

Section 2

Learner Outcomes



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This List of Indicators includes all the indicators in Section 2 that appear on *The Condition of Education* website (<http://nces.ed.gov/programs/coe>), drawn from the 2000–2006 print volumes. The list is organized by subject area. The indicator numbers and the years in which the indicators were published are not necessarily sequential.



Introduction: Learner Outcomes

The indicators in this section of *The Condition of Education* examine student achievement and other outcomes of education among students in elementary and secondary education and among adults in the larger society. There are 23 indicators in this section: 11, prepared for this year's volume, appear on the following pages, and all 23, including indicators from previous years, appear on the Web (see Website Contents on the facing page for a full list of the indicators). The indicators on student achievement show how students are performing on assessments in reading, mathematics, science, and other academic subject areas; trends over time in student achievement; and gaps in achievement. The indicators in this section are organized into five subsections.

The indicators in the first subsection trace the gains in achievement and specific reading and mathematics skills of children through the early years of elementary education. Children enter school with varying levels of knowledge and skill. Measures of these early childhood competencies represent important indicators of students' future prospects both inside and outside of the classroom. Two indicators available on the Web show changes in student achievement for a cohort of children who began kindergarten in fall 1998 as they progressed through 3rd grade in 2001–02.

The indicators in the second subsection report trends in student performance by age or grade in the later years of elementary education through high school. As students progress through school, it is important to know the extent to which they are acquiring necessary skills and becoming proficient in challenging subject matter. Academic outcomes are basically measured in three ways, as the change in students' average performance over time, as the

change in the percentage of students achieving predetermined levels of achievement, and through international comparisons of national averages.

Together, measures in the first two subsections, across indicators, help create a composite picture of academic achievement in U.S. schools. For example, one indicator that appears on the Web shows the overall reading and mathematics achievement of U.S. students from kindergarten through 3rd grade, while another in this volume shows the overall reading and mathematics achievement of 4th- and 8th-graders.

In addition to academic achievement, there are adult literacy measures in the third subsection and culturally and socially desirable outcomes of education in the fourth subsection. These outcomes contribute to an educated, capable, and engaged citizenry, which can be gauged by adult literacy, civic knowledge, community volunteerism, and voting participation. Other measures are patterns of adult reading habits, communication and media use, and the health status of individuals.

The fifth subsection looks specifically at the economic outcomes of education. Economic outcomes refer to the likelihood of being employed, the salaries that employers are prepared to pay individuals with varying levels of skill and competence, the job and career satisfaction of employees, and other measures of economic well-being and productivity.

The indicators on student achievement from previous editions of *The Condition of Education* that are not included in this volume are available at <http://nces.ed.gov/programs/coe/list/i2.asp>.

Academic Outcomes

Reading Performance of Students in Grades 4 and 8

National average reading scores of 4th- and 8th-graders have varied little over time, though both were 2 points higher in 2005 than in 1992: the average score of 4th-graders increased to 219, and the average score of 8th-graders increased to 262.

The National Assessment of Educational Progress (NAEP) has assessed the reading abilities of students in grades 4, 8, and 12 in both public and private schools since 1992.¹ Between 1992 and 2005, national average reading scores of 4th- and 8th-graders varied little, though both were 2 points higher in 2005 than in 1992 (see supplemental table 12-1). Reported on a scale of 0–500, the average score of 4th-graders increased from 217 in 1992 to 219 in 2005, while the average score of 8th-graders increased from 260 to 262.

Achievement levels (*Basic*, *Proficient*, and *Advanced*) identify what students should know and be able to do at each grade and provide another measure of student performance. The percentage of 4th-graders at or above *Proficient* (indicating solid academic achievement) increased between 1992 and 2002 (from 29 to 31 percent) and has remained steady since then (see supplemental table 12-2). Seventy-three percent of 8th-graders were at or above *Basic* (indicating partial mastery of fundamental skills), and 31 percent were at or above *Proficient* in 2005. The percentage of 8th-graders at or above *Basic* has increased since 1992, but there has been a decrease in the percentage at or above either level since 2002.

Certain subgroups outperformed others in reading in 2005. For example, females outperformed males in both grades in 2005 (as they did in 1992) even though the average score for males increased between 1992 and 2005, while the average score for females remained steady (see supplemental table 12-3). White and Asian/Pacific Islander students outperformed their Black, Hispanic, and American Indian peers in both grades. Between 1992 and 2005, the average score increased for White, Black, Hispanic, and Asian/Pacific Islander 4th-graders (ranging from 5 to 13 points) and for White, Black, and Hispanic 8th-graders (ranging from 4 to 6 points).

NAEP results also permit state-level comparisons of the abilities of 4th- and 8th-graders in public schools. Of the 42 states that participated in 1992 and 2005 at grade 4, there were increases in average reading scores in 20 states and decreases in 3 between these years (see supplemental table 12-4). In grade 8, of the 38 states that participated in 1998 and 2005, there were 3 states with higher average scores and 8 with lower average scores.

¹ The 2005 National Assessment of Educational Progress (NAEP) assessment included a 12th-grade component, but these data were not available at the time of this analysis.

² Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted.

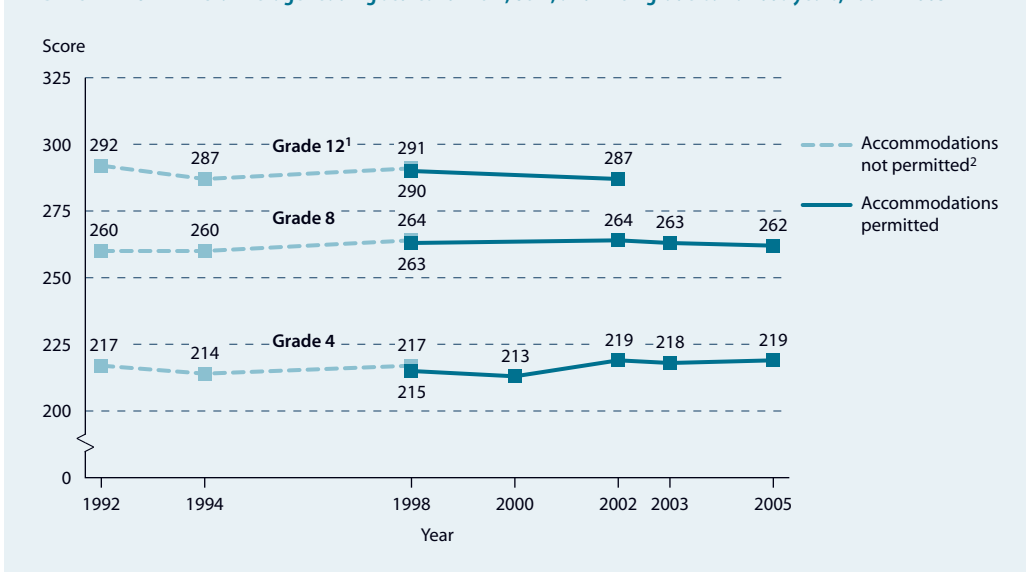
NOTE: Beginning in 2002, the NAEP national sample was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. As a consequence, the size of the national sample increased, and smaller differences between years or between types of students were found to be statistically significant than would have been detected in previous assessments. See *supplemental note 4* for more information on testing accommodations, achievement levels, and NAEP.

SOURCE: Perie, M., Grigg, W.S., and Donahue, P.L. (2005). *The Nation's Report Card: Reading 2005* (NCES 2006-451), figure 1. Data from U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2005 Reading Assessments.

FOR MORE INFORMATION:
 Supplemental Notes 1, 4
 Supplemental Tables 12-1,
 12-2, 12-3, 12-4



READING PERFORMANCE: Average reading scores for 4th-, 8th-, and 12th-graders: Various years, 1992–2005





Academic Outcomes

Mathematics Performance of Students in Grades 4 and 8

The mathematics performance of 4th- and 8th-graders improved steadily from 1990 to 2005. For both grades, the average score in 2005 was higher than in all previous assessments.

The National Assessment of Educational Progress (NAEP) has assessed the mathematics abilities of students in grades 4, 8, and 12 in public and private schools since 1990.¹ In 2005, the national average mathematics scores of 4th- and 8th-graders were higher than in all previous assessments (see supplemental table 13-1). Reported on a 0–500 scale, between 1990 and 2005, the average score of 4th-graders increased 25 points, from 213 to 238, and the average score of 8th-graders increased 16 points, from 263 to 279.

The percentages of students at each achievement level (*Basic*, *Proficient*, and *Advanced*), which identifies what students should know and be able to do at each grade, were also higher in 2005 than in all previous assessments. The percentage of students at or above *Proficient* (indicating solid academic performance) increased from 13 to 36 percent during this period in grade 4 and from 15 to 30 percent in grade 8. The percentage of students at or above *Basic* (indicating partial mastery of fundamental skills) increased from 50 to 80 percent in

grade 4 and from 52 to 69 percent in grade 8 (see supplemental table 13-2).

Certain subgroups of both 4th- and 8th-graders outperformed others in mathematics in 2005. For example, males outperformed females in 2005 (see supplemental table 13-3). White and Asian/Pacific Islander students had higher average scores than their Black, Hispanic, or American Indian peers in 2005. White, Black, and Hispanic scores increased between 1990 and 2005.

NAEP results also permit state-level comparisons of the abilities of 4th- and 8th-graders in public schools. The average mathematics score of all 42 states that participated in 4th grade in 1992 and 2005 increased, with increases ranging from 9 points in Maine to 28 points in North Carolina (see supplemental table 13-4). Similarly, among 8th-graders, the average score increased for all 38 states that participated in 1990 and 2005, with increases ranging from 6 points in Iowa, Montana, and North Dakota to 31 points in North Carolina.

¹ The 2005 National Assessment of Educational Progress (NAEP) assessment included a 12th-grade component, but at the time of this analysis, these data were not available.

² Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted.

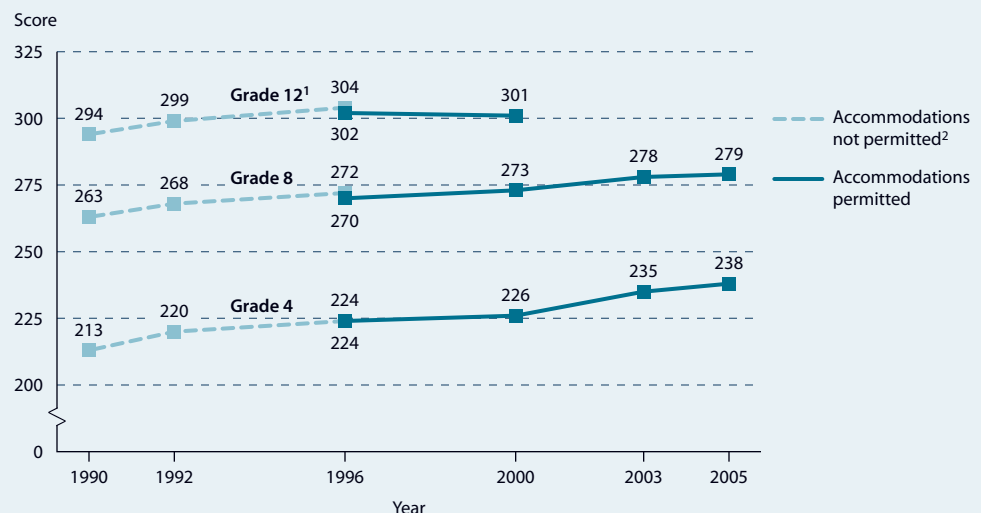
NOTE: Beginning in 2003, the NAEP national sample was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. As a consequence, the size of the national sample increased, and smaller differences between years or between types of students were found to be statistically significant than would have been detected in previous assessments. See *supplemental note 4* for more information on testing accommodations, achievement levels, and NAEP.

SOURCE: Perie, M., Grigg, W.S., and Dion, G.S. (2005). *The Nation's Report Card: Mathematics 2005* (NCES 2006-453), figure 1. Data from U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2005 Mathematics Assessments.



FOR MORE INFORMATION:
Supplemental Notes 1, 4
Supplemental Tables 13-1,
13-2, 13-3, 13-4

MATHEMATICS PERFORMANCE: Average mathematics scores for 4th-, 8th-, and 12th-graders: Various years, 1990–2005



Academic Outcomes

Trends in the Achievement Gaps in Reading and Mathematics

Since the early 1990s, the achievement gaps in reading and mathematics between White and Black and White and Hispanic 4th- and 8th-graders have shown little measurable change.

The National Assessment of Educational Progress (NAEP) has assessed student reading and mathematics performance since the early 1990s. NAEP thus provides a picture of the extent to which student performance in each subject has changed over time, including the achievement gaps between White and Black, between White and Hispanic, and between low- and high-achieving students.

In reading, the achievement gaps between White and Black and White and Hispanic 4th-graders have fluctuated since 1992, but the gaps in 2005 were not measurably different from those in 1992. In 2005, at the 4th-grade level, Blacks scored, on average, 29 points lower than Whites (on a 0–500 scale), and Hispanics scored, on average, 26 points lower than Whites (see supplemental table 14-1). At 8th grade, there was no measurable change in the

White-Black achievement gap between 1992 and 2005, and little change in the White-Hispanic gap, though the gap decreased slightly from 2003 to 2005 (from 27 to 25 points).

In mathematics, the achievement gap between White and Black 4th-graders decreased between 1990 and 2005 (from 32 to 26 points). The White-Hispanic 4th-grade gap increased in the 1990s before decreasing in the first half of the 2000s, but the gap in 2005 (20 points) was not measurably different from that in 1990. Among 8th-graders, a similar trend existed in both the White-Black and White-Hispanic score gaps: increases occurred in the 1990s before decreasing to levels not measurably different from those in 1990. In 2005, the White-Black gap was 34 points, and the White-Hispanic gap was 27 points.

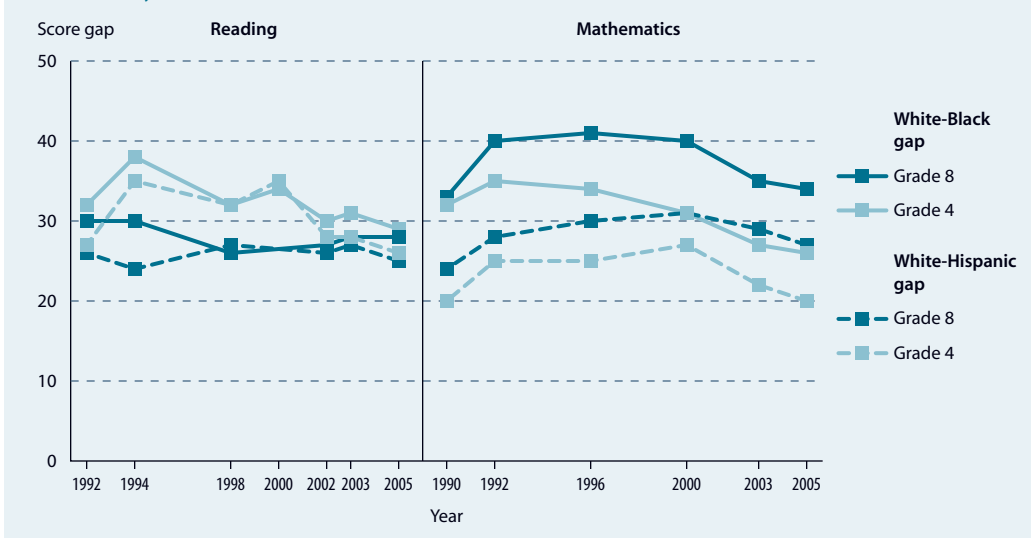
NOTE: National Assessment of Educational Progress (NAEP) scores are calculated on a 0–500 scale. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin unless specified. The score gap is determined by subtracting the average Black and Hispanic score, respectively, from the average White score. Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted in 1990–94. Beginning in 2002, the NAEP national sample for grades 4 and 8 was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. See supplemental note 4 for more information on NAEP.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2005 Reading and Mathematics Assessments, previously unpublished tabulation (December 2005).

FOR MORE INFORMATION:
 Supplemental Notes 1, 4
 Supplemental Tables 14-1
 NCES 2006-451
 NCES 2006-453



ACHIEVEMENT GAP: Differences in White-Black and White-Hispanic 4th- and 8th-grade average reading and mathematics scores: Various years, 1990–2005





Academic Outcomes

Poverty and Student Mathematics Achievement

The mathematics performance of 4th-graders in high-poverty public schools was lower than that of their peers in low-poverty public schools.

The National Assessment of Educational Progress (NAEP) collects background information on students, teachers, and schools, permitting analysis of student achievement relative to the poverty level of public schools, measured as the percentage of students eligible for free or reduced-price lunch through the National School Lunch program. In 2005, the average score on the 4th-grade mathematics assessment decreased as the percentage of students in the school who were eligible for the school lunch program increased. For example, students in the highest poverty public schools (those with more than 75 percent of students eligible for the school lunch program) had an average score of 221, compared with an average score of 255 for students in the lowest poverty public schools (those with 10 percent or less of students eligible) (see supplemental table 15-1).

This negative relationship between average achievement in mathematics and school-level poverty occurs when the performance of students who are eligible for the school lunch program is considered separately from that of other students. For example, the achievement gap between the average scores of 4th-graders in the lowest and

highest poverty schools was 20 points among those eligible for the school lunch program, and 25 points among those not eligible.

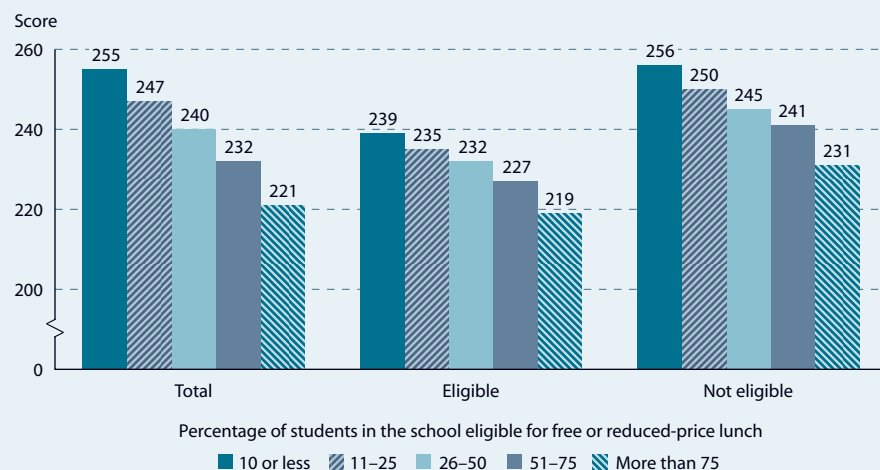
Comparing schools with different concentrations of poverty reveals that the highest poverty public schools in 2005 differed from other public schools in terms of particular student characteristics. For example, they had the lowest percentage of White students, the highest percentage of Black and Hispanic students, and the highest percentage of students who reported always speaking a language other than English at home. They also had the highest percentage of 4th-graders who were taught by a teacher with less than 5 years of teaching experience (see supplemental tables 15-1 and 15-2).

A school's poverty concentration also led to differences in terms of school characteristics. Fourth-graders in the highest poverty public schools were more likely than their peers in public schools with lower levels of poverty to have a full-time mathematics specialist and to spend the most amount of class time on mathematics (7 hours or more per week).

NOTE: Data were not available for a small number of cases (1 percent of cases for race/ethnicity and 2 percent for eligibility for free or reduced-price lunch).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment, previously unpublished tabulation (October 2005).

POVERTY AND ACHIEVEMENT: Average mathematics score of public school 4th-graders, by whether the student was eligible for free or reduced-price lunch and the percentage of students in the school eligible for free or reduced-price lunch: 2005



FOR MORE INFORMATION:
Supplemental Notes 1, 4
Supplemental Tables 15-1, 15-2

Academic Outcomes

Reading and Mathematics Score Trends by Age

The average reading and mathematics scores on the long-term trend National Assessment of Educational Progress were higher in 2004 than in the early 1970s for 9- and 13-year-olds.

The long-term trend National Assessment of Educational Progress (NAEP) has provided information on the reading and mathematics achievement of 9-, 13-, and 17-year-olds in the United States since the early 1970s and allows one to measure progress over time. These results may differ from the main NAEP results presented in *indicators 12, 13, 14, and 15* as the content of the long-term trend assessment has remained consistent over time, while the main NAEP undergoes changes periodically (see *supplemental note 4*).

NAEP long-term trend results indicate that the reading and mathematics achievement of 9- and 13-year-olds improved between the early 1970s and 2004. In reading, 9-year-olds scored higher in 2004 than in any previous assessment year, with an increase of 7 points between 1999 and 2004. The 2004 average scores for 13-year-olds were not measurably different from the 1999 average score, but still were higher than the scores in 1971 and 1975. In mathematics, the achievement of 9- and 13-year-olds in 2004 was the highest of any assessment year. The performance of 17-year-olds on the 2004 reading and mathematics assessment, however, was not measurably different from their performance on either the first reading and mathematics assess-

ments (in 1971 and 1973, respectively) or the 1999 reading and mathematics assessments.

The performance of subgroups of students generally mirrored the overall national patterns; however, there were some notable differences. The average reading and mathematics scores of Black and Hispanic 9-year-olds in 2004 were the highest of any assessment year (see supplemental tables 16-1 and 16-2). For Black 13-year-olds, the reading and mathematics scores were higher in 2004 than the scores in the early 1970s, and the 2004 mathematics score was higher than in any previous assessment year. For Hispanic 13-year-olds, reading and mathematics scores were higher in 2004 than in any previous assessment year. In contrast to the overall national results, the average scores of Black and Hispanic 17-year-olds were higher in 2004 than in the early 1970s. Black 17-year-olds improved 25 points in reading between 1971 and 2004, and 15 points in mathematics between 1973 and 2004 on a 0–500 point scale. Hispanic 17-year-olds improved 12 points in reading between 1975 (the first year the reading achievement of Hispanics was specifically measured) and 2004, and 12 points in mathematics between 1973 and 2004.

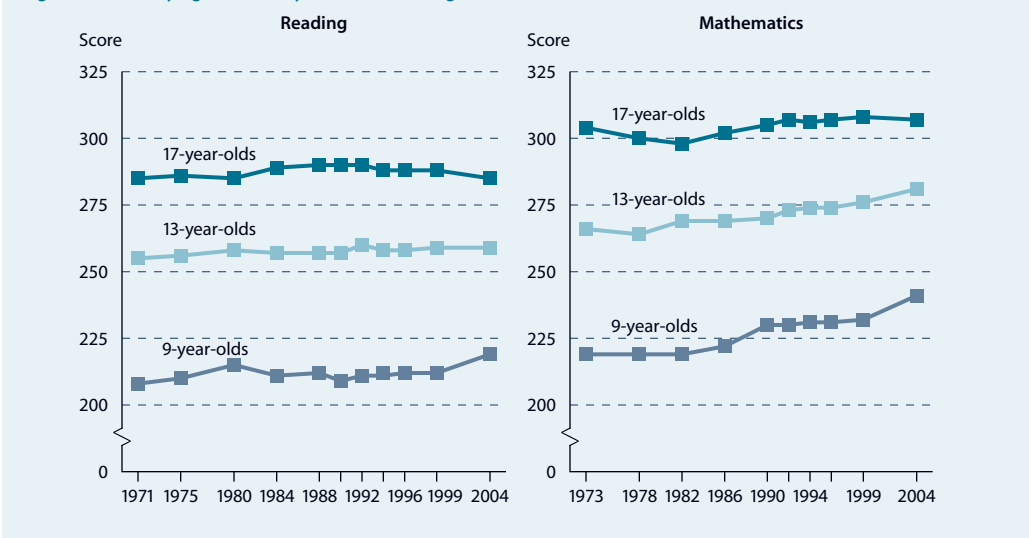
NOTE: NAEP has two distinct assessment programs: the long-term trend assessment program and the main assessment program. Data from the long-term trend program, presented in this indicator, come from subject assessments that have remained substantially the same since the early 1970s in order to measure and compare student achievement over time. In contrast, data from the main NAEP assessment program, presented in *indicators 12, 13, 14, and 15*, come from subject assessments that are periodically adapted to employ the latest advances in assessment methodology and to reflect changes in educational objectives and curricula. Because the instruments and methodologies of the two assessment programs are different, it is not possible to compare long-term trend results with the main assessment results (see *supplemental note 4* for more information on the two NAEP programs). NAEP scores range from 0 to 500.

SOURCE: Perie, M., Moran, R., and Lutkus, A.D. (2005). *NAEP 2004 Trends in Academic Progress: Three Decades of Student Performance in Reading and Mathematics* (NCES 2005-464), figures 2-1 and 2-4. Data from U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1971–2004 Long-Term Trend Reading and Mathematics Assessments.

FOR MORE INFORMATION:
Supplemental Note 4
Supplemental Tables 16-1,
16-2



NAEP SCORES: Average reading and mathematics scale scores on the long-term trend National Assessment of Educational Progress (NAEP), by age: Various years, 1971 through 2004





Academic Outcomes

International Comparisons of Mathematics Literacy

U.S. 15-year-olds performed below the international average of 29 industrialized countries in both mathematics literacy and problem solving in 2003.

The Program for International Student Assessment (PISA) 2003 reports on the mathematics literacy and problem-solving ability of 15-year-olds in 29 participating Organization for Economic Cooperation and Development (OECD) industrialized countries and 10 non-OECD countries. By assessing students near the end of compulsory schooling, PISA provides information about how well prepared students will be for their future as they approach an important transition point for education and work.

U.S. 15-year-olds, on average, scored below the international average for participating OECD countries in combined mathematics literacy, specific mathematics skill areas (space and shape, change and relationships, quantity, and uncertainty), and problem solving (see supplemental table 17-1). In combined mathematics literacy, students in 20 OECD countries and 3 non-OECD countries outperformed U.S. students, while U.S. students outperformed students in 5 OECD countries and 6 non-OECD countries. In problem solving, students in 22 OECD countries and 3 non-OECD countries outperformed U.S. students, while U.S. students

outperformed students in 3 OECD countries and 5 non-OECD countries.

The OECD average score of males was greater than that of females in combined mathematics literacy and in each of the four mathematics subscales in 2003 (see supplemental table 17-2). Males outperformed females in two-thirds of the participating countries in combined mathematics literacy; Iceland was the only country where females outperformed males. In the United States, males outperformed females in both combined mathematics literacy and the space and shape subscale. No such sex difference was detected among U.S. 15-year-olds in their performance on the other three subscales. In 32 of the 39 countries, including the United States, there were no performance differences between males and females in problem solving.

The cutoff scores for both the top and bottom 10 percent of U.S. students (the highest and lowest achievers) in combined mathematics literacy were lower than the overall OECD cutoff scores for these percentiles, respectively (see supplemental table 17-3).

NOTE: The OECD average is the average of the national averages of the Organization for Economic Cooperation and Development (OECD) member countries with data available. Because the Program for International Student Assessment (PISA) is principally an OECD study, the results for non-OECD countries are not included in the OECD average. Due to low response rates, data for the United Kingdom are not included in this indicator. Non-OECD countries participating in this assessment are Hong Kong-China, Indonesia, Latvia, Liechtenstein, Macao-China, Russian Federation, Serbia and Montenegro, Thailand, Tunisia, and Uruguay. Participants were scored on a 1,000-point scale. The international standard deviation is 100 points. For more information on this study and a description of *mathematics literacy* and *problem solving*, see *supplemental note 5*. For information on differences between PISA and the National Assessment of Educational Progress (NAEP) used in *indicator 13*, see http://nces.ed.gov/timss/pdf/naep_timss_pisa_comp.pdf.

SOURCE: U.S. Department of Education, National Center for Education Statistics. (2004). *International Outcomes of Learning in Mathematics Literacy and Problem Solving: PISA 2003 Results from the U.S. Perspective* (NCES 2005-003), table 2. Data from Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2003.



FOR MORE INFORMATION:

Supplemental Notes 5, 6
Supplemental Tables 17-1,
17-2, 17-3
NCES 2006-027
NCES 2006-029
OECD 2004a, 2004b

INTERNATIONAL MATHEMATICS LITERACY: Average combined mathematics literacy scores of 15-year-olds, by country: 2003

| Average score relative to the United States | Country and score | | | | | | |
|---|-----------------------------|---------|-----------------------|----------------------|-----------------|--------|-----|
| Significantly higher | Hong Kong-China | 550 | Switzerland | 527 | Sweden | 509 | |
| | Finland | 544 | Macao-China | 527 | Austria | 506 | |
| | Korea | 542 | New Zealand | 523 | Germany | 503 | |
| | Netherlands | 538 | Australia | 524 | Ireland | 503 | |
| | Liechtenstein | 536 | Czech Republic | 516 | OECD average | 500 | |
| | Japan | 534 | Iceland | 515 | Slovak Republic | 498 | |
| | Canada | 532 | Denmark | 514 | Norway | 495 | |
| | Belgium | 529 | France | 511 | Luxembourg | 493 | |
| | Not significantly different | Poland | 490 | Spain | 485 | Latvia | 483 |
| | | Hungary | 490 | United States | 483 | | |
| Significantly lower | Russian Federation | 468 | Serbia and Montenegro | 437 | Mexico | 385 | |
| | Portugal | 466 | Turkey | 423 | Indonesia | 360 | |
| | Italy | 466 | Uruguay | 422 | Tunisia | 359 | |
| | Greece | 445 | Thailand | 417 | | | |

Academic Outcomes

Science Performance of Students in Grades 4, 8, and 12

In 2005, the average science score of students was higher than in previous assessment years at grade 4, was not measurably different at grade 8, and was lower at grade 12 than in 1996.

The National Assessment of Educational Progress (NAEP) has assessed the science abilities of students in grades 4, 8, and 12 in both public and private schools since 1996, using a separate 0–300 scale for each grade. Between 1996 and 2005, the national average 4th-grade science score increased from 147 to 151; there was no measurable change in the 8th-grade score; and the 12th-grade score decreased from 150 to 147 (see supplemental table 18-1).

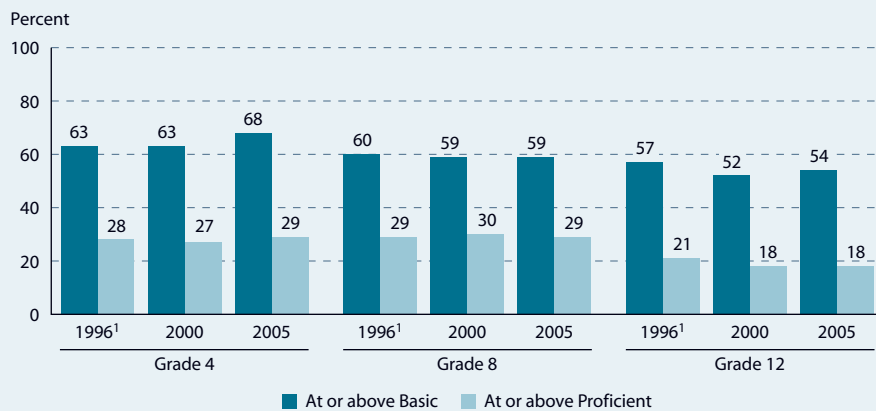
Achievement levels (*Basic*, *Proficient*, and *Advanced*), which identify what students should know and be able to do at each grade, provide another measure of student performance. The percentages of 4th- and 8th-graders at or above *Proficient* (indicating solid academic achievement) were not measurably different from 1996 to 2005, while the percentage of 12th-graders at or above this achievement level decreased. In 2005, 29 percent of 4th- and 8th-graders and 18 percent of 12th-graders were at or above *Proficient*.

Certain subgroups outperformed others in science in 2005. For example, males out-

performed females at all three grades. Male 4th-graders had a higher average score in 2005 than in 1996, and both male and female 12th-graders had lower scores in 2005 than in 1996 (see supplemental table 18-2). White students scored higher, on average, than Black and Hispanic students at all three grades in 2005. At 4th grade, average scores increased for White, Black, Hispanic, and Asian/Pacific Islander students between 1996 and 2005. At 8th grade, the average score for Black students increased, but the scores were not measurably different for other racial/ethnic groups. At 12th grade, there were no measurable differences in average scores for any racial/ethnic group during this period.

NAEP results also permit comparisons among states of the science abilities of 4th- and 8th-graders in public schools over time. At grade 4, of the 36 states that participated in both the 2000 and 2005 assessments, average science scores increased in 9 states (see supplemental table 18-3). At grade 8, of the 36 states that participated in 1996 and 2005, average scores increased in 8 states and decreased in 5 states.

SCIENCE PERFORMANCE: Percentage of students performing at or above Basic and at or above Proficient in science, by grade: 1996, 2000, and 2005



¹ Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted on the 1996 science assessment.

SOURCE: Grigg, W., Lauko, M., and Brockway, D. (2006). *The Nation's Report Card: Science 2005* (NCES 2006-466), figure 1. Data from U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1996, 2000, and 2005 Science Assessments.

FOR MORE INFORMATION:
 Supplemental Notes 1, 4
 Supplemental Tables 18-1,
 18-2, 18-3





Adult Literacy

Trends in Adult Literacy

While the quantitative literacy of adults improved from 1992 to 2003, the prose and document literacy of adults was not measurably different between these two years.

Adults age 16 or older were assessed in three types of literacy (prose, document, and quantitative) in 1992 and 2003. Literacy is defined as “using printed and written information to function in society, to achieve one’s goals, and to develop one’s knowledge and potential.” The average prose and document literacy scores of U.S. adults were not measurably different in 2003 from 1992, but the average quantitative literacy score increased 8 points between these years (see supplemental table 19-1).

Differences in average literacy were apparent by education and age. Educational attainment is positively related to all three types of literacy: those with a bachelor’s or higher degree outperformed their peers in 1992 and 2003. Between these years, average prose literacy decreased for all levels of educational attainment, and document literacy decreased among those with at least some college education or a bachelor’s or higher degree. From 1992 to 2003, the average prose, document, and quantitative literacy scores of adults ages 50–64 and 65 or older increased.

Additional differences in average literacy scores were apparent by race/ethnicity and sex. In

1992 and 2003, White and Asian/Pacific Islander adults had higher average scores than their Black and Hispanic peers in the three types of literacy assessed. The average scores of Blacks increased in each type of literacy from 1992 to 2003, while the average scores of Hispanics declined in prose and document literacy. Women scored higher than men on prose and document literacy in 2003, though men outperformed women on quantitative literacy. Male scores declined in prose and document literacy from 1992 to 2003, while female scores increased in document and quantitative literacy.

Another measure of literacy is the percentage of adults who perform at three achievement levels: *Basic*, *Intermediate*, and *Proficient*. In each type of literacy, 13 percent of adults were at or above *Proficient* (indicating they possess the skills necessary to perform complex and challenging literacy activities) in 2003 (see supplemental table 19-2). Fourteen percent of adults were *Below Basic* (indicating they possess no more than the most simple and concrete literacy skills) in prose literacy, compared with 12 percent in document literacy and 22 percent in quantitative literacy.

¹ Included in this category are those still enrolled in high school. In 2003, this accounted for 3 percent of the total population age 16 or older.

NOTE: Prose literacy is the knowledge and skills needed to perform prose tasks (i.e., to search, comprehend, and use information from continuous texts, such as paragraphs from stories); document literacy is the knowledge and skills needed to perform document tasks (i.e., to search, comprehend, and use information from noncontinuous texts in various formats, such as bills or prescription labels); and quantitative literacy is the knowledge and skills required to perform quantitative tasks (i.e., to identify and perform computations, either alone or sequentially, using numbers embedded in printed materials). In 1992, respondents were allowed to identify only one race; in 2003, respondents were allowed to identify multiple races. Included in the total but not shown separately are American Indians/Alaska Natives and respondents with more than one race. Results are reported in terms of average scores on a 0–500 scale. To compare results between 1992 and 2003, the 1992 results were rescaled using the criteria and methods established for the 2003 assessment.

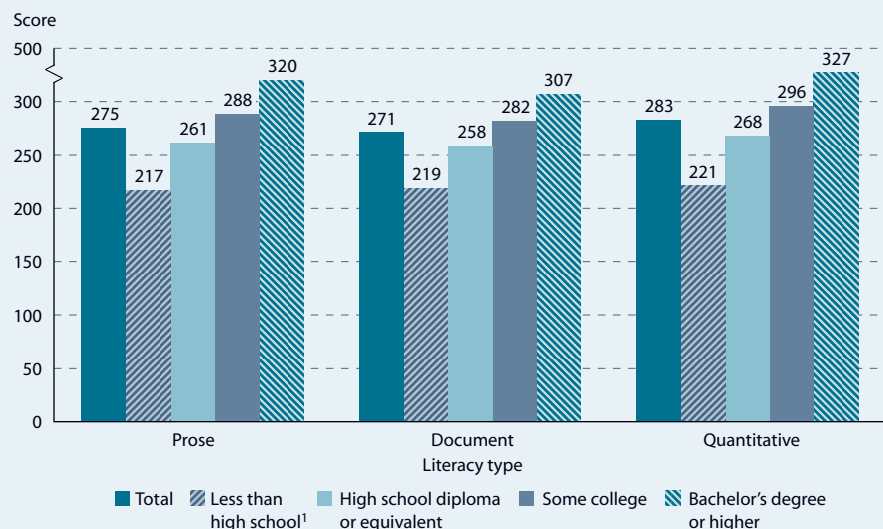
SOURCE: Kutner, M., Greenberg, E., and Baer, J. (2005). *A First Look at the Literacy of America’s Adults in the 21st Century* (NCES 2006-470), figure 1. Data from U.S. Department of Education, National Center for Education Statistics (NCES), 2003 National Assessment of Adult Literacy (NAAL).



FOR MORE INFORMATION:
Supplemental Notes 1,3
Supplemental Tables 19-1,
19-2

NCES 2006-471

ADULT LITERACY PERFORMANCE: Average prose, document, and quantitative literacy scores of adults age 16 or older, by educational attainment: 2003



Adult Literacy

Adult Reading Habits

Adult reading habits are positively associated with educational attainment: the more education a person attained, the more likely that person was to report reading newspapers or magazines, books, or letters and notes daily in 2003.

The 2003 National Assessment of Adult Literacy (NAAL) reports on the literacy habits of adults age 16 or older in the United States by asking them how often they read three types of printed materials in English: newspapers or magazines, books, or letters and notes. On a daily basis, 48 percent of adults reported reading newspapers or magazines, 32 percent reported reading books, and 51 percent reported reading letters and notes (see supplemental table 20-1). In comparison, the percentages of adults who reported reading less than once a week or never was 15 percent for newspapers or magazines, 38 percent for books, and 20 percent for letters and notes. Eighty-eight percent of adults reported having 25 or more books in their home.

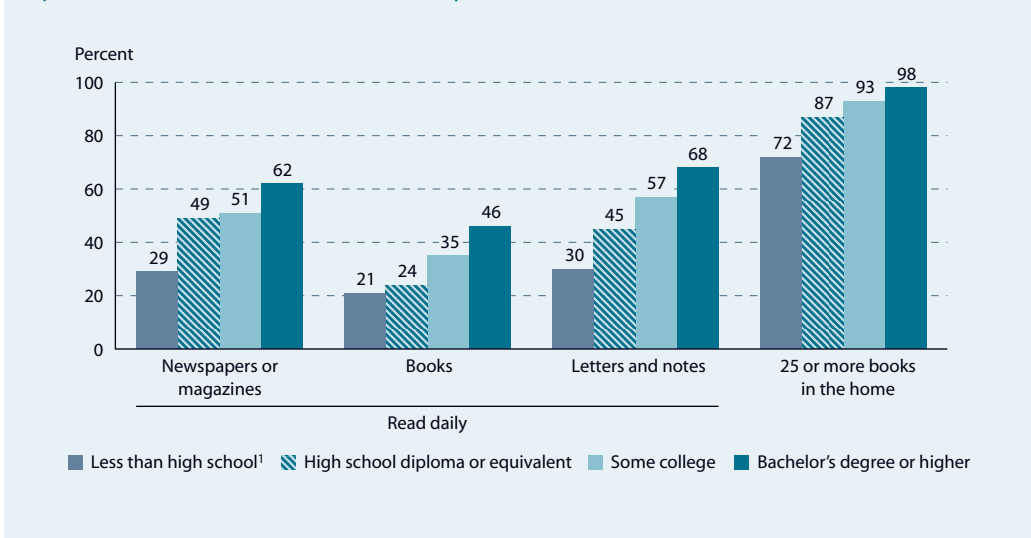
Along with other personal and family characteristics, a person’s educational attainment was positively associated with the frequency of reading any of the three types of printed materials as well as having 25 or more books in the home in 2003. For example, 46 percent of adults with a bachelor’s or higher degree reported reading books daily, compared with 35 percent of those with some college education,

24 percent of those with a high school diploma or equivalent, and 21 percent of those with less than a high school diploma.¹

Among the other individual and family characteristics related to differences in reading habits were sex and race/ethnicity. Females were more likely than males to report reading books or letters and notes daily. White adults were more likely than Black or Hispanic adults to report reading newspapers or magazines or letters and notes daily, and to have 25 or more books in the home. Hispanic adults were less likely than White, Black, or Asian adults to report reading in English any of the three types of materials daily or to have 25 or more books in the home.

Poverty was negatively associated with adults’ frequency of reading any of the three types of printed materials in 2003 and having 25 or more books in the home. That is, poor adults were less likely than near-poor adults, who were in turn less likely than nonpoor adults,² to report reading any of the three types of printed materials daily or to have at least 25 books in their home.

ADULT LITERACY: Percentage of adults age 16 or older who read newspapers or magazines, books, or letters and notes daily and who had 25 or more books in the home, by educational attainment: 2003



¹ Included in this category are those still enrolled in high school. In 2003, this accounted for 3 percent of the total population age 16 or older.

² “Poor” is defined to include those families below the poverty threshold; “near-poor” is defined as 100–199 percent of the poverty threshold; and “nonpoor” is defined as 200 percent or more than the poverty threshold.

NOTE: Respondents age 16 or older living in households or prisons were asked about how often they read newspapers or magazines, books, or letters and notes in English; they could respond “every day,” “a few times a week,” “once a week,” “less than once a week,” or “never.”

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), 2003 National Assessment of Adult Literacy (NAAL), previously unpublished tabulation (December 2005).

FOR MORE INFORMATION:

Supplemental Notes 1,3

Supplemental Table 20-1

NCES 2005-094

NCES 2006-470

NCES 2006-471





Social and Cultural Outcomes

Youth Neither in School nor Working

In 2005, about 8 percent of youth ages 16–19 were neither enrolled in school nor working.

Youth between 16 and 19 years of age may be neither enrolled in school nor working for many reasons. For example, they may be seeking but are unable to find work, or they may have left the workforce temporarily or permanently to start a family. This indicator provides information on the transitions of youth when most are entering postsecondary education or joining the workforce. This is a critical period for young people as they pursue their educational goals and career paths.

From 1986 through 2005, the percentage of such youth remained between 7 and 10 percent annually (see supplemental table 21-1). In contrast to this small amount of variation between these years, within any single year, the percentage of such youth varied more within certain subgroups of the population. In 2004, for example, the percentage of such youth varied markedly by education, age, and poverty status, though there was no measurable difference by sex.

In 2005, 54 percent of 16- to 19-year-olds not in high school and with less than a high school diploma were not working. In contrast, 13 percent of those with at least a high school diploma or

equivalent were neither in school nor working. This pattern of higher percentages for youth with less than a high school diploma than for youth with a high school diploma also held for all other years observed. Similarly, 13 percent of youth ages 18–19 were neither in school nor working in 2005, compared with 4 percent of youth ages 16–17. This pattern of higher percentages for youth ages 18–19 than for youth ages 16–17 was consistent across all years observed. Family poverty was also positively related to youth neither in school nor working. In each year observed from 1986 through 2005, the percentages of such youth were higher for youth from poor families than for their counterparts from nonpoor families.¹ For instance, in 2005, these percentages were 18 and 5 percent, respectively. In contrast, sex was not related to the percentage of youth neither in school nor working.

Differences were found by race/ethnicity in 2005. For example, the percentage of youth who were neither in school nor working was 6 percent for Whites, 12 percent for Blacks, and 13 percent for Hispanics. However, no measurable difference was found between Blacks and Hispanics.

¹ "Poor" is defined to include those families below the poverty threshold; "near-poor" is defined as 100–199 percent of the poverty threshold; and "nonpoor" is defined as 200 percent or more than the poverty threshold. See supplemental note 1 for more information on poverty.

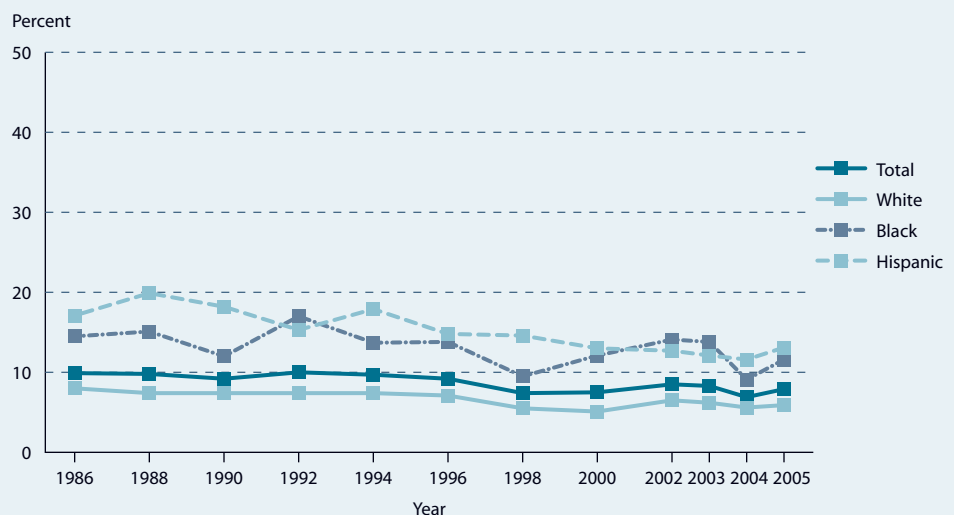
NOTE: Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin unless specified. Other race/ethnicities are included in the total but are not shown separately. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. See supplemental note 2 for more information and for an explanation of the neither enrolled nor working variable.

SOURCE: U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), Annual Social and Economic Supplement, selected years, 1986–2005, previously unpublished tabulation (January 2006).



FOR MORE INFORMATION:
Supplemental Notes 1, 2
Supplemental Table 21-1

YOUTH EMPLOYMENT: Percentage of youth ages 16–19 who were neither enrolled in school nor working, by race/ethnicity: Selected years, 1986–2005



Economic Outcomes

Annual Earnings of Young Adults

Adults ages 25–34 with a bachelor’s degree or higher have higher median earnings than their peers with less education, and these differences in earnings increased from 1980 to 2004.

This indicator examines the relationship between education and median annual earnings, in constant 2004 dollars, for all young adults—ages 25–34—who work full time throughout a full year.

Between 1980 and 2004, earnings increased with education for the total population as well as for male, female, White, Black, and Hispanic populations. For example, young adults with at least a bachelor’s degree consistently had higher median earnings than those with less education (see supplemental table 22-1). Moreover, for the entire population and, in general, for each subgroup, the difference between the earnings of those with at least a bachelor’s degree and their peers with less education grew during this period. For example, in 1980 males with a bachelor’s or higher degree earned 19 percent more than male high school completers,¹ while in 2004 they earned 67 percent more (see supplemental table 22-2).

This growth in the difference between the median earnings of those with at least a bachelor’s degree and their peers with less education can be attributed in large part to the fact that, during this period, earnings increased among those with at least a bachelor’s degree, while they

decreased among those with less education. For example, the earnings of those with less than a high school diploma decreased \$5,200 during this period, while the earnings of those with a bachelor’s or higher degree increased \$2,700 (see supplemental table 22-1). The growth in the difference in earnings existed among both sexes and Whites: earnings increased only for those with a bachelor’s or higher degree.

Examining education and earnings by race/ethnicity reveals that at each level of educational attainment, White young adults have higher earnings than their Black and Hispanic peers (see supplemental table 22-3). During this period, there were no measurable changes in the gaps between Whites and Blacks and between Whites and Hispanics at any level of educational attainment.

Males have higher median earnings than females at each level of educational attainment. However, the gaps between the sexes at each level of educational attainment decreased from 1980 to 2004. For example, males with a bachelor’s degree or higher earned 36 percent more than their female counterparts in 1980 compared with 26 percent more in 2004.

¹ Includes those who earned a high school diploma or equivalent (e.g., a General Educational Development [GED] certificate).

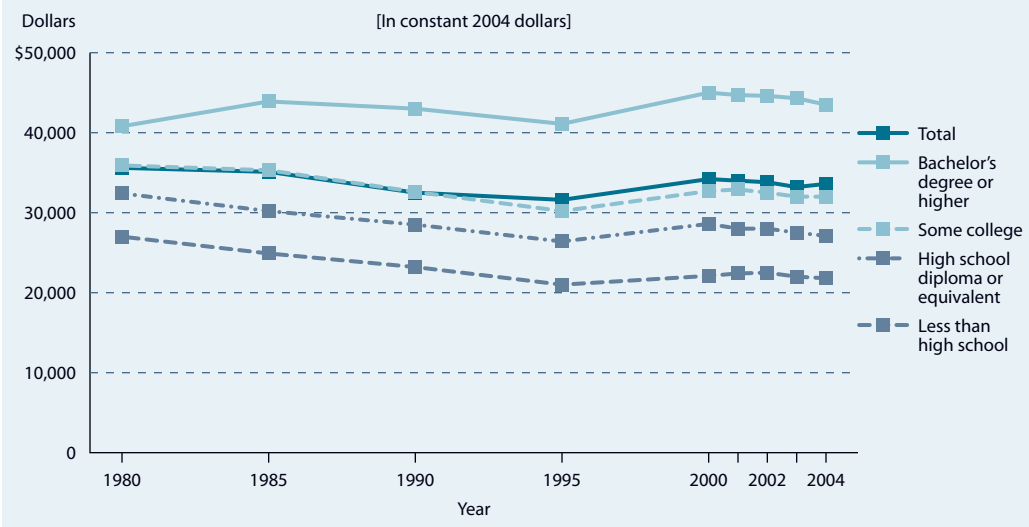
NOTE: Earnings presented in constant dollars by means of the Consumer Price Index (CPI) to eliminate inflationary factors and allow direct comparison across years. See supplemental note 11 for further discussion. “Full-year worker” indicates worked 50 or more weeks the previous year, and “full-time worker” indicates usually worked 35 or more hours per week. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. See supplemental note 2 for further discussion.

SOURCE: U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), March and Annual Social and Economic Supplement, selected years, 1981–2005, previously unpublished tabulation (September 2005).

FOR MORE INFORMATION:
Supplemental Notes 1, 2, 11
Supplemental Tables 22-1,
22-2, 22-3



ANNUAL EARNINGS: Median annual earnings of full-time, full-year wage and salary workers ages 25–34, by educational attainment: Selected years, 1980–2004



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