

## Commissioner's Statement

### INTRODUCTION

With the creation of the original Department of Education in 1867, the Congress declared that it should “gather statistics and facts on the condition and progress of education in the United States and Territories.”<sup>1</sup> The National Center for Education Statistics (NCES) currently responds to this mission for the Department of Education through such publications as *The Condition of Education*, a mandated report submitted to Congress on June 1st each year.

Reauthorization of the Center through the Education Sciences Reform Act of 2002 (P.L. 107-279) reaffirms this mandate. The Act calls upon NCES to release information that is valid, timely, unbiased, and relevant.

Recognizing that reliable data are critical in guiding efforts to improve education in America, *The Condition of Education 2004* 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 volume contains a special analysis that examines changes in undergraduate student financial aid between 1989–90 and 1999–2000.

This statement summarizes the main findings of the special analysis and the 38 indicators that appear in the six following sections. Each indicator is referenced by its number (e.g., *indicator 10*) in the volume.

<sup>1</sup>In 1869, the name of the new department was changed to the Office of Education and it was moved to the Department of the Interior (NCES 93-442).

### SPECIAL ANALYSIS ON PAYING FOR COLLEGE

The 1990s brought rising tuition and fees but also expanded and restructured financial aid programs to help students pay for college. At the federal level, the 1992 Reauthorization of the Higher Education Act broadened eligibility for need-based aid, raised loan limits, and made unsubsidized loans available to students regardless of need. States and institutions increased their grant aid and put more emphasis on merit as a criterion for awards. As a result, the overall picture of what and how students pay for college has changed substantially since the early 1990s.

This special analysis uses data from the 1989–90 and 1999–2000 administrations of the National Postsecondary Student Aid Study to describe some of these changes. It focuses on students who were enrolled full time and were considered financially dependent on their parents for financial aid purposes. All dollar amounts were adjusted for inflation.

- Between 1990 and 2000, the average price of attending college (tuition and fees plus an allowance for living expenses) increased at public 2-year institutions (from \$7,300 to \$8,500), at public 4-year institutions (from \$10,000 to \$12,400), and at private not-for-profit 4-year institutions (from \$19,400 to \$24,400).
- These higher prices, combined with reduced expected family contributions for low- and middle-income students and their families resulting from restructuring of the aid programs, meant that the average student was eligible for more need-based financial aid in 2000 than in 1990.
- Reflecting this greater need, more students received aid in 2000 than in 1990 (71 vs. 54 percent), and the average aided student received more aid (\$8,700 vs. \$6,200). Fi-

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- nancial aid increased for all income groups and at all types of institutions.
- Grant aid partly offset the price increases, with the percentage of students receiving grants rising from 45 to 57 percent and the average amount received by students with grants increasing from \$4,200 to \$5,400. However, the average net price after taking grants into account (i.e., price minus grants) increased at each type of institution. In other words, the growth in grant aid was not enough to offset the price increases.
  - The average net price after taking grants into account increased for all income groups, except those in the lowest-income quarter attending public 2-year or private for-profit less-than-4-year institutions.
  - Reflecting greater need and expanded eligibility for the Stafford loan program, the percentage of students who borrowed increased from 30 to 45 percent. In 2000, about half of low-income students and 35 percent of high-income students borrowed to help pay for their education. In 1990, about 46 percent of low-income students and 13 percent of high-income students borrowed. Among those who took out loans, the average amount borrowed increased from \$3,900 to \$6,100.
  - After taking into account both grants and loans, the average net price of attending increased for full-time dependent undergraduates at public 2-year institutions, remained stable for those at public 4-year institutions, and declined for those at private for-profit less-than-4-year institutions. The apparent decline at private not-for-profit 4-year institutions was not statistically significant.
- The average net price after grants and loans declined for low-income students, except at public 2-year institutions, and increased for high-income students at public 2- and 4-year institutions.

### PARTICIPATION IN EDUCATION

As the U.S. population increases, so does its enrollment at all levels of education. At the elementary and secondary levels, growth is due largely to the increase in the size of the school-age population. At the postsecondary level, both population growth and increasing enrollment rates help explain rising enrollments. Adult education is also increasing due to demographic shifts in the age of the U.S. population and increasing rates of enrollment, as influenced by changing employer requirements for skills. As enrollments have risen, the cohorts of learners—of all ages—have become more diverse than ever before.

- As enrollment of school-age children is compulsory, growth in elementary and secondary schooling is primarily the result of the increasing size of the population. At the postsecondary level, both population growth and increasing enrollment rates help explain rising enrollments. Between 1970 and 2002, for example, the enrollment rate of 20- and 21-year-olds increased from 32 to 48 percent (*indicator 1*).
- Thirty-five percent of public elementary schools had prekindergarten programs in 2000–01, serving over 800,000 children. Schools in the Southeast were more likely to have prekindergarten programs and full-day programs than schools in other regions of the country. Public schools with large enrollments (700 or more students) and schools in central cities were more likely than other schools to offer prekindergarten classes (*indicator 2*).

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- Enrollment among 4- to 6-year-olds in kindergarten increased from 3.2 million in 1977 to 4 million in 1992 before decreasing to 3.7 million in 2001. During this period, the proportion of students enrolled in full-day programs increased, and by 1995, it was larger than the proportion enrolled in half-day programs (*indicator 3*).
- Rising immigration and a 25 percent increase in the number of annual births that began in the 1970s and peaked in the mid-1970s have boosted school enrollment. Public elementary and secondary enrollment reached an estimated 48.0 million in 2003 and is projected to increase to an all-time high of 49.7 million in 2013. The West will experience the largest increase in enrollment of all regions in the country (*indicator 4*).
- In 2003, Black and Hispanic 4th-graders were more likely than White 4th-graders to be in high-poverty schools (measured by the percentage of students eligible for a subsidized lunch) and less likely to be in low-poverty schools. The same is also true by school location: Black and Hispanic students were more likely than White students to be concentrated in the highest-poverty schools in central city, urban fringe, and rural areas in 2003 (*indicator 5*).
- In the next 10 years, undergraduate enrollment is projected to increase. Enrollment in 4-year institutions is projected to increase at a faster rate than in 2-year institutions, and women's enrollment is expected to increase at a faster rate than men's. The number of part- and full-time students, those enrolled at 2- and 4-year institutions, and male and female undergraduates are projected to reach a new high each year from 2004 to 2013 (*indicator 6*).
- Forty percent of the population age 16 and above participated in some work-related adult education in 2002–03. The most common types of programs were formal work-related courses (33 percent) and college or university degree programs for work-related reasons (9 percent). Educational attainment was positively associated with participating in adult education for work-related reasons (*indicator 7*).

### LEARNER OUTCOMES

How well does the American educational system—and its students—perform? Data from national and international assessments can help answer this question, as can data on adults' educational and work experiences, health, and earnings later in life. In some areas, such as reading, mathematics, and writing, the performance of elementary and secondary students has improved over the past decade, but not in all grades assessed and not equally for all students. Long-term effects of education, such as on the health and earnings of adults, help underscore the importance of education and the outcomes of different levels of educational attainment.

- According to data from the Early Childhood Longitudinal Study, children without family risk factors, such as poverty, start kindergarten with higher performance and experience a larger gain in reading and mathematics scale scores through 3rd grade than students with 1 or more family risk factors. From the beginning of kindergarten in fall 1998 through the end of 3rd grade in spring 2002, children with no family risk factors had an average gain of 84 points in reading, compared with a 73-point gain among children with 2 or more family risk factors; the respective gains in mathematics were 65 and 57 points (*indicator 8*).

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- The average reading scale scores of 8th-graders assessed by the National Assessment of Educational Progress (NAEP) increased between 1992 and 2003, while no difference was detected for 4th-graders. The percentages of 4th- and 8th-graders performing at or above the *Proficient* level, defined as “solid academic performance for each grade assessed,” were higher in 2003 than in 1992. Among 12th-graders, average scores were lower in 2002 than in 1992 and 1998 (*indicator 9*).
- The average writing scale scores of 4th- and 8th-graders assessed by NAEP improved between 1998 and 2002. Twenty-eight percent of 4th-graders, 31 percent of 8th-graders, and 24 percent of 12th-graders performed at or above the *Proficient* level in 2002 (*indicator 10*).
- The average mathematics scale scores of 4th- and 8th-graders assessed by NAEP increased steadily from 1990 to 2003. For both grades, the average scale scores in 2003 were higher than in all previous assessments, and the percentages of students performing at or above the *Proficient* level and at the *Advanced* level, defined as “superior performance,” were higher in 2003 than in 1990. Thirty-two percent of 4th-graders and 29 percent of 8th-graders were at or above the *Proficient* level (*indicator 11*).

In addition to indicators on students' academic achievement, there are also some indicators on the long-term outcomes of education.

- The better educated a person is, the more likely that person is to report being in “excellent” or “very good” health, regardless of income. Among adults age 25 and above, 78 percent of those with a bachelor's degree or higher reported being in excellent or very good health in 2001, compared with 66 percent of those with

some education beyond high school, 56 percent of high school completers, and 39 percent of those with less than a high school education (*indicator 12*).

- In 2003, 13 percent of all persons ages 16–24 were neither enrolled in school nor working, a decrease from 16 percent in 1986. The gap between the percentage of poor youth and others neither enrolled nor working decreased over the period. The percentages of White and Asian/Pacific Islander youth neither enrolled nor working in 2003 were lower than the percentages of Hispanic, Black, and American Indian youth. In addition, the percentage of Hispanic youth neither enrolled nor working was lower than the percentages of Black and American Indian youth (*indicator 13*).
- The earnings of young adults with at least a bachelor's degree increased over the past 20 years relative to their counterparts with a high school diploma or General Educational Development (GED) certificate. Among men, the difference in median earnings rose from 19 percent in 1980 to 65 percent in 2002, while among women, the difference increased from 34 percent to 71 percent (*indicator 14*).

### STUDENT EFFORT AND EDUCATIONAL PROGRESS

Many factors are associated with school success, persistence, and progress toward high school graduation or a college degree. These include student motivation and effort, the expectations of students, encouragement from others, and learning opportunities, as well as various student characteristics, such as sex and family income. Monitoring these factors in relation to the progress of different groups of students through the educational system and tracking students' attainment are important for knowing how well we are doing as a nation in education.

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- The proportion of 10th-graders who expected to complete a bachelor's as their highest degree nearly doubled between 1980 and 2002, and the proportion who intended to earn a graduate degree more than doubled. Rising aspirations were also notable among students from families with low socioeconomic status: about 13 percent of such students intended to earn a bachelor's degree in 1980, but this figure had tripled by 2002 (*indicator 15*).
- During the 1970s and 1980s, "event drop-out rates," which measure the proportion of students who drop out of high school each year, declined. However, event drop-out rates remained unchanged during the 1990s on average and for students from low-, middle-, and high-income families (*indicator 16*).
- First-time entry rates into programs that lead to a bachelor's or higher degree increased from 1998 to 2001 in many countries that were members of the Organization for Economic Cooperation and Development (OECD). In 2001, the U.S. rate was lower than the OECD country average (*indicator 17*).
- Despite assistance offered through remediation, students enrolled in remediation are less likely to earn a postsecondary degree or certificate. The need for remedial reading appears to be the most serious barrier to degree completion: 12th-graders in 1992 who took remedial reading at the postsecondary level were about half as likely as those who took no remedial courses to have earned a degree or certificate by 2000 (*indicator 18*).
- While bachelor's degree completion rates have been steady over time, the likelihood of still being enrolled with no degree at the end of 5 years has increased. When comparing students who enrolled in a 4-year college or university for the first time in 1989–90 with those who began in 1995–96, 53 percent of both cohorts had completed a bachelor's degree within 5 years; however, the later cohort was more likely to have no degree but still be enrolled and also less likely to have left college without a degree (*indicator 19*).
- Women have earned more than half of all bachelor's degrees every year since 1981–82. They still trail men in certain fields but have made substantial gains since 1970–71 at both the undergraduate and graduate levels (*indicator 20*).

### CONTEXTS OF ELEMENTARY AND SECONDARY EDUCATION

The school environment is shaped by many factors, including the courses offered in the school and taken by students, the instructional methods used by teachers, students' opportunities to attend a "chosen" public school, the role of school staff in providing various support services to students, the extent to which teachers are teaching in their field, and the characteristics of school principals and their influence over school governance. Monitoring these and other factors provides a better understanding of the conditions in schools that influence education.

- Since the early 1980s, the percentage of high school graduates completing advanced coursework in science and mathematics has increased. Between 1982 and 2000, the percentage who had completed advanced courses in science increased from 35 to 63 percent, and the percentage who had completed advanced courses in mathematics increased from 26 to 45 percent (*indicator 21*).

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- Among high school graduates in 2000, Asian/Pacific Islander and private school graduates completed advanced levels of science and mathematics coursework at higher rates than their peers. Females were more likely than males to have completed some advanced science coursework and to have completed level II advanced academic mathematics courses (i.e., precalculus or an introduction to analysis) (*indicator 22*).
- According to findings from the 1999 Third International Mathematics and Science Study (TIMSS) Video Study—which examined 8th-grade science lessons in Australia, the Czech Republic, Japan, the Netherlands, and the United States—46 percent of U.S. 8th-grade science lessons had students conduct experiments or other practical activities, while 31 percent had students collect and report data from those activities (*indicator 23*).
- In 1999–2000, high school students in high-minority schools and high-poverty schools (measured by the percentage of students eligible for a subsidized lunch) were more often taught English, science, and mathematics by “out-of-field” teachers (i.e., teachers who have neither a major nor certification in the subject they teach) than their peers in low-minority and low-poverty schools (*indicator 24*).
- The percentage of students in grades 1–12 whose parents enrolled them in a “chosen” public school (i.e., a public school other than their assigned public school) increased from 11 to 15 percent between 1993 and 2003. In the same period, the percentage of children attending private schools also increased (.9 percentage points for private, church-related schools and .8 percentage points for private, not church-related schools). In addition, in 2003, parents of 24 percent of students reported that they moved to a neighborhood so that their children could attend a particular school (*indicator 25*).
- Principals’ perceptions of their own influence over a number of school governance functions vary by the control of the school. In 1999–2000, private elementary and secondary school principals were more likely than their public school counterparts to report a high degree of influence over establishing curriculum, setting disciplinary policies, and setting performance standards for students (*indicator 26*).
- The goals that guidance programs in public high schools emphasize vary according to the size and location of the school. For example, in 2002, the smallest schools were more likely than larger schools to report that their primary emphasis was on helping students prepare for postsecondary schooling, while the largest schools were more likely to emphasize helping students with their high school academic achievement. Schools located in a central city or urban fringe were more likely than rural schools to make helping students with their academic achievement the primary emphasis (*indicator 27*).
- At the elementary and secondary school levels, most schools have staff who provide various support services directly to students (e.g., counselors, social workers, speech therapists, and instructional and noninstructional aides). In 1999–2000, the most common student support staff in public elementary and secondary schools were school counselors, speech therapists, school nurses, and special education aides, each of which were found in 79 percent or more of schools (*indicator 28*).



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### CONTEXTS OF POSTSECONDARY EDUCATION

The postsecondary education system encompasses various types of institutions, both public and private. Although issues of student access, persistence, and attainment have been predominant concerns in postsecondary education, the contexts in which postsecondary education takes place matter as well. The diversity of the undergraduate and graduate populations, the various educational missions and learning environments of colleges and universities, the courses that students take, the modes of learning that are employed, and the ways in which colleges and universities attract and use faculty and other resources all are important aspects of the contexts of postsecondary education.

- Students age 24 and above represented 43 percent of all undergraduates in 1999–2000, and 82 percent of these students worked while enrolled. Many older undergraduates were employees first, focusing primarily on their jobs, and students second. Those whose primary focus was on their employment were less likely to complete their postsecondary programs than were older students who worked primarily to meet their educational expenses (*indicator 29*).
- The list of the top 30 postsecondary courses, which reports the subjects that students study the most in college (and which is referred to as the “empirical core curriculum”), has remained relatively stable over the past three decades. Among bachelor’s degree recipients who graduated from high school in 1972, 1982, and 1992, each cohort earned about one-third of its credits from the top 30 postsecondary courses for the cohort. For the 1992 cohort, the top 30 list for students attending highly selective institutions included a concentration of engineering and humanities courses and courses with an international theme, a pat-

tern not present for students in selective and nonselective institutions (*indicator 30*).

- Postsecondary institutions provided remedial coursework for 28 percent of entering freshmen in fall 2000 (22 percent undertook remediation in mathematics, 14 percent in writing, and 11 percent in reading). Public 2-year colleges provided such coursework for 42 percent of their entering students (*indicator 31*).
- In 2000–01, 56 percent of all postsecondary institutions offered distance education courses, up from 34 percent 3 years earlier. The number of course enrollments in distance education also increased, nearly doubling between 1997–98 and 2000–01; by 2000–01, about half of these enrollments were at public 2-year institutions (*indicator 32*).

### SOCIETAL SUPPORT FOR LEARNING

Society and its members—families, individuals, employers, and governmental and private organizations—provide support for education in various ways. This support includes learning activities that take place outside schools and colleges as well as the financial support for learning inside schools and colleges. Parents contribute to the education of their children in the home through reading with young children, setting aside a time and place for schoolwork, and seeing that assignments are completed. Communities impart learning and values through various modes, both formal and informal. Financial investments in education are made both by individuals in the form of income spent on their own education (or the education of their children) and by the public in the form of public appropriations for education. These investments in education are made at all levels of the education system. Other collective entities, such as employers and other kinds of

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organizations, also invest in various forms of education for their members.

- In 2001, 50 percent of children in kindergarten through 8th grade were enrolled in a variety of nonparental care arrangements after school, most commonly center- or school-based programs, relative care, and self-care. Black children were more likely than White and Hispanic children to participate in nonparental care (*indicator 33*).
- Thirty-eight percent of children in kindergarten through 8th grade participated in one or more organized activities after school in 2001. Children in 3rd through 5th grade and 6th through 8th grade were more likely to participate than children in kindergarten through 2nd grade. Parents of 19 percent of these children reported using activities to cover hours when adult supervision was needed for their children (*indicator 34*).
- Total expenditures per public elementary and secondary school student, adjusted for inflation, increased by 25 percent between 1991–92 and 2000–01. The largest increases occurred in midsize cities and rural areas (*indicator 35*).
- In 2000, expenditures per student for the OECD member countries averaged \$5,162 at the combined elementary/secondary level and \$9,509 at the postsecondary level. The United States and Switzerland, two of the world's wealthiest nations, ranked highest in expenditures per student at the elementary/secondary and postsecondary levels. Wealthy countries such as the United States spent more on education, and a larger share of their gross domestic product (GDP) per capita on education, than less wealthy nations (*indicator 36*).
- The percentage of full-time undergraduates receiving institutional aid and the average amount awarded increased at 4-year institutions during the 1990s. In 1992–93, some 17 percent of full-time undergraduates at public institutions and 47 percent at private not-for-profit institutions received institutional aid; by 1999–2000, the respective proportions had increased to 23 and 58 percent. During this period, the average award increased from \$2,200 to \$2,700 at public institutions and from \$5,900 to \$7,000 at private not-for-profit institutions (*indicator 37*).
- Those who had received bachelor's degrees in 1999–2000 were more likely than their 1992–93 counterparts to have borrowed to pay for their undergraduate education (65 vs. 49 percent), and if they had done so, to have borrowed larger amounts, on average (\$19,300 vs. \$12,100 in constant 1999 dollars). However, the median “debt burden” (monthly payment as a percentage of monthly salary) a year later did not change (*indicator 38*).

### CONCLUSION

Trends in the condition of American education continue to show promise and challenge, as well as underscore the importance of schooling. In reading, the performance of U.S. 8th-graders has increased since 1992, and higher percentages of 4th- and 8th-graders are scoring at or above the *Proficient* level. Yet the overall reading achievement of 12th-graders has decreased. In mathematics, the performance of 4th- and 8th-graders has risen steadily since 1990. In writing, the performance of 4th- and 8th-graders improved between 1998 and 2002, and in the later year, about one-quarter of 4th-, 8th-, and 12th-graders were at or above the *Proficient* level.



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The poverty level of students and their schools presents a challenge to students' educational progress and achievement. Children with family risk factors, such as poverty, start kindergarten with fewer reading and mathematics skills and end 3rd grade with smaller gains. In the early part of this decade, high school students living in low-income families dropped out of school at six times the rate of their peers from high-income families.

The proportion of kindergarten students enrolled in full-day programs has risen since the late 1970s, and by 1995 exceeded that of students enrolled in half-day programs. In elementary and secondary education, enrollments have followed population shifts, and in the coming decade are projected to remain fairly steady and then climb to an all-time high of 49.7 million in 2013. The current trends toward greater diversity in the racial/ethnic composition of the student population are expected to continue. In addition, the proportion of 10th-graders expecting to complete a bachelor's as their highest degree has nearly doubled since 1980 and the proportion expecting to earn a graduate degree has more than doubled, with the potential of higher educational attainment in the years ahead.

In the past 30 years, rates of enrollment in postsecondary education have increased and are projected to continue to do so in the next decade. At the undergraduate and graduate levels, enrollments have grown faster among women than men. In the next decade, full-time undergraduate enrollment is expected to increase faster than part-time enrollment, and enrollment in 4-year institutions faster than in 2-year institutions. In recent years,

the number of course enrollments in distance education has nearly doubled, and continued growth is expected. Also, about one-third of undergraduates are now older students who combine school and work, and many of them characterize themselves as employees first and students second.

Paralleling the growth in postsecondary education, participation in adult education has increased as well. Many adults participate in adult education for work-related purposes, and in 2002–03, 40 percent of all persons age 16 and above did so.

NCES produces an array of reports each month that present findings about the U.S. education system. *The Condition of Education 2004* is the culmination of a yearlong project. It includes data that were available by early April 2004. In the coming months, many other reports and surveys informing us about education will be released, including the baseline year for a new longitudinal study tracking the development and early childhood experiences of very young children; the 3rd-grade follow-up to the kindergarten cohort study; international assessments; and the first year of a new longitudinal study of high school students. As is true of the indicators in this volume, these surveys and reports will continue to inform Americans about the condition of education.



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