those who were in the 8<sup>th</sup> grade in 1999 (*Indicator 14*).
- In 1995, U.S. 12<sup>th</sup>-graders who had taken physics and advanced mathematics courses scored lower than students in their final year of secondary school in most participating countries and no higher than their peers in any country (*Indicator 19, The Condition of Education 2000*).
- Despite the continued increase in the attainment rates of U.S. 25- to 29-year-olds across all racial/ethnic groups and all educational levels, gaps between whites versus blacks and Hispanics persisted between 1971 and 2000, except for the gap between black and white rates of high school completion, which declined (*Indicator 31*).
- Women earn more than half of all bachelor's degrees in the United States. They still trail men in certain fields but have made considerable progress over the past quarter century (*Indicator 30*).
- Attainment rates of secondary education in the other G-7 countries are approaching, matching, or surpassing U.S. rates. However, U.S. attainment rates of higher education remain relatively high (*Indicator 32*).

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### FOCUS ON FIRST-GENERATION COLLEGE STUDENTS

Reflecting the high value placed on postsecondary education, most high school graduates expect to continue their education, and many of them actually do so. However, first-generation students (those whose parents did not attend college) are less likely than their peers with a college-educated parent to enroll in postsecondary education.

- Nearly all 1992 high school graduates (97 percent) reported that they expected to continue their education at some point (Berkner and Chavez 1997).
- Over the past decade, the percentage of high school completers who enrolled in college immediately after finishing high school has ranged between 60 and 67 percent, but enrollment rates have varied considerably with parents' educational attainment (*Indicator 26*).
- In 1999, 82 percent of high school graduates whose parents had a bachelor's degree or higher enrolled in college immediately after finishing high school, compared with 54 percent of those whose parents had not gone beyond high school and 36 percent of those whose parents had not completed high school (*Indicator 26*).

Recent NCES studies have shown that high school graduates whose parents did not attend college remain at a disadvantage with respect to postsecondary access even after taking into account other important factors such as educational expectations, academic preparation, support from parents and schools, and family income. Also according to these studies, among those who overcome the barriers to access and do enroll in postsecondary education, students whose parents did not attend college remain at a disadvantage with respect to staying enrolled and attaining a degree, again controlling for other related factors.

Academic preparation has a striking impact on the likelihood that first-generation students will enroll and persist in postsecondary education, but it does not completely close the gaps in postsecondary access and persistence between first-generation students and their peers with a college-educated parent.

- Taking advanced mathematics in high school increases the likelihood of enrollment in a 4-year institution, especially for first-generation students (*Indicator 24*).
- Taking rigorous coursework in high school increases the likelihood of persistence toward a bachelor's degree, especially for first-generation students (*Indicator 28*).

For those students who earn a bachelor's degree, labor market outcomes (but not rates of enrollment in graduate school) during the 4 years following graduation are similar regardless of parents' education.

### QUALITY OF THE ENVIRONMENT FOR LEARNING

Student performance in elementary and secondary schools is undoubtedly shaped by the quality of the teaching staff and the climate for learning within and outside schools.

- The percentage of high school graduates who completed advanced academic levels of English and foreign language study doubled between 1982 and 1998, to about 30 percent in each subject (*Indicator 33*). The proportion of high school graduates who completed advanced levels of mathematics increased from 26 to 41 percent during this period, and the proportion who completed advanced levels of physical science rose from 31 to 60 percent (*Indicator 40, The Condition of Education 2000*).

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- However, the quality of the mathematical content of 8<sup>th</sup>-grade mathematics lessons was rated lower than that in Germany and Japan (*Indicator 36*).
- Between 1990 and 1998, student/teacher ratios declined in public elementary schools but rose slightly in public secondary schools (*Indicator 38*).
- Academically weak college graduates are more likely than those who are academically strong to prepare to teach and to remain in teaching (*Indicator 42*).
- U.S. 8<sup>th</sup>-grade students are less likely to be taught by a teacher whose field of study was mathematics or physics than their international peers (*Indicator 43*).
- The percentages of high school students carrying weapons and engaging in physical fights on school property have declined since 1993, while the percentage being threatened or injured with a weapon has not changed (*Indicator 44*).
- As hours at a job increased, high school seniors were less likely to spend 10 or more hours a week on homework (*Indicator 21*).
- A slightly higher percentage of students were somewhat more likely to participate in community service in 1999 than in 1996; a key variable in their participation appears to be whether the school arranged rather than simply required service activities (*Indicator 16*).

Different issues are raised about the context for learning at the postsecondary level.

- Part-time faculty provide postsecondary institutions with a flexible work force; however, part-time faculty may be less

available to students and may not participate in institutional activities to the same extent as other faculty. In fall 1998, 4 out of 10 faculty worked part time (*Indicator 50*).

- Full-time instructional faculty at postsecondary degree-granting institutions worked an average of 53 hours weekly in fall 1998, devoting a majority of their time to teaching. The proportion of time faculty allocated to teaching and to research varied considerably depending on institution and academic rank, averaging 57 and 15 percent (*Indicator 51*).

### SOCIETAL SUPPORT FOR EDUCATION

Society and its members—the family, the individual, employers, and government and private organizations—provide support for education in various ways, such as spending time on learning activities, providing encouragement to learners, and investing money in education.

- The levels of parental involvement in American elementary and secondary schools are relatively high, but the frequency of such participation depends on the child's grade in school as well as parental income and educational attainment (*Indicator 54*).
- In 1999, among children ages 3–5 who were not yet enrolled in kindergarten, those with multiple risk factors were generally less likely than those without risk factors or with only one risk factor to engage in literacy activities frequently with their families (*Indicator 52*).
- Average expenditures in public school districts were \$5,700 per student in 1996–97. Between 1991–92 and 1996–97,

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average expenditures increased more in nonmetropolitan school districts than in metropolitan areas (*Indicator 56*).

- U.S. spending per student on primary and secondary education as a percentage of Gross Domestic Product (GDP) per capita was similar to the average for the Organisation for Economic Co-operation and Development (OECD) countries in 1997. In terms of expenditures per student at the postsecondary level, the United States spent more than twice as much as 15 other OECD countries (*Indicator 57*).
- In 1999, U.S. 6<sup>th</sup>- to 12<sup>th</sup>-graders and their parents overestimated the price of attending public 4-year institutions in their state (*Indicator 25*).
- Four years after they graduated, most 1992–93 bachelor's degree recipients earned enough to repay their loans without undue financial burden (*Indicator 59*).

### ENDURING EFFECTS OF EDUCATION

Education provides many lasting benefits to society as a whole and its members.

- Adults with a bachelor's degree are three times more likely than people with less than a high school diploma to report reading newspapers, magazines, or books regularly (*Indicator 15*).
- Better-educated adults report themselves in better health, regardless of income (*Indicator 17*).
- Young adults with higher levels of education earn more than their peers with less education (*Indicator 18*).

### CONCLUSION

In examining trends in the condition of American education, some encouraging signs emerge. These include higher rates of educational participation in the overall population as well as increases in the mathematics performance of students, some increases in science performance in the 1980s (but with no further increases in the 1990s), and increased advanced course-taking of high school students in four major academic subject areas (mathematics, science, English, and foreign languages). But international comparisons of student performance and instructional quality raise concerns about how well the American educational system compares with the systems of other economically developed countries, especially at the middle school and secondary levels.

Also, disturbing gaps persist in academic performance and educational participation among different racial/ethnic and socioeconomic groups. These gaps exist when children enter kindergarten but show few signs of closing by the end of 1<sup>st</sup> grade or at higher grade levels. The parents of at-risk children are less likely to engage in early literacy activities and to enroll them in a preschool program of some kind.

A growing and increasingly diverse population of elementary and secondary students continues to increase the challenge of providing high-quality instruction and equal educational opportunities. At the postsecondary level, institutions must prepare for the record numbers of enrollments expected over the next few decades. U.S. spending per student is similar to that in other major industrialized countries at the elementary and secondary level but higher at the postsecondary level.

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NCES produces an array of reports each month presenting important findings about the U.S. education system. In April 2001, more than a dozen reports were released, including two major studies: *The Nation's Report Card: Fourth Grade Reading 2000* from the National Assessment of Educational Progress (NAEP) and *What Democracy Means to Ninth-Graders: U.S. Results From the International IEA Civic Education Study*. *The Condition of Education* represents the culmination of a year-long project and some material, such as the results from these two surveys, were not available in time to be included in this year's edition.

In the coming months many other reports and surveys informing us about education will also be released, including the NAEP *Report Cards for the Nation and States* on mathematics and on science, which will both include results on students' performance in the 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grades; the 1999–2000 Schools and Staffing Survey; and the Program for International Student Assessment.



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