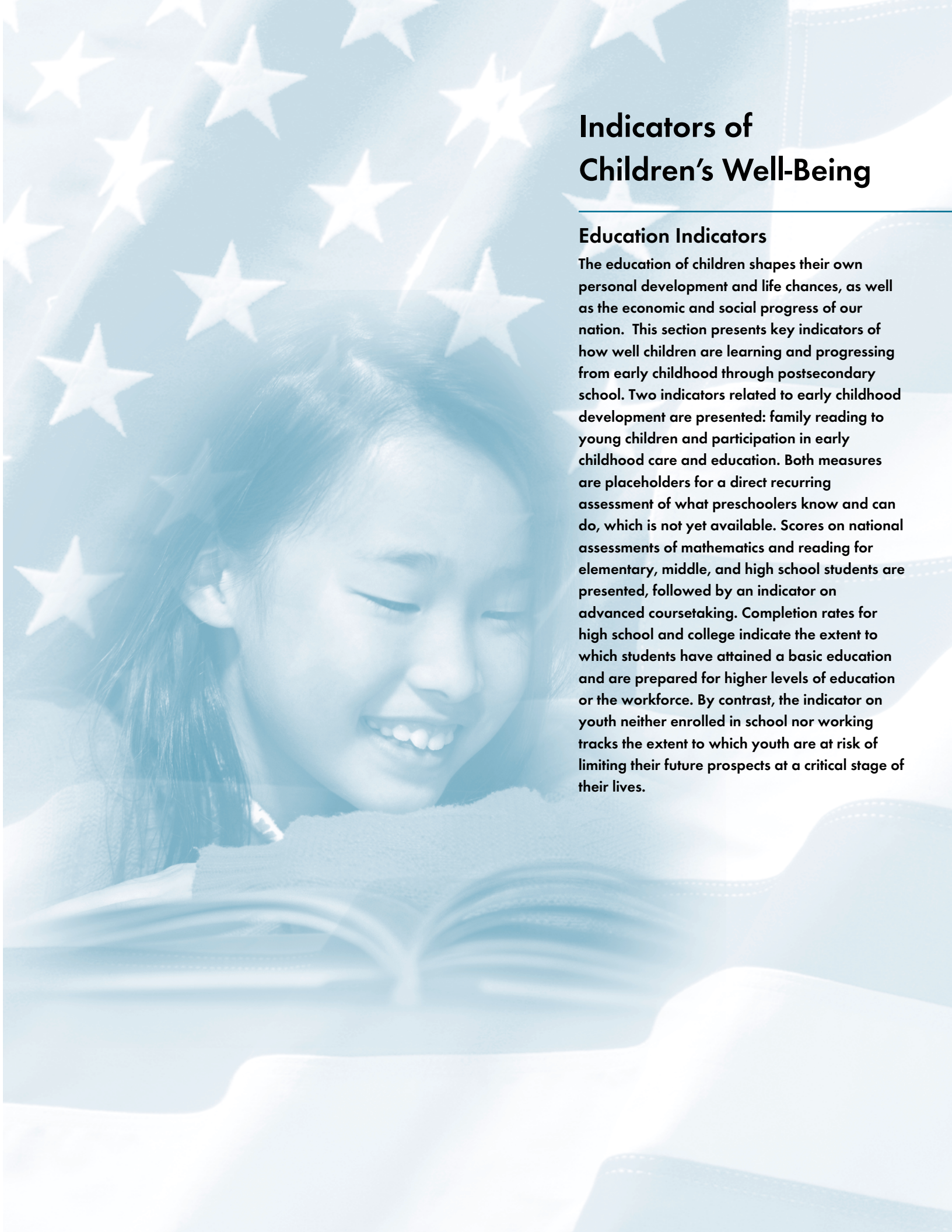


Indicators of Children's Well-Being

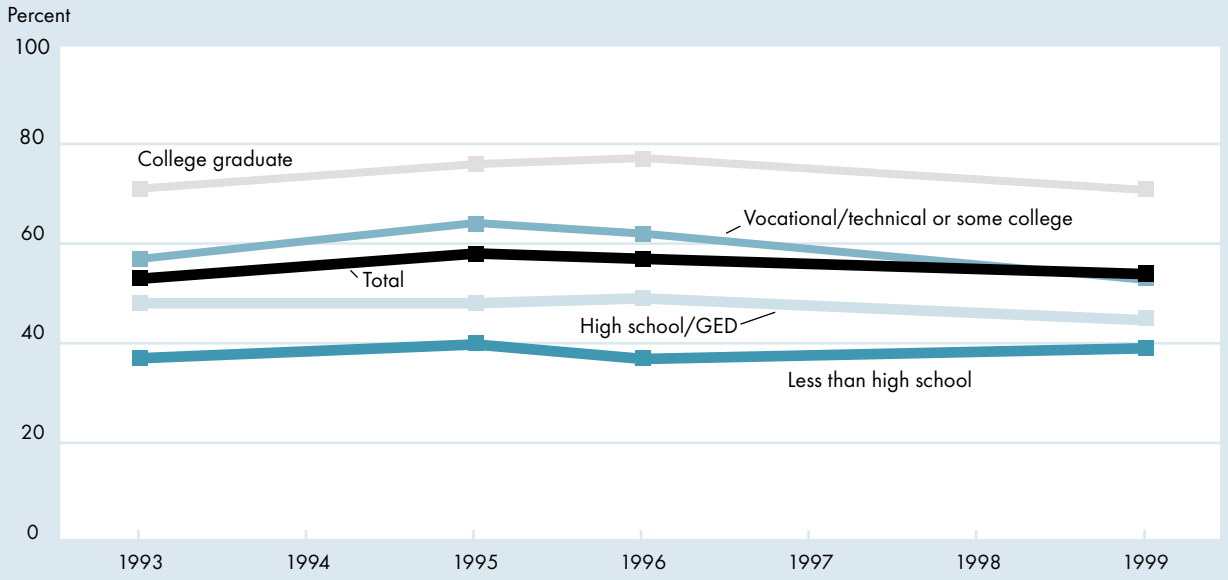
Education Indicators

The education of children shapes their own personal development and life chances, as well as the economic and social progress of our nation. This section presents key indicators of how well children are learning and progressing from early childhood through postsecondary school. Two indicators related to early childhood development are presented: family reading to young children and participation in early childhood care and education. Both measures are placeholders for a direct recurring assessment of what preschoolers know and can do, which is not yet available. Scores on national assessments of mathematics and reading for elementary, middle, and high school students are presented, followed by an indicator on advanced coursetaking. Completion rates for high school and college indicate the extent to which students have attained a basic education and are prepared for higher levels of education or the workforce. By contrast, the indicator on youth neither enrolled in school nor working tracks the extent to which youth are at risk of limiting their future prospects at a critical stage of their lives.

Family Reading to Young Children

Reading to young children promotes language acquisition and correlates with literacy development and, later on, with achievement in reading comprehension and overall success in school.[62] The percentage of young children read aloud to daily by a family member is one indicator of how well young children are being prepared for school. Mother's education is consistently related to whether children are read to by a family member.

Indicator ED1 **Percentage of children ages 3 to 5 who were read to every day in the last week by a family member by mother's education, selected years 1993-99**



NOTE: Data are available for 1993, 1995, 1996, and 1999. Estimates are based on children ages 3 to 5 who have yet to enter kindergarten.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey.

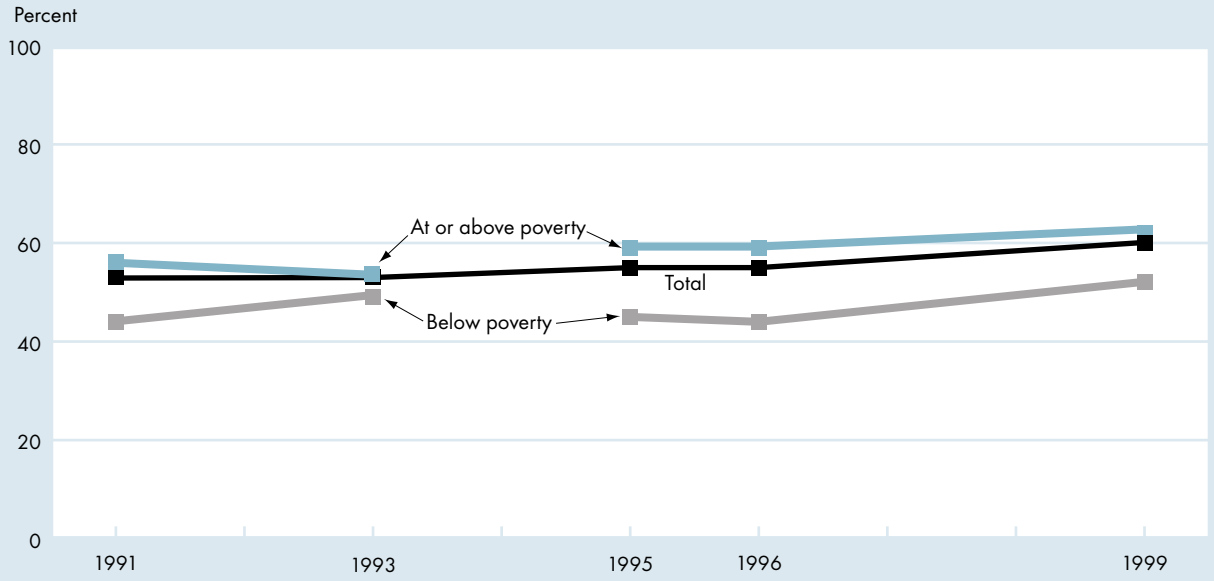
- In 1999, 54 percent of children ages 3 to 5 were read to daily by a family member. The percentage has fluctuated between 53 and 58 since 1993.
- As a mother's education increases, so does the likelihood that her child is read to every day. In 1999, 71 percent of children whose mothers were college graduates were read aloud to every day. In comparison, daily reading aloud occurred for 53 percent of children whose mothers had some postsecondary education, 45 percent whose mothers had completed high school but had no education beyond that, and 39 percent whose mothers had not completed high school.
- White, non-Hispanic children are more likely to be read aloud to every day than either black, non-Hispanic or Hispanic children. Sixty-one percent of white, non-Hispanic children, 41 percent of black, non-Hispanic children, and 33 percent of Hispanic children were read to every day.
- Children in families with incomes below the poverty line are less likely to be read aloud to every day than are children in families with incomes at or above the poverty line. Thirty-eight percent of children in families in poverty were read to every day in 1999, down from 46 percent in 1996, compared with 58 percent of children in families at or above the poverty line, down from 61 percent in 1996.
- Children living with two parents are more likely to be read aloud to every day than are children who live with one or no parent. Fifty-eight percent of children in two-parent households were read to every day in 1999, compared with 43 percent of children living with one or no parent.

Bullets contain references to data that can be found in Table ED1 on page 102. Endnotes begin on page 58.

Early Childhood Care and Education

Like family reading, participation in an early childhood education program can provide preschoolers with skills and enrichment that can increase their chances of success in school. Studies have demonstrated that participation in high-quality early childhood education programs has short-term positive effects on IQ and achievement and long-term positive effects on low-income minority children's school completion.[63] Until an ongoing direct measure of preschoolers' cognitive, behavioral, and social skills is available for this monitoring report, this indirect indicator monitors the percentage of children who are exposed to a variety of early childhood education programs.

Indicator ED2 **Percentage of children ages 3 to 5 who are enrolled in center-based early childhood care and education programs by poverty status, selected years 1991-99**



NOTE: Data are available for 1991, 1993, 1995, 1996, and 1999. Estimates are based on children who have yet to enter kindergarten. Poverty estimates for 1991 and 1993 are not comparable to later years.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey.

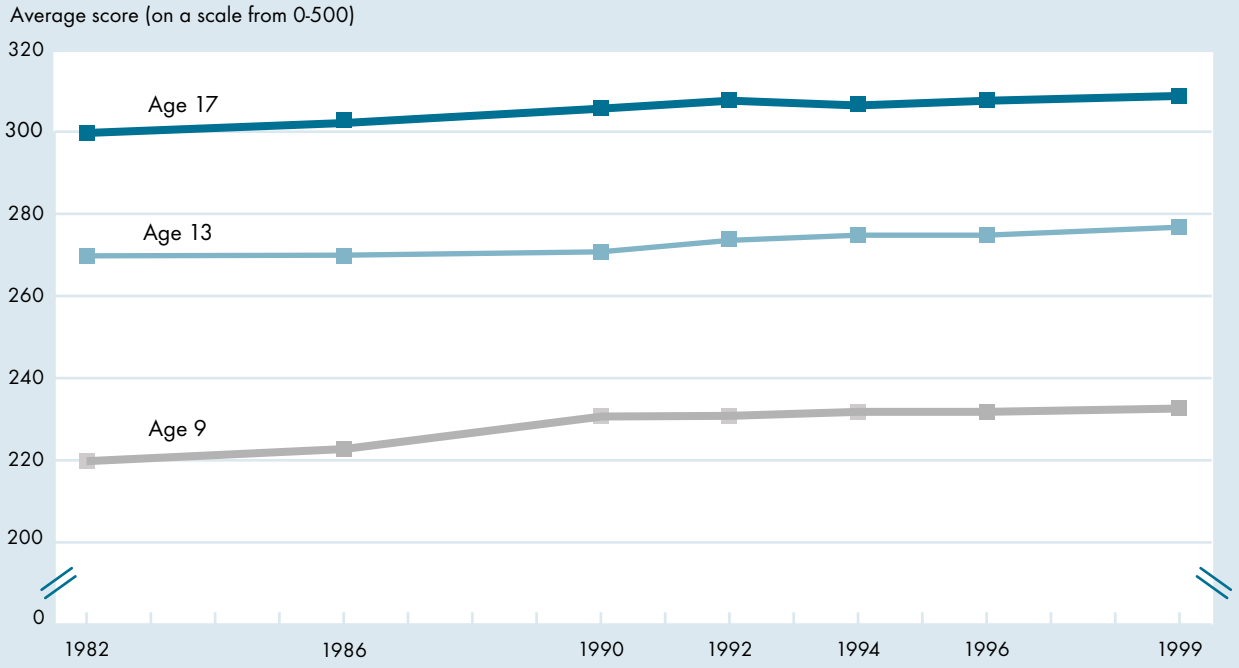
- Sixty percent of children ages 3 to 5 who had not yet entered kindergarten attended center-based early childhood care and education programs in 1999. These programs include day care centers, nursery schools, preschool programs, Head Start programs, and prekindergarten programs.
- Between 1996 and 1999, the percentage of children of this age attending early childhood programs increased from 55 to 60 percent. Most groups of children had higher participation rates in 1999 than in 1996, but especially noteworthy were increases among children living in poverty, among children with mothers who were not in the labor force, and among black, non-Hispanic and other minority children.
- Children living in poverty were still less likely to attend these programs than those living in families at or above poverty in 1999 (52 percent compared with 62 percent).
- Children with more highly educated mothers were more likely to attend an early childhood program than others. Seventy-four percent of children whose mothers had completed college attended such programs in 1999, compared with 40 percent whose mothers had less than a high school education.
- Black, non-Hispanic children were more likely than white, non-Hispanic children or Hispanic children to attend an early childhood program. In 1999, 73 percent of black, non-Hispanic children ages 3 to 5 attended such programs, compared with 60 percent of white, non-Hispanic children and 44 percent of Hispanic children.

Bullets contain references to data that can be found in Table ED2 on page 103. Endnotes begin on page 58.

Mathematics and Reading Achievement

The extent and content of students' knowledge, as well as their ability to think, learn, and communicate, affect their ability to succeed in the labor market as adults. On average, students with higher test scores will earn more and will be unemployed less often than students with lower test scores.[64] Mathematics and reading achievement test scores are important measures of students' skills in these subject areas, as well as good indicators of achievement overall in school. To assess progress in mathematics and reading, the National Assessment of Educational Progress measures national trends in the academic performance of students at ages 9, 13, and 17.

Indicator ED3.A **Average mathematics scale scores for students ages 9, 13 and 17, selected years 1982-99**



NOTE: Data are available for 1982, 1986, 1990, 1992, 1994, 1996, and 1999. The mathematics proficiency scale ranges from 0 to 500, with the following skill levels associated with the corresponding scale score:

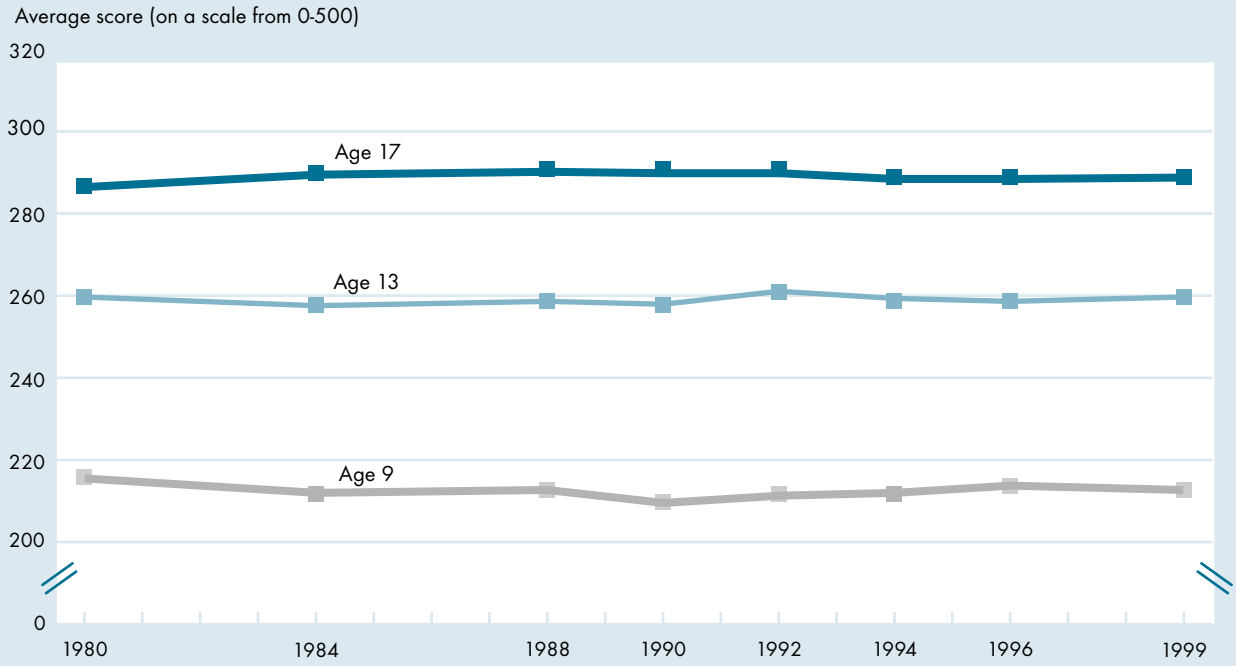
Level 150: Simple arithmetic facts
Level 200: Beginning skills and understandings
Level 250: Numerical operations and beginning problem solving
Level 300: Moderately complex procedures and reasoning
Level 350: Multi-step problem solving and algebra

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress.

- Average mathematics scores increased for all age groups between 1982 and 1999.
- Scores did not improve significantly over the last assessment in 1996 in reading or mathematics or in any of the three age groups tested—ages 9. 13, and 17.
- White, non-Hispanic students consistently have had higher reading and mathematics scores than either black, non-Hispanic or Hispanic students at ages 9, 13, and 17. However, the gaps between non-Hispanic whites and blacks and between non-Hispanic whites and Hispanics decreased in each subject in some age groups during the 1980s and 1990s, but widened for others. Larger reductions in these gaps occurred during the 1970s because of gains in the scores of black, non-Hispanic and Hispanic students.

Indicator ED3.B

Average reading scale scores for students ages 9, 13, and 17, selected years 1980-99



NOTE: Data are available for 1980, 1984, 1988, 1990, 1992, 1994, 1996, and 1999. The reading proficiency scale ranges from 0 to 500, with the following skill levels associated with the corresponding scale score:

Level 150: Simple, discrete reading tasks
Level 200: Partial skills and understanding
Level 250: Interrelates ideas and makes generalizations
Level 300: Understands complicated information
Level 350: Learns from specialized reading materials

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress.

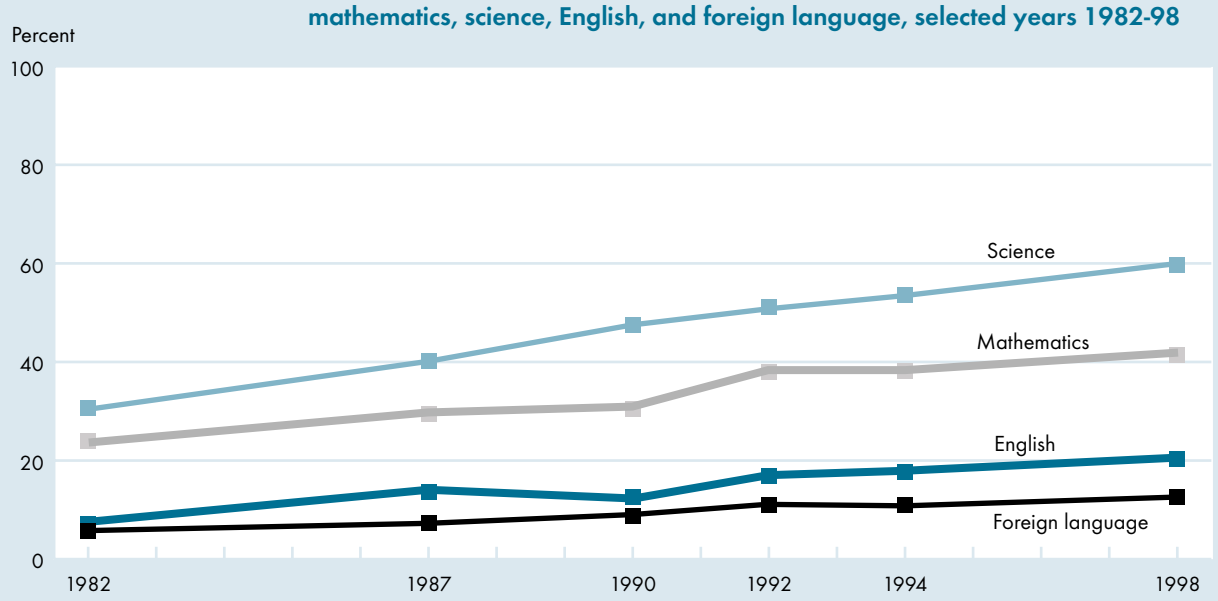
- Average reading scores have not improved among students ages 9, 13, or 17 since 1980.
- On average, students at ages 13 and 17 whose parents have completed more years of school have higher reading and mathematics scores than do their peers whose parents have had fewer years of education.[65]
- Girls had higher reading scores than boys at all three ages in 1999. In 1996, boys outperformed girls in mathematics at all three ages, but that gap was no longer significant in 1999. At ages 9 and 13, the differences between boys and girls were not significant for most years between 1980 and 1996.

Bullets contain references to data that can be found in Tables ED3.A and ED3.B on pages 104 -105. Endnotes begin on page 58.

High School Academic Coursetaking

Since *A Nation at Risk* was published in 1983, school reforms have emphasized increasing the number of academic courses students take in high school. The third goal of the National Education Goals calls for all students to leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter "to ensure all students learn to use their minds well so they may be prepared for responsible citizenship, further learning, and productive employment." Research has shown a strong relationship between the level of difficulty of courses students take and their performance on assessments.[66] For both college-bound and non-college-bound students, assessment scores increased more for students taking advanced courses than for students who did not take advanced courses.[66] Studies have also shown that students who take advanced coursework, such as calculus, in high school are more likely to enroll in college and succeed beyond college.[67]

Indicator ED4 **Percentage of high school graduates who completed high-level coursework in mathematics, science, English, and foreign language, selected years 1982-98**



NOTE: Data are available for 1982, 1987, 1990, 1992, 1994, and 1998. High-level coursework includes: mathematics: courses above Algebra II; science: chemistry, physics or both; English: 50% or more of courses at the honors level; foreign language: 4th-year/advanced placement course. For a detailed listing of courses, see Tables ED4A-ED4D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, National Longitudinal Study of 1988, and NAEP Transcript Study.

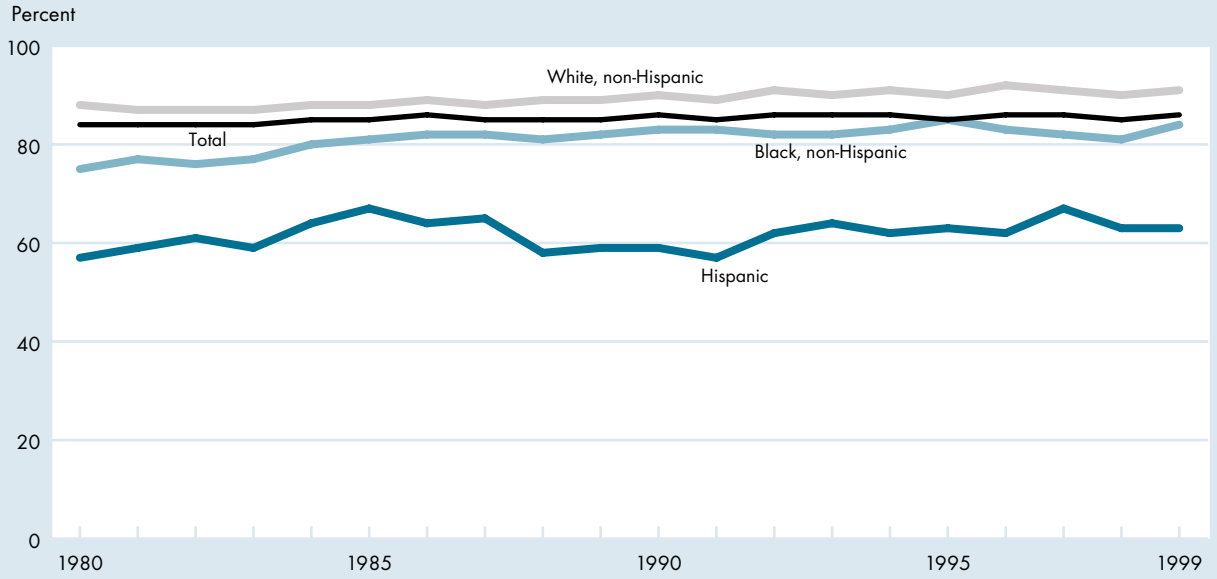
- Forty-one percent of 1998 high school graduates had taken at least one advanced mathematics course, defined as a course above algebra II. This was an increase from the 26 percent of 1982 high school graduates who had taken at least one advanced mathematics course. In addition, the percentage of 1998 high school graduates taking a non- or low academic course as their most advanced course was 9 percent, compared to 24 percent for 1982 graduates.
- In science, more than half (60 percent) of all 1998 high school graduates had taken either physics I or chemistry I or higher courses, nearly doubling the percentage of 1982 graduates who had taken one or both courses (31 percent). In addition, the percentage of students that had taken a physical science course below biology, chemistry, and physics as their most advanced course dropped from 27 percent of 1982 graduates to 9 percent of 1998 graduates.
- Twenty percent of all 1998 high school graduates took the majority of their English courses at the honors level, an increase from 7 percent of 1982 high school graduates. A total of 29 percent of 1998 graduates took a mix of middle and high-level English courses without taking any low-level courses, up from 13 percent in 1982.
- More high school students are taking foreign language courses. In foreign languages, 13 percent of 1998 high school graduates had taken a 4th-year or advanced placement course, compared to 6 percent of 1982 graduates. Nineteen percent of 1998 high school graduates did not take any foreign language course, compared to 46 percent of 1982 high school graduates who did not take any foreign language course.

Bullets contain references to data that can be found in Tables ED4.A-ED4.D on pages 106 -107. Endnotes begin on page 58.

High School Completion

A high school diploma or its equivalent represents acquisition of the basic reading, writing, and mathematics skills a person needs to function in modern society. The percentage of young adults ages 18 to 24 with a high school diploma or an equivalent credential is a measure of the extent to which young adults have completed a basic prerequisite for many entry-level jobs as well as higher education.

Indicator ED5 **Percentage of adults ages 18 to 24 who have completed high school by race and Hispanic origin, 1980-99**



NOTE: Percentages are based only on those not currently enrolled in high school or below. Prior to 1992, this indicator was measured as completing 4 or more years of high school rather than the actual attainment of a high school diploma or equivalent.

SOURCE: U.S. Census Bureau, October Current Population Survey. Tabulated by the U.S. Department of Education, National Center for Education Statistics.

- In 1999, 86 percent of young adults ages 18 to 24 had completed high school, either with a diploma or an alternative credential such as a General Education Development (GED) test. The high school completion rate has increased slightly since 1980, when it was 84 percent.
- The rate at which black, non-Hispanic youth completed high school increased markedly between 1980 and 1990, from 75 percent to 83 percent. It has fluctuated since then, and was at 84 percent in 1999. Among white, non-Hispanics, high school completion rates increased slightly, from 88 percent in 1980 to 91 percent in 1999.
- Hispanic youth consistently have had a lower high school completion rate than black, non-Hispanic youth who, in turn, have had consistently lower high school completion rates than white, non-Hispanic youth. Since 1980, the high school completion rate for Hispanic youth has been fluctuating between 57 and 67 percent, and was at 63 percent in 1999.
- Most young adults complete high school by earning a regular high school diploma. Others complete high school by earning an alternative credential, such as a GED. Between 1990 and 1999, the diploma rate declined by 4 percentage points, falling from 81 percent to 77 percent. In comparison, the alternative credential rate increased by 5 percentage points, increasing from 4 to 9 percent.[68]

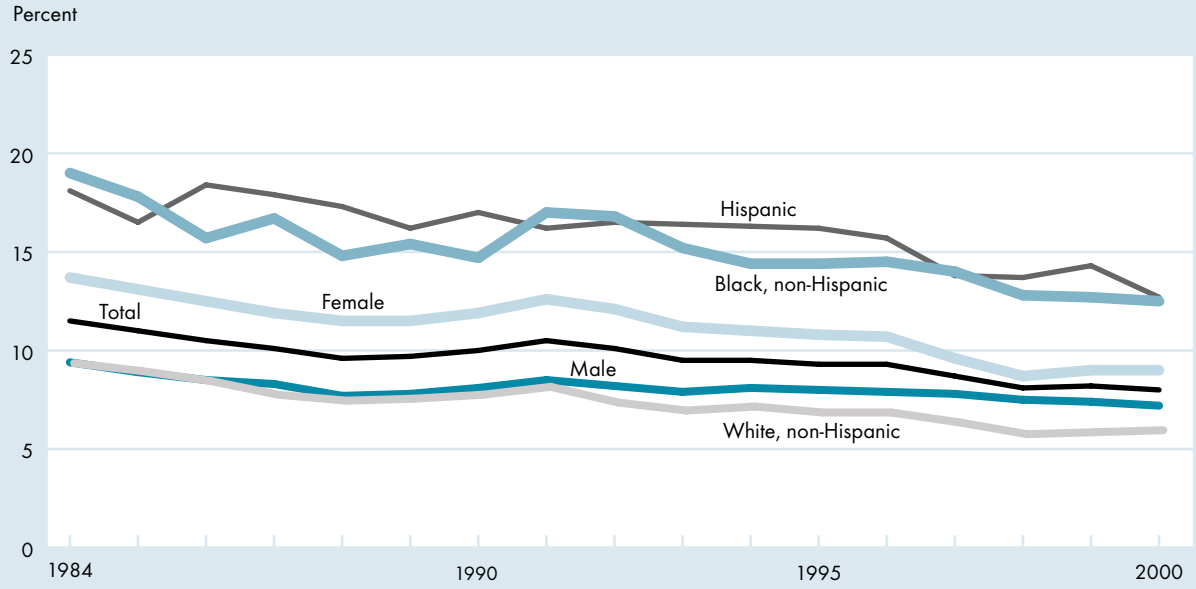
Bullets contain references to data that can be found in Table ED5 on page 108. Endnotes begin on page 58.

Youth Neither Enrolled in School Nor Working

The transition from adolescence to adulthood is a critical period in each individual's life. Youth ages 16 to 19 who are neither in school nor working are detached from both of the core activities that usually occupy teenagers during this period. Detachment from school or the work force, particularly if this situation lasts for several years, puts youth at increased risk of having lower earnings and a less stable employment history than their peers who stayed in school and/or secured jobs.[69] The percentage of youth who are not enrolled in school and not working is one measure of the proportion of young people who are at risk of limiting their future prospects.

Indicator ED6

Percentage of youth ages 16 to 19 who are neither enrolled in school nor working by gender, race, and Hispanic origin, 1984-2000



SOURCE: Bureau of Labor Statistics, Current Population Survey.

- In 2000, about 8 percent of youth ages 16 to 19 were neither enrolled in school nor working.
- The proportion of youth neither enrolled nor working has been declining since 1991, when it was 11 percent. Most of the decline in the proportion of youth neither enrolled nor working occurred among young women. In 1991, 13 percent of young women were neither in school nor working. By 2000, this proportion had decreased to 9 percent. Nevertheless, young women continue to be more likely to be detached from these activities than young men.
- Black, non-Hispanic and Hispanic youth are considerably more likely to be detached from these activities than white, non-Hispanic youth. In 2000, 13 percent of Hispanic and black, non-Hispanic youth were neither in school nor working, compared with 6 percent of white, non-Hispanic youth.
- The proportion of black, non-Hispanic youth who are neither enrolled in school nor working has decreased from 19 percent in 1984 to 13 percent in 2000. The proportion of Hispanic youth who are neither enrolled in school nor working has also decreased, from 18 percent in 1984 to 13 percent in 2000.
- Older youth, ages 18 to 19, are three times as likely to be detached from these activities as youth ages 16 to 17. In 2000, 12 percent of youth ages 18 to 19 were neither enrolled in school nor working compared with 4 percent of youth ages 16 to 17.
- In contrast to the decrease in the percentage of youth who are neither enrolled in school nor working, the percentage of youth who are both enrolled and employed increased during this time period. Between 1984 and 2000 the percentage of youth ages 16 to 19 who are both enrolled and employed increased from 25 to 30 percent.

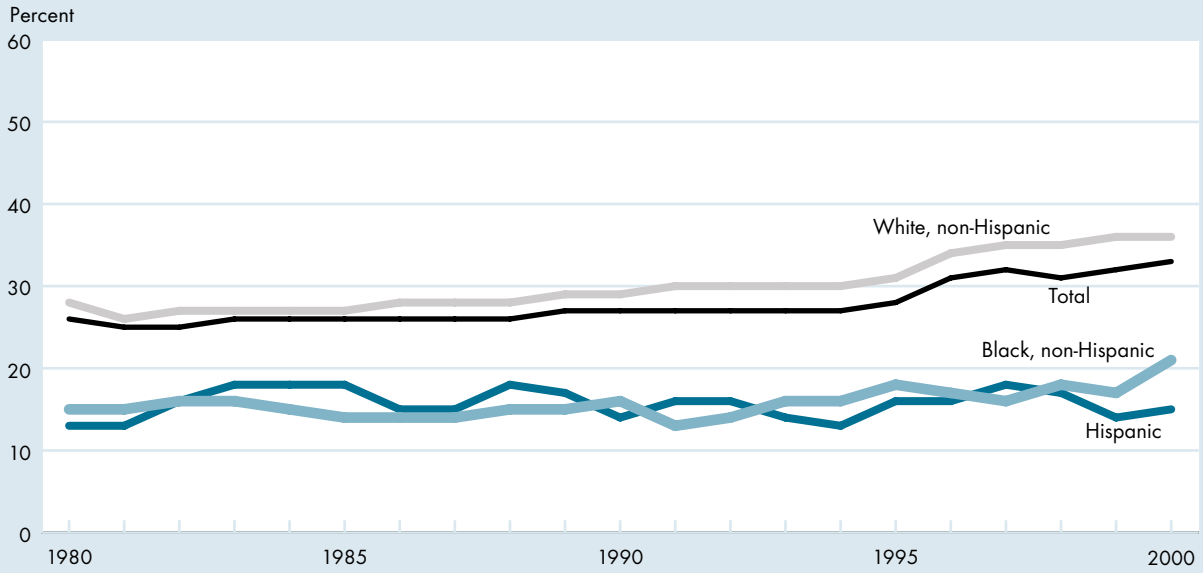
Bullets contain references to data that can be found in Tables ED6.A and ED6.B on pages 109-110. Endnotes begin on page 58.

Higher Education

Higher education, especially completion of a bachelor's or more advanced degree, generally enhances a person's employment prospects and increases his or her earning potential.[70] The percentage of high school graduates who have completed a bachelor's degree is one measure of the percentage of young people who have successfully applied for and persisted through a program of higher education.

Indicator ED7

Percentage of high school graduates ages 25 to 29 who have completed a bachelor's degree or higher by race and Hispanic origin, 1980-2000



NOTE: Prior to 1992, this indicator was measured as completing 4 or more years of college rather than the actual attainment of a bachelor's degree.

SOURCE: U.S. Census Bureau, March Current Population Survey. Tabulated by the U.S. Department of Education, National Center for Education Statistics.

- In 2000, 33 percent of high school graduates ages 25 to 29 had earned a bachelor's or a higher degree.
- This percentage increased slightly between 1980 and 1995, from 26 to 28 percent, then increased 3 percentage points between 1995 and 1996 and increased to 33 percent in 2000.
- White, non-Hispanic high school graduates ages 25 to 29 are more likely than either black, non-Hispanic or Hispanic high school graduates in the same age group to have earned a bachelor's degree. Black, non-Hispanic high school graduates are more likely than their Hispanic counterparts to have earned a bachelor's degree. In 2000, 36 percent of white, non-Hispanic, 21 percent of black, non-Hispanic, and 15 percent of Hispanic high school graduates in this age group had earned a bachelor's degree or higher. In addition, the percentage of black, non-Hispanic high school graduates who earned a bachelor's degree increased from 17 percent in 1999 to 21 percent in 2000.
- In 2000, 10 percent of high school graduates ages 25 to 29 had earned an associate's degree but had not subsequently earned a bachelor's degree.
- Racial and ethnic group differences in rates of enrollment in college are smaller than differences in rates of degree attainment. In 1997, 46 percent of white, non-Hispanic high school graduates ages 18 to 24 were enrolled in college, compared with 39 percent of black, non-Hispanic, and 36 percent of Hispanic high school graduates.[71]

Bullets contain references to data that can be found in Table ED7 on page 111. Endnotes begin on page 58.

Indicator Needed

Education

Regular, periodic data collections are needed of young children's cognitive and socioemotional development.

- *Early childhood development.* Although this report offers indicators of young children's exposure to reading and early childhood education, a regular source of data that can be used to monitor specific social, intellectual, and emotional skills of preschoolers over time is needed. One assessment of kindergartners' skills and knowledge was presented as a special feature in *America's Children, 2000*. Another assessment of kindergartners' skills may be available in 2008.