

Section 3

Student Effort and Academic Progress





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Summary: Student Effort and Academic Progress

The effort students put into their studies and the choices they make as they proceed through the educational system contribute to their academic success. These factors play an important role in determining how well students perform and also affect their access to and persistence at the next level if they decide to continue their formal education. The indicators in this section use the student as the unit of analysis and examine student effort, academic progress, and attainment as students proceed through elementary, secondary, and postsecondary education.

STUDENT ASPIRATIONS AND ATTITUDES

Students' educational expectations have increased substantially since the early 1980s. Between 1983 and 1998, the percentage of 12th-graders who reported that they definitely planned to complete a bachelor's degree increased from 36 to 55 percent, and the percentage who definitely planned to attend graduate or professional school nearly doubled—from 11 to 21 percent (*Indicator 19*). Women's expectations have increased more than men's. In 1983, there were no gender differences in the percentages who definitely planned to complete a 4-year program or attend graduate or professional school. By 1998, however, women were more likely than men to expect to do so.

Gender differences also exist in 12th-graders' perceptions about what is important for having high status in their school. In 1998, females were more likely than males to report that getting good grades (49 versus 42 percent) and planning to go to college (53 versus 43 percent) were greatly important (*Indicator 20*).

STUDENT EFFORT

Reflecting increased expectations and changes in graduation requirements and course offerings, today's high school graduates are taking more courses and more difficult courses than they did

in the early 1980s. Between 1982 and 1998, the average number of credits earned by high school graduates increased from 22 to 25 (*Indicator 27, The Condition of Education 2000*). This increase has been in academic rather than vocational or enrichment/other credits. The percentage of high school graduates who took the most rigorous mathematics curriculum (Advanced Placement calculus, calculus, and calculus/analytic geometry) doubled—from 6 to 12 percent between 1982 and 1998 (*Indicator 40, The Condition of Education 2000*). Also, the percentage who took both chemistry and physics increased from 7 to 19 percent during the same period.

Another indicator of the effort that students give to their school work is the amount of time spent on homework. In 1998, most 12th-graders (88 percent) reported doing at least some homework in a typical week, although more than half spent less than 0-4 hours per week on homework (*Indicator 21*). At the same time, 77 percent of 12th-graders worked during the school year, and there was an inverse relationship between hours spent working and hours devoted to homework, with seniors more likely to do no homework or to spend 4 or fewer hours a week on homework as their job hours increased.

ELEMENTARY/SECONDARY PERSISTENCE AND PROGRESS

In addition to examining students' academic achievement (see section 2), it is important to monitor their progress through school up to and including completion. Early problems in school can accumulate and lead eventually to dropping out, which can have long-term consequences for adults including lower earnings (*Indicator 18*) and putting their own children at a disadvantage with respect to educational success (see, for example, *Indicator 33, The Condition of Education 2000*).



Summary: Student Effort and Academic Progress

Continued

There have been changes in the preschool enrollment patterns of young children and in high school completion rates. Between 1991 and 1999, the percentage of children ages 3–5 who had not yet entered kindergarten and who attended center-based early childhood education programs increased from 53 to 60 percent (*Indicator 1*). In addition, high school completion rates have increased. In 2000, 88 percent of 25- to 29-year-olds had completed high school, up from 78 percent in 1971 (*Indicator 31*). Status dropout rates have declined since the early 1970s (*Indicator 23*).

Persistence and progress vary by gender, race/ethnicity, and urbanicity. For example, girls beginning kindergarten in 1998 were reported by their teachers to be more likely than boys to persist at tasks, show eagerness to learn, and pay attention often or very often (*Indicator 26, The Condition of Education 2000*). In addition, white and Asian children were more likely than black or Hispanic children to exhibit these characteristics, as were children whose mothers had higher versus lower levels of education. Also, dropout rates tend to be higher for Hispanics (especially those born outside the United States) than for non-Hispanics (*Indicator 23*), as they are for students in urban areas compared with those in suburban areas (*Indicator 28, The Condition of Education 2000*).

TRANSITION TO COLLEGE

Increasing numbers of high school graduates are entering college immediately after high school. In 1972, about half (49 percent) of all high school completers ages 16–24 enrolled in a 2- or 4-year college immediately after high school; in 1999, 63 percent did so (*Indicator 26*). Enrollment rates increased faster for females than males, especially at 4-year institutions. The enrollment rate for whites remains higher than that for blacks (66 versus 59 percent in 1999), but the white-black gap has decreased since the early 1980s.

Although high overall, immediate college enrollment rates varied with family income and parents' education. High school completers from high-income families were considerably more likely to enroll than were their peers from low-income families (76 versus 49 percent) (*Indicator 26*). High school completers were also much more likely to enroll if at least one parent had a bachelor's degree or higher than if their parents had less education.

Financial aid programs are available to help low-income families pay for college. Nonetheless, many students and parents tend to overestimate the price of attending college, possibly discouraging them from making the necessary academic and financial preparations. For example, when parents and their 6th- to 12th-grade children who planned to attend or were considering a public 4-year institution were asked in 1999 to estimate annual in-state tuition and fees, their estimates (\$5,970 by parents and \$5,664 by students) were substantially higher than the actual average amount charged to full-time undergraduates (\$3,243) (*Indicator 25*).

Having less educated parents places students at a disadvantage that is partly mitigated by taking advanced mathematics in high school. Among 1992 high school graduates who had not completed any mathematics courses higher than algebra I and geometry, those whose parents had not gone beyond high school enrolled in 4-year institutions at less than half the rate of those whose parents had a bachelor's degree (11 versus 28 percent) (*Indicator 24*). If students had completed courses beyond algebra II, however, they enrolled at about three-quarters the rate of their peers whose parents had a bachelor's degree (64 versus 85 percent).

POSTSECONDARY PERSISTENCE AND PROGRESS

Completion of a degree or certificate is associated with increased employment opportunities

Summary: Student Effort and Academic Progress

Continued

and income potential (*Indicator 18*). Thus, it is useful to monitor persistence and identify factors that promote students' likelihood of staying enrolled and attaining their goal (see the *Essay* for a comprehensive treatment of this topic).

In 1995–96, about 3.3 million students enrolled in postsecondary education for the first time (*Indicator 27*). Persistence and completion rates varied with degree goal. Among those seeking a certificate, 52 percent had obtained one by 1998. A few had earned an associate's degree, and some were still enrolled in a program. However, 37 percent had left postsecondary education without a degree or certificate. Among those seeking an associate's degree, 15 percent had earned one by 1998, and 41 percent had left postsecondary education without an award. Those seeking a bachelor's degree were the most likely to persist, with about three-quarters of those who started at a 4-year institution still enrolled at that level 3 years later.

Certain characteristics put college students at risk for not persisting, including coming from a low-income family, having parents who did not attend college, and attending a higher poverty high school. One factor that helps these at-risk students persist in 4-year institutions is high school preparation for college-level work. At-risk students who complete high school with 4 years of English and 3 years each of science, social science, and mathematics (the Core New Basics curriculum) were as likely to persist as their peers who were not at risk (*Indicator 35, Condition of Education 2000*).

There is additional evidence of the importance of high school coursework. The gap in persistence at 4-year institutions between students whose parents did not go beyond high school

and those with a parent who had a bachelor's degree is narrower when students take a rigorous high school curriculum than when they do not exceed the Core New Basics curriculum (*Indicator 28*).

When students enter college lacking the reading and other skills needed to succeed in college-level work, their likelihood of completing a bachelor's degree diminishes. Reading skills are particularly important. Thirty-four percent of 1982 high school graduates who took any remedial reading coursework in college had completed a bachelor's or associate's degree by age 29–30, compared with 56 percent of those with no remedial courses (*Indicator 29*).

COMPLETIONS

The overall educational attainment of the population has increased over time. The percentage of 25- to 29-year olds who had completed at least high school (with a regular high school diploma or equivalent, such as a GED) rose from 78 percent in 1971 to 88 percent in 2000 (*Indicator 31*). Several trends have been evident since the early 1970s: (1) female attainment rates have increased faster than those of males at all levels; (2) the black-white gap remained about the same for completing some college and widened for earning a bachelor's degree or higher; and (3) the Hispanic-white gap in earning a bachelor's degree or higher has increased.

In the United States, 28 percent of adults ages 25–34 and 29 percent of those ages 45–54 have completed some higher education (*Indicator 32*). These percentages are higher than those in any of the other G-7 countries (Canada, United Kingdom, France, Italy, Germany, and Japan).



Student Attitudes and Aspirations

Educational Plans

Students' educational expectations have increased substantially since 1983. Since at least 1990, female 12th-graders have been more likely than their male peers to report definite plans for higher education.

In a climate of rising standards and expectations that began in the 1980s, students have been increasingly completing college-preparatory courses in high school and taking college admissions examinations such as the ACT/SAT (*Indicator 22, The Condition of Education 1996; Indicator 9, The Condition of Education 1997; Indicator 9, The Condition of Education 1998*). Increasing proportions of students are also entering college and completing degrees (*Indicator 59, The Condition of Education 1999*). Trends in high school seniors' educational expectations provide another measure of this growing focus on postsecondary schooling.

The percentage of 12th-graders who said they “definitely will” complete a bachelor’s degree increased substantially between 1983 and 1998 (from 36 to 55 percent). Furthermore, the proportion who said they definitely will attend graduate or professional school nearly doubled, from 11 to 21 percent. The percentage of se-

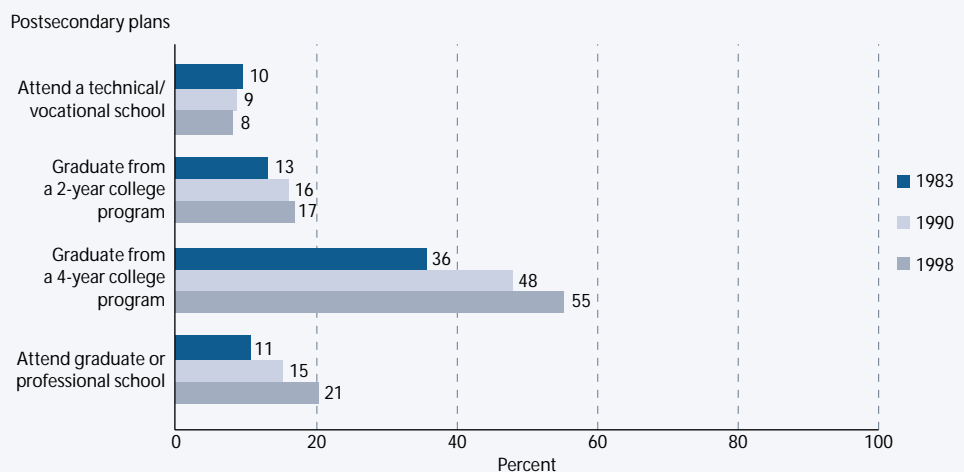
niors who definitely planned to complete a 2-year college program rose slightly from 1983 to 1998. In contrast to these three upward trends, the percentage of 12th-graders who planned to attend technical/vocational school ranged between 8 and 10 percent during this 15-year period.

These data show some notable differences by gender. In all 3 years, female seniors were more likely than their male counterparts to report definite plans to complete 2-year degrees. In 1983, there were no gender differences in the likelihood of having definite plans to complete a 4-year degree or to attend graduate or professional school. In 1990 and 1998, however, women were more likely than men to have such plans. For example, in 1998, 61 percent of female high school seniors reported definite plans to complete a 4-year college program, in contrast to 50 percent of male seniors (see supplemental table 19-1).

NOTE: The data do not meet NCES standards for response rates. Students were asked how likely it was that they would participate in different types of postsecondary education. The 1990 estimates are revised slightly from those published in *Indicator 24, The Condition of Education 2000*.

SOURCE: University of Michigan, Institute for Social Research. Monitoring the Future Survey: 1983, 1990, and 1998.

POSTSECONDARY PLANS: Percentage of high school seniors who reported definite plans for postsecondary education: 1983, 1990, and 1998



FOR MORE INFORMATION:

Supplemental Notes 1, 8
Supplemental Table 19-1

NCES 96–304, NCES 97–388, NCES 98–013, NCES 1999–022

Student Attitudes and Aspirations

Peer Culture of High School Seniors

At least half of 12th-graders in 1998 thought that two characteristics were greatly important for having status in their school: being a good athlete and planning to attend college.

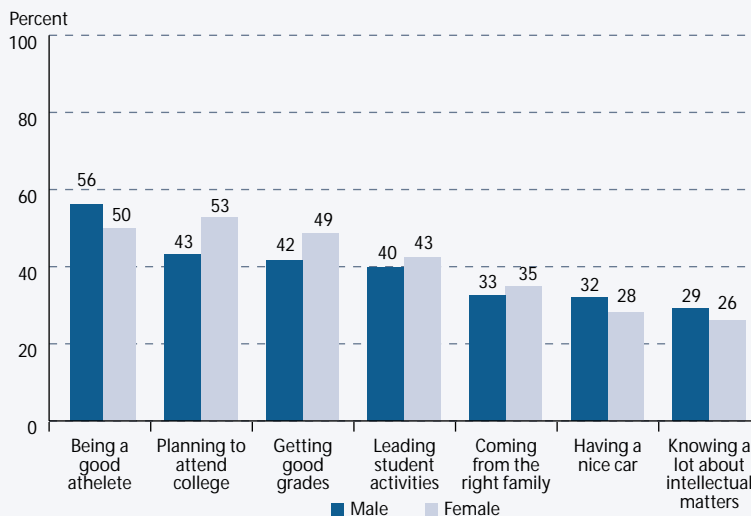
The peer groups that teenagers encounter at school strongly influence their priorities and activities (Coleman 1965; Eckert 1989), and students tend to value attributes likely to gain their classmates' acceptance (Harris 1998). In the annual Monitoring the Future Survey, 12th-graders were asked how important various social, academic, and material characteristics were for having high status in their school. In 1998, 53 percent of seniors reported that being a good athlete had "great" or "very great" importance in their school, while 28 percent felt that knowing a lot about intellectual matters had similar importance (see supplemental table 20-1). Proportionately more seniors ascribed great importance to athletic skill than to any of the other characteristics except planning to attend college.

In 1998, females were more likely than males to report that getting good grades and planning to go to college were greatly important for being admired by their schoolmates. About 53 percent of 1998 female 12th-graders thought

planning to attend college was greatly important, compared with 43 percent of males. A similar gender difference was also found in 1990 for planning to attend college (see supplemental table 20-1). In addition, 48 percent of females attributed great importance to leading student activities, compared with 36 percent of males. The lack of measurable gender differences for the other characteristics remained consistent between 1983 and 1998.

From 1983 to 1998, there were increases in the percentages of 12th-graders who attributed great importance to two characteristics: planning to attend college and being a good athlete. Students' ratings of other characteristics either fluctuated with no clear trend or remained fairly stable over the 15-year time span examined. Despite increasing high school course requirements and academic standards over this period, no increase occurred in the percentage of seniors who attributed great importance to getting good grades or knowing a lot about intellectual matters.

CHARACTERISTICS VALUED BY STUDENTS: Percentages of 12th-graders who thought that various student characteristics were greatly important for having high status in their school, by sex: 1998



NOTE: The data do not meet NCES standards for response rates. All data shown and discussed are for the combined categories of "great" and "very great" importance.

SOURCE: University of Michigan, Institute for Social Research. Monitoring the Future Survey: 1998.

FOR MORE INFORMATION:
Supplemental Note 8
Supplemental Table 20-1



Coleman 1965
Eckert 1989
Harris 1998



Student Effort

Time Spent on Homework and on the Job

Regardless of hours worked per week, more than half of high school seniors spent 0–4 hours weekly on homework.

High school students' educational aspirations, feelings about school, and socioeconomic status can all influence their choices about spending time on homework or at a job. The priorities that students' families and peers place on school and work can also influence such choices. Educators and most parents believe that doing homework is important to academic success. One finding from the 1999 National Assessment for Educational Progress concludes that 17-year-olds who typically spent more than 2 hours daily doing homework had higher average reading scores than those who spent less than 1 hour per day on homework or who did none (NCES 2000–469). In 1998, most high school seniors (88 percent) reported doing at least some homework in a typical week. However, most seniors allocated little time to homework, fewer than 5 hours a week.

High school seniors often spend some of their nonschool hours working to earn money for

current expenses, to save for college, and to gain work-related experience. Indeed, most students work during their senior year. In 1998, about three-quarters (77 percent) of high school seniors reported working some hours at a paid or volunteer job during the school year.

Recent survey data show an inverse relationship between hours spent working and hours devoted to homework. In 1998, high school seniors were more likely to do no homework or to spend 4 or fewer hours a week on homework as their job hours increased. Similarly, they were less likely to spend 10 or more hours per week on homework as their job hours increased. For example, about 28 percent of 12th-graders who worked 5 or fewer hours per week (including those who had no job) spent 10 or more hours on homework in a typical week. In contrast, roughly half that proportion, 15 percent, of those working more than 20 hours a week spent 10 or more hours on homework.

NOTE: Percentages may not add to 100.0 due to rounding. The data do not meet NCES standards for response rates.

SOURCE: University of Michigan, Institute for Social Research. Monitoring the Future Survey: 1998.

HOMEWORK AND JOBS: Percentage of high school seniors who reported spending any time on homework per week, and percentage distribution of high school seniors according to homework hours, by work status: 1998

Work status	Total	Any homework	Hours spent doing homework per week		
			0–4	5–9	10 or more
Total	100.0	77.3	58.4	20.5	21.0
Any (more than 0)	77.2	88.1	60.0	20.8	19.2
Hours per week at a job					
0–5	32.2	89.4	52.2	20.1	27.7
6–20	34.9	90.1	56.5	23.2	20.2
More than 20	33.0	85.6	66.7	18.1	15.2



FOR MORE INFORMATION:
Supplemental Note 8
NCES 2000–469

Student Effort

Students' Use of Time

Students watched fewer hours of television in 1999 than in 1984, but few teenagers used this time to complete homework or read for fun.

Many educators and parents are concerned that youth watch too much television instead of pursuing activities such as reading for fun and doing their homework that reinforce the skills they learn at school (Beentjes and Van der Voort 1988). Although increases in television watching may have occurred in earlier years (NCES 2000–469), 9-, 13-, and 17-year-old students were less likely to watch 3 or more hours of television per day in 1999 than they were in 1984. For example, among 9-year-old students, 51 percent watched 3 or more hours of television each day in 1999, but 67 percent did so in 1984.

Many educators would like children to devote more of their out-of-school time to reading or completing homework. In the 1980s, policymakers encouraged educators to increase homework (Tyack and Cuban 1995), but research indicates that “homework may have a positive effect on older students’ achievement, but no discernible effect on the achievement of younger students” (NCES 2000–469). How-

ever, only the youngest students experienced increases in the assignment of homework between 1984 and 1999. In 1999, 9-year-olds were more likely to report that they were assigned homework than in 1984. There was no change among 13-year-olds and a decrease in the percentage of 17-year-olds who were assigned any homework between the 2 years. Moreover, 13 percent of the 17-year-old students had homework assigned but did not complete it in 1999, and 17-year-olds were less likely to work on their assignments for 1 to 2 hours daily in 1999 than in 1984.

Between 1984 and 1999, there was no change in the percentage of 9-year-olds who read for pleasure each day. In contrast, fewer 13- and 17-year-old students read for fun daily in 1999 than did their counterparts in 1984. With these decreases in activities, increased time may have been devoted to other pursuits, such as using computers (*Indicator 18, The Condition of Education 1999*), playing electronic games, or working for pay.

STUDENTS' USE OF TIME: Percentage of 9-, 13-, and 17-year-olds who were watching 3 or more hours of television, assigned homework, and reading for fun daily: 1984 and 1999

	Watched television 3 or more hours daily	Time on homework					Read daily for fun
		Any homework assigned	Assigned, not done	Less than 1 hour	1 to 2 hours	More than 2 hours	
Age 9							
1984	66.7	64.4	4.1	41.5	12.7	6.1	53.3
1999	51.1	74.2	3.8	53.1	12.4	4.9	54.1
Age 13							
1984	63.4	77.4	3.7	35.9	29.2	8.6	35.1
1999	45.9	75.9	4.5	37.2	26.3	7.9	28.2
Age 17							
1984	43.7	77.5	11.4	26.2	26.8	13.2	30.8
1999	34.3	73.6	13.1	26.4	22.6	11.5	24.8

SOURCE: U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), 1984 and 1999 Long-Term Trend Assessment.

FOR MORE INFORMATION:

Supplemental Note 4
NCES 1999–022, NCES 2000–469

Beentjes and Van der Voort 1988

Tyack and Cuban 1995





Elementary/Secondary Persistence and Progress

Status Dropout Rates, by Race/Ethnicity

Since 1972, status dropout rates for whites and blacks ages 16–24 have declined; rates for Hispanics have not decreased and remain higher than those for other racial/ethnic groups.

Advances in technology have fueled the demand for a highly skilled labor force and transformed a high school education from a valued asset into a minimum requirement for entry into the labor market. As a result, young adults who do not finish high school are more likely to be unemployed and earn less when they are employed than those who completed high school (*Indicators 10 and 12, The Condition of Education 1999*). In addition, high school dropouts are more likely to receive public assistance than high school graduates who did not go to college (*Indicator 34, The Condition of Education 1998*).

The status dropout rate represents the percentage of an age group not enrolled in school and that has not earned a high school credential (a diploma or an alternative credential such as a GED). According to this measure, 11 percent of 16- to 24-year-olds were out of school without a high school credential in 1999 (see supplemental table 23-1). Although the status dropout rate remained fairly consistent from 1992 to 1999, it declined for young adults as a group between the early 1970s and 1999. The rate of this decline, however, varied by race/ethnicity.

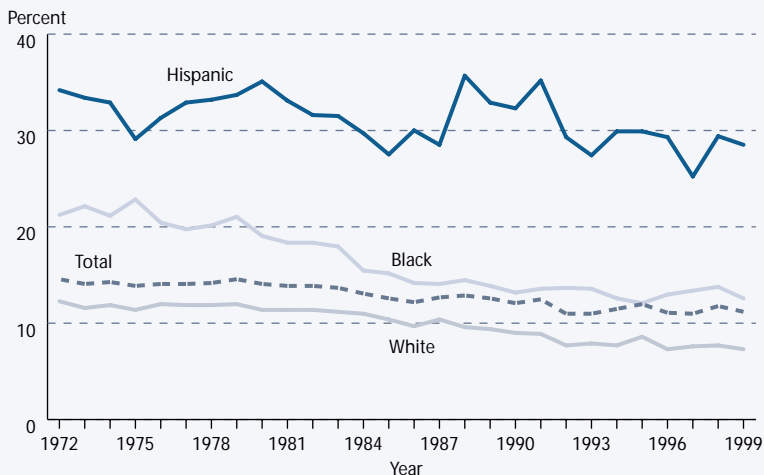
Between 1972 and 1999, the status dropout rate for whites was lower each year than the rate for blacks or Hispanics. During these years, the percentage of Hispanic youths who were out of school without a high school credential was also higher than that of blacks in every year. In addition, during these years, the status dropout rates for whites and blacks declined by nearly 40 percent in each group, while the rate for Hispanic young adults did not decrease.

Greater dropout rates among Hispanic immigrants partly account for the persistently high dropout rates for all Hispanic young adults. Among Hispanic 16- to 24-year-olds who were born outside the 50 states and the District of Columbia, the status dropout rate of 44 percent was more than double the rates for first- or later-generation (16 percent each) Hispanic young adults born in the United States. Nevertheless, Hispanic young adults born in the United States are more likely to be high school dropouts than their peers of other race/ethnicities (see supplemental table 23-2).

NOTE: Due to relatively small sample sizes, American Indians/Alaskan Natives and Asians/Pacific Islanders are included in the total but are not shown separately. In addition, the erratic nature of the Hispanic status rates reflects, in part, the small sample size of Hispanics.

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

STATUS DROPOUTS: Dropout rates of 16- to 24-year-olds, by race/ethnicity: October 1972–99



FOR MORE INFORMATION:
Supplemental Notes 1, 2
Supplemental Tables 23-1, 23-2
NCES 2001–022, NCES 1999–
022, NCES 98–013

Transition to College

Mathematics Curriculum and College Enrollment

Taking advanced mathematics in high school increases the likelihood of college enrollment, especially for students whose parents never attended college.

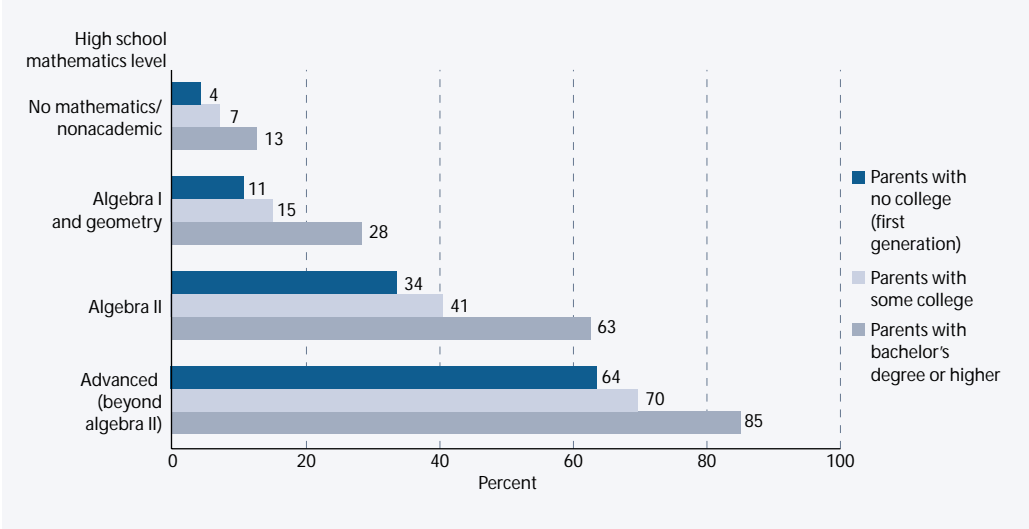
College students whose parents have attained no more than a high school education are often referred to as “first-generation” college students. Just over one-quarter of high school graduates are from families where neither parent attended college. The rate at which these students enroll in 4-year colleges is much lower than that of their counterparts whose parents attended college (NCES 2000–153). Because of this difference in enrollment rates, students whose parents did not attend college are often targeted for outreach programs to help them prepare academically for college (Swail and Perna 2000). One indicator of academic readiness for college is the highest level of mathematics completed in high school.

Among 1992 high school graduates, at all mathematics levels completed except the lowest, students whose parents did not attend college enrolled in 4-year colleges at lower rates than did their counterparts from families where at least one parent has a bachelor’s degree. However, completing advanced mathematics courses (e.g., pre-calculus or higher) appeared to help mitigate the disadvantages of first-generation status. For example, among high school graduates whose par-

ents did not attend college, 64 percent who had completed advanced mathematics courses in high school enrolled in a 4-year college, compared with 34 percent who had completed courses through algebra II and 11 percent who had completed algebra I and geometry. Comparable percentages for students with a parent who has a bachelor’s degree were 85 percent, 63 percent, and 28 percent, respectively.

Future first-generation college students can help prepare themselves for taking advanced mathematics in high school by taking algebra in middle school. However, not all students have acquired the necessary skills for doing so. But among students who presumably have—those at the highest proficiency level tested in 8th grade (level 3)—83 percent whose parents did not attend college and who had completed algebra by 8th grade went on to complete advanced mathematics in high school. In contrast, 54 percent who had not taken algebra completed advanced mathematics. Among students with a parent who has a bachelor’s degree, the comparable percentages were 95 percent and 73 percent, respectively (see supplemental table 24-1).

MATHEMATICS AND COLLEGE ENROLLMENT: Percentage of 1992 high school graduates who had enrolled in a 4-year institution as of 1994, by highest level of mathematics completed in high school and parents’ education



NOTE: See *Supplementary Note 6* for definition of course levels.

SOURCE: U.S. Department of Education, NCES, National Education Longitudinal Study of 1988 Eighth Graders, “Third Follow-up” (NELS:1988/1994), Data Analysis System.

FOR MORE INFORMATION:
 Supplemental Notes 1, 6, 8
 Supplemental Table 24-1
 NCES 2000–153
 Swail and Perna 2000





Transition to College

Perceptions of College Costs

In 1999, 6th- to 12th-graders and their parents overestimated the price of attending college.

Increases in tuition and fees charged at 4-year colleges often outpace increases in median family income (Davis 1997). Although increases have occurred at many institutions, much of the media attention about rising college prices focuses on a few, highly selective private institutions that charge \$20,000 or more in tuition per year (e.g., “Those Scary College Costs” 1996). Such publicity can foster the perception that college is unaffordable and discourage some students and parents from making the necessary financial and academic preparations for the student to attend. Whatever the perception, the average in-state tuition and fees charged full-time undergraduates at public 4-year institutions in 1998–99 was about \$3,200 (The College Board 1998). It is useful, therefore, to compare perceptions of the price of college with the actual price of attendance.

In 1999, 6th- to 12th-graders and their parents who thought the student would enroll in postsecondary education were asked if they knew or could estimate the tuition and mandatory fees for 1 year at the type of college the student planned to attend. Among those estimating tuition and fees at 4-year public institutions in their state, estimates

reported by both students and parents were substantially higher than the average amount charged full-time undergraduates in the same year (\$5,664 and \$5,970, respectively, versus \$3,243). Moreover, 27 percent of these students and 28 percent of their parents estimated tuition and fees at \$8,000 or more, even though no public 4-year institutions had tuition and fees that high.

In addition to students’ and parents’ misperceptions of tuition and fees, their uncertainty about tuition and fees was high. Such uncertainty can also affect the decision to attend (Hossler, Schmit, and Vesper 1999). Examining students’ and parents’ estimates for all types of institutions, even among 11th- and 12th-graders, 37 percent of students and 29 percent of their parents could not estimate the price of tuition and fees at the institution students planned to attend. For both students and their parents, the likelihood of such uncertainty declined as family income and parents’ education increased. In other words, in families with the lowest incomes and least educated parents, students and parents knew the least about the price of attending college (see supplemental table 25-1).

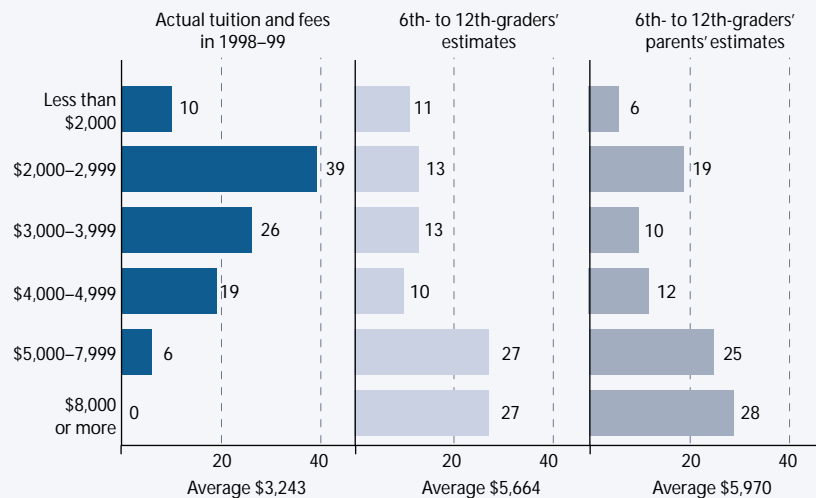
NOTE: Distributions for in-state tuition only. Students’ and parents’ estimates include only those who were able to provide estimates of tuition and fees. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES, National Household Education Surveys Program (NHES), 1999 (Parent and Youth Interview Surveys); The College Board, *Trends in College Pricing, 1998* (for actual tuition and fees).



FOR MORE INFORMATION:
 Supplemental Notes 1, 3, 14
 Supplemental Table 25-1
 “Those Scary College Costs”
 1996
 Davis 1997
 The College Board 1998
 Hossler, Schmit, and Vesper 1999

PERCEPTIONS OF COLLEGE COSTS: Percentage distribution of tuition and fees charged at public 4-year institutions and estimates reported by 6th- to 12th-graders and their parents: 1999



Transition to College

Immediate Transition to College

Immediate college enrollment rates have been increasing since 1972. Female rates of immediate enrollment have increased faster than those of males.

The percentage of high school completers who enroll in college in the fall immediately after high school reflects the accessibility of higher education and the value high school completers place on college compared with other pursuits. Overall, immediate college enrollment rates of high school completers increased from 49 to 63 percent between 1972 and 1999 (see supplemental table 26-1).

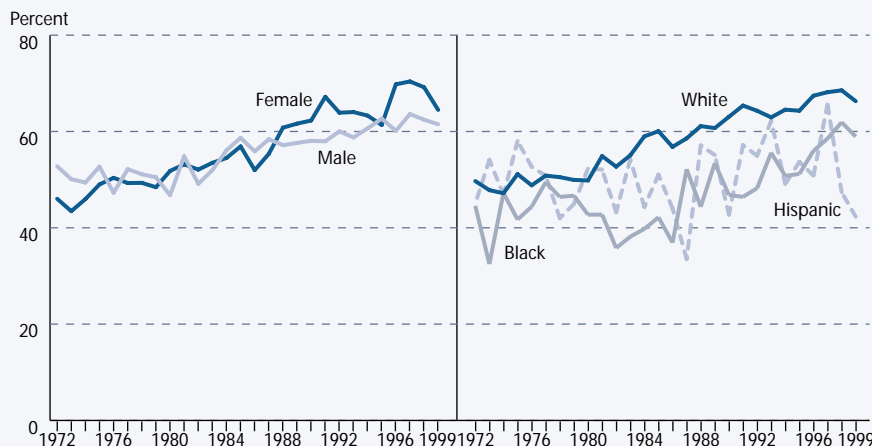
From 1972 to 1999, immediate enrollment rates of female high school completers increased faster than those of males. Much of the growth in immediate college enrollment rates between 1984 and 1999 was due to increases in the immediate enrollment rates of females at 4-year institutions. During this period, the rate at which females enrolled at 4-year institutions increased faster than that of males at 4-year institutions and both males and females at 2-year institutions (see supplemental table 26-2).

Immediate enrollment rates for white high school completers have increased over the past

28 years, from 50 to 66 percent. Among black high school completers, immediate enrollment rates fluctuated between 1972 and 1983 and then increased between 1984 and 1999, rising from 40 to 59 percent. Since 1984, immediate enrollment rates for blacks have increased faster than those for whites, narrowing the gap between the two groups. For Hispanic high school completers, there was no consistent growth in rates between 1972 and 1999 (see supplemental table 26-1).

Some differences in immediate enrollment rates among groups of completers have not changed. The gap in rates between those from high- and low-income families persisted for each year between 1990 and 1999 (see supplemental table 26-1). Likewise, completers whose parents had attained a bachelor's degree or higher were more likely than those with parents who had less education to enter college immediately after high school graduation for each year between 1990 and 1999 (see supplemental table 26-3).

IMMEDIATE COLLEGE ENROLLMENT RATES: Percentage of high school completers who were enrolled in college the October after completing high school, by sex and race/ethnicity: October 1972–99



NOTE: Includes those ages 16–24 completing high school in a given year. In 1994, the survey instrument for the Current Population Survey (CPS) was changed and weights were adjusted. See *Supplemental Note 2* for further discussion. SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys, various years.

FOR MORE INFORMATION:
 Supplemental Notes 1, 2
 Supplemental Tables 26-1, 26-2, 26-3
 NCES 1999–022





Postsecondary Persistence and Progress

Persistence of Beginning Postsecondary Students

After 3 years, bachelor's degree seekers who start at 4-year institutions are the most likely of all beginning postsecondary students to have persisted or attained their goal.

In 1995–96, 3.3 million students enrolled in postsecondary education for the first time. Their outcomes 3 years later varied with their initial goal, the type of institution in which they first enrolled, and whether they transferred.

By 1998, 52 percent of those seeking a certificate had attained one, another 2 percent had earned an associate's degree instead, and about 10 percent were still enrolled. The remaining 37 percent had left postsecondary education without an award. Students starting at a private, for-profit institution were much more likely than those starting at a public 2-year institution to have earned a certificate (66 percent versus 39 percent) and less likely to have left without an award (29 percent versus 44 percent).

Fifteen percent of students with an associate's degree goal were successful by 1998. Some had earned a certificate instead (6 percent), and many were still enrolled (32 percent were still at a less-than-4-year institution and 7 percent were enrolled in a 4-year institution). However, 41 percent had left without earning an award.

Because of the limited time since their initial enrollment, only 1 percent of bachelor's degree seekers had earned that degree by 1998. The majority had persisted toward that goal (79 percent of those who started at a private, not-for-profit institution and 75 percent of those who started at a public institution). Bachelor's degree seekers who started at public 2-year institutions were considerably more likely to have left without an award (33 percent) than were those who started at 4-year institutions (13 percent at private, not-for-profit institutions and 16 percent at public institutions).

Relatively few students transferred, but transfer and persistence were generally positively related. For example, certificate seekers who transferred were more likely to have earned an award or be still enrolled (84 percent) than were those who did not transfer (62 percent). Among bachelor's degree seekers, those who transferred to another 4-year institution within their first 3 years were more likely to have attained a degree or be still enrolled (90 percent) than were those who had not transferred (78 percent) (see supplemental table 27-1).

¹Includes students without a specific degree goal.

²Includes students in types of institutions other than those listed here.

³Value less than 0.05 percent.

NOTE: Percentages may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES. Beginning Postsecondary Students Longitudinal Study, "First Follow-up" (BPS:1996/1998).

DEGREE GOAL AND PERSISTENCE: Number of 1995–96 beginning postsecondary students enrolled and percentage distribution according to attainment by 1998, by initial goal and type of first institution

Initial goal and type of first institution	Number enrolled (thousands)	Highest degree attained by 1998			No degree		
		Certificate	Associate's	Bachelor's	Still enrolled		Not enrolled
					Less-than 4-year	4-year	
Total¹	3,321	10.4	5.1	0.3	17.2	34.6	32.3
Certificate ²	469	51.7	2.0	(³)	8.2	1.6	36.5
Public 2-year	179	39.1	3.4	(³)	13.6	0.2	43.6
Private, for-profit	217	65.7	0.3	(³)	4.9	0.5	28.7
Associate's degree ²	882	6.2	14.5	0.1	31.6	6.6	41.1
Public 2-year	750	5.9	11.2	(³)	35.2	5.4	42.4
Bachelor's degree or transfer ²	1,603	1.5	2.7	0.7	12.5	63.2	19.4
Public 2-year	376	2.6	5.2	(³)	36.1	22.9	33.3
Public 4-year	773	1.0	1.3	1.0	5.9	74.8	16.0
Private, not-for-profit 4-year	433	1.3	2.0	0.9	3.9	78.8	13.1



FOR MORE INFORMATION:
Supplemental Note 8
Supplemental Table 27-1
NCES 2000–154

Postsecondary Persistence and Progress

High School Academic Preparation and Postsecondary Progress

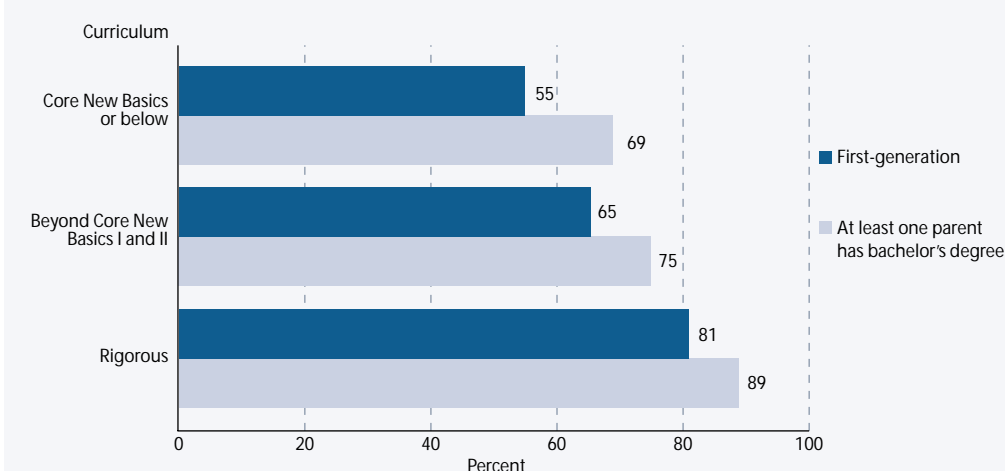
Rigorous academic preparation in high school narrows the gap in postsecondary persistence between first-generation students and their peers with a parent who has a bachelor's degree.

First-generation students are less likely to persist toward a bachelor's degree than other students. Among students who began their postsecondary education in 1995–96, first-generation students—those whose parents have no education beyond high school—were less likely than their peers to enroll in 4-year institutions (30 versus 70 percent) and, if they did, were less likely than other students to persist toward a bachelor's degree 3 years later (13 versus 33 percent) (NCES 98–082). The strongest predictor of eventual completion of a bachelor's degree is the academic rigor of secondary education (Adelman 1999). Three years after entering a 4-year institution, 87 percent of postsecondary students who had taken rigorous coursework in high school had stayed on the persistence track toward a bachelor's degree, compared with 62 percent who had not exceeded the Core New Basics curriculum (NCES 2001–153). Students who stayed on the persistence track either remained at the initial 4-year institution in which they enrolled or made

a lateral transfer to a new 4-year institution with no break in enrollment.

Parents' level of education is associated with students' persistence in postsecondary education, but rigorous academic preparation in high school narrows the gap in postsecondary persistence between first-generation and other students. Among postsecondary students who had taken no more than the core New Basics curriculum in high school and enrolled in a 4-year institution in 1995–96, first-generation students were less likely to stay on the persistence track toward a bachelor's degree in 1998 than their counterparts with a parent who has a bachelor's degree (55 versus 69 percent). In contrast, the likelihood of students who had taken rigorous coursework in high school staying on the persistence track did not differ meaningfully between first-generation students and their peers with a parent who has a bachelor's degree (81 versus 89 percent).

PERSISTENCE TRACK: Percentage of 1995–96 beginning postsecondary students who persisted toward a bachelor's degree, by the academic rigor of their secondary school curriculum and first-generation status: June 1998



NOTE: First-generation students are those whose parents have no education beyond high school. The Core New Basics curriculum includes 4 years of English and 3 years each of mathematics, science, and social science. The "rigorous" curriculum includes the Core New Basics with advanced science courses (biology, chemistry, and physics); 4 years of mathematics (algebra I, geometry, algebra II, and precalculus); plus 3 years of foreign language and 1 honors/Advanced Placement course or Advanced Placement test score. *Supplemental Note 6* provides more detail.

SOURCE: U.S. Department of Education, NCES. Beginning Postsecondary Students Longitudinal Study, "First Follow-up" (BPS:1996/1998).

FOR MORE INFORMATION:

Supplemental Notes 1, 6, 8

NCES 98–082, NCES 2001–153

Adelman 1999





Postsecondary Persistence and Progress

Remediation and Degree Completion

Students who take any remedial reading courses are less likely to earn a 2- or 4-year degree than those who take other combinations of remedial courses.

The role of remedial coursework in postsecondary education has been the subject of continuing debate among policymakers and educators. The core questions being addressed are what kinds of institutions should offer remedial coursework and how remedial coursework affects degree completion. The postsecondary education transcripts of a cohort of students who graduated from high school in 1982 and were followed until they were 29 to 30 years old provide an opportunity to examine the relationship between degree completion and remedial coursework patterns.

Assignment to remedial reading in college is associated with additional remediation and a lower likelihood of degree completion. Among the students who took any remedial reading, 42 percent were in three or more other remedial courses, and 67 percent took remedial mathematics (see supplemental table 29-2). In contrast, among the students who took any remedial mathematics courses, 16 percent were

in three or more remedial courses, and 24 percent took remedial reading.

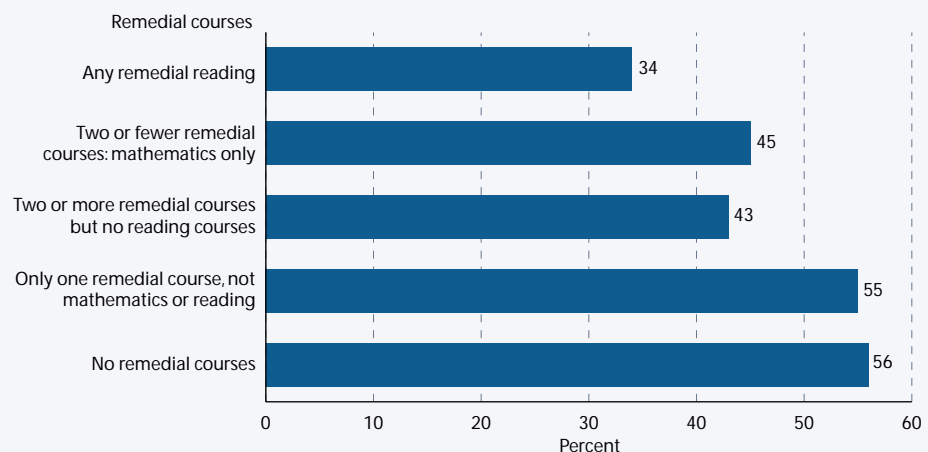
Students who took only one remedial course (other than remedial mathematics or reading) completed degrees at the same rate as students who took no remedial courses (55 and 56 percent, respectively). Students whose only remedial requirement was mathematics and who took a maximum of two remedial courses completed associate's or bachelor's degrees at a higher rate (45 percent) than students with any reading problems (34 percent).

A higher percentage of community college students than 4-year college students are assigned to remedial courses. Sixty-three percent of students who attended only a 2-year college and 64 percent of those who attended both a 2-year college and a 4-year college took at least one remedial course, compared with 40 percent of those who attended only a 4-year college (see supplemental table 29-3).

NOTE: The patterns of remedial coursework are mutually exclusive, starting with "any reading" and proceeding downward. Thus, no student included in a pattern is included in any pattern below. Students who attended only subbaccalaureate vocational/technical schools are not included.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B:So PETS).

REMEDIATION AND COMPLETION: Percentage of postsecondary education students with varying patterns of remedial courses who completed 2- or 4-year degrees: 1980–93



FOR MORE INFORMATION:
Supplemental Notes 1, 6
Supplemental Tables 29-1,
29-2, 29-3

Completions

Degrees Earned by Women

Women earn more than half of all bachelor's degrees. They still trail men in certain fields but have made considerable progress over the past quarter century.

Women have made considerable progress in attaining postsecondary degrees. In 1970–71, women earned 43 percent of all bachelor's degrees. They made gradual gains throughout the 1970s, and in each year since the early 1980s, they have earned more than half of all bachelor's degrees (NCES 2001–034). In 1997–98, they earned 56 percent of such degrees.

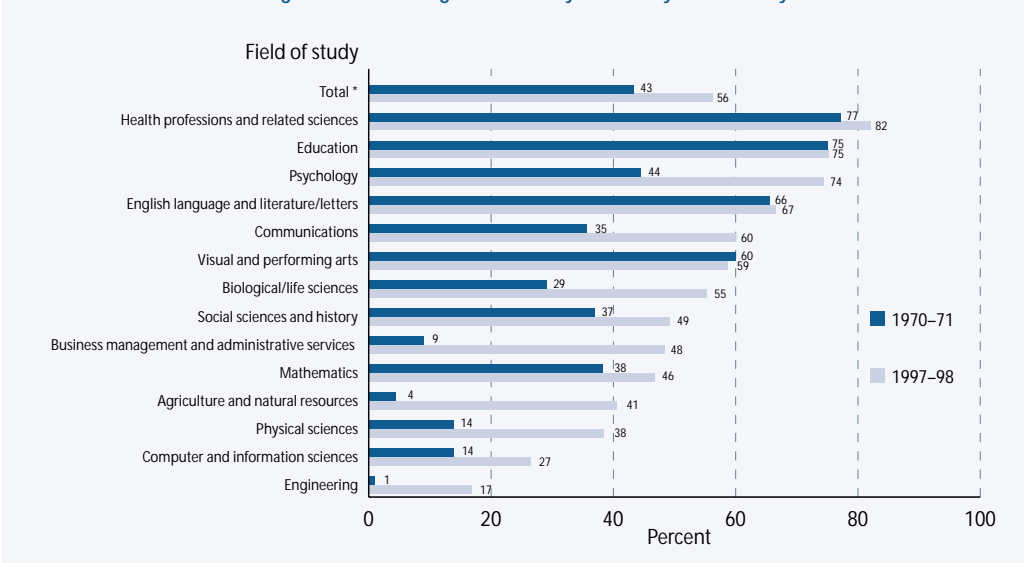
In certain fields (health professions and related sciences, education, English, and visual and performing arts), women earned a majority of bachelor's degrees in both 1970–71 and 1997–98. In other fields (psychology, communications, and biological/life sciences), they earned a majority of the degrees in 1997–98, but not in 1970–71. In business management and administrative services, social sciences and history, and mathematics, women have made modest or considerable gains and now earn almost half of all bachelor's degrees in these fields.

In 1997–98, women still earned considerably less than half the bachelor's degrees in the tra-

ditionally male-dominated fields of agriculture and natural resources (41 percent), physical sciences (38 percent), computer and information sciences (27 percent), and engineering (17 percent). Nevertheless, women have made substantial gains in all of these fields since 1970–71.

Women have made progress at the graduate level as well (see supplemental table 30-1). In 1997–98, women earned 57 percent of master's degrees, up from 40 percent in 1970–71. However, less than one-third of the master's recipients in 1997–98 in computer and information sciences and engineering were women (29 and 20 percent, respectively). At the doctoral level, women earned 42 percent of all degrees in 1997–98, compared with 14 percent in 1970–71. There were six fields in which women received over half of the degrees awarded, and six fields in which they received less than one-third. The percentage of doctoral degrees earned by women ranged from 12 percent in engineering to 68 percent in psychology.

BACHELOR'S DEGREES: Percentage of bachelor's degrees earned by women, by field of study: 1970–71 and 1997–98



*Includes other fields of study not shown separately.

SOURCE: U.S. Department of Education, NCES, Higher Education General Information Survey (HEGIS) 1970–71, "Degrees and Other Formal Awards Conferred" survey and Integrated Postsecondary Education Data System (IPEDS) 1997–98, "Completions" survey.

FOR MORE INFORMATION:
Supplemental Notes 8, 11
Supplemental Table 30-1
NCES 2001–034





Completions

Educational Attainment

Attainment rates among 25- to 29-year-olds increased at all educational levels, for all racial/ethnic groups, and for males and females from 1971 to 2000.

The percentage of 25- to 29-year-olds who completed at least high school rose from 78 percent in 1971 to 88 percent in 2000 (see supplemental table 31-1). Over the same period, the percentage of high school completers in this age group who also completed at least some college increased from 44 to 66 percent (see supplemental table 31-2), and the percentage who obtained a bachelor's degree or higher rose from 22 to 33 percent (see supplemental table 31-3).

From 1971 to 2000, the gap in the rates at which blacks and whites completed at least high school began to close. In 1971, the completion rate of blacks was 23 percentage points less than that of whites, while it was 7 percentage points less than that of whites in 2000. In contrast, the gap in attainment between white and black high school completers with at least some college remained similar, and the gap between blacks and whites who

completed college widened (see supplemental tables 31-1, 31-2, and 31-3).

Among Hispanics, there were increases in completion rates across all levels of education between 1971 and 2000. Nonetheless, the differences in attainment rates between whites and Hispanics remained about the same at every educational level.

Among those ages 25–29 in 1971, females had lower completion rates than males at every educational level above high school. Between 1971 and 2000, however, the educational attainment rates of females increased faster than those of males. By 2000, as a result, females had higher rates than males for completing high school and some college. In addition, there were no differences in the percentages of males and females with a bachelor's degree or higher in that year.

* Included high school completers with some college or a bachelor's degree or higher.

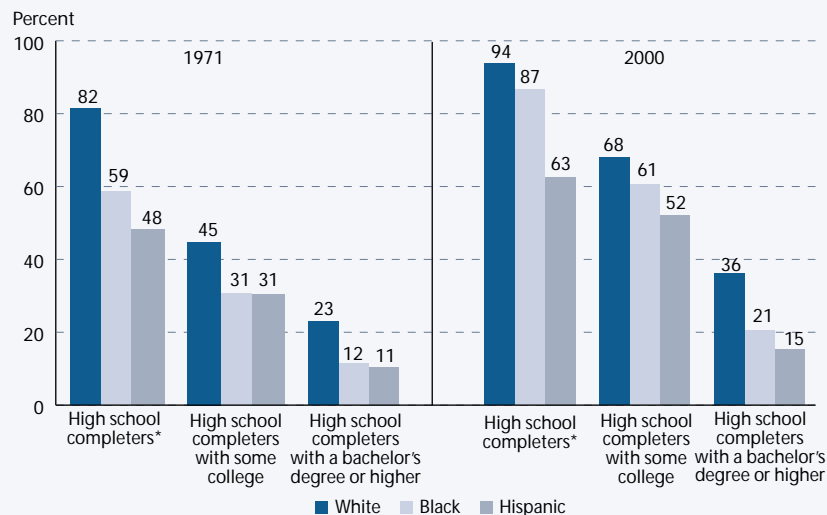
NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. The category "diploma or equivalency certificate" includes those who have a high school diploma or an equivalency certificate; "some college" includes those with an associate's degree or a vocational certificate; and "bachelor's degree or higher" includes those with an advanced degree. In 1994, the survey instrument for the CPS was changed and weights for undercounted populations were adjusted. See *Supplemental Note 2* for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, 1971 and 2000.



FOR MORE INFORMATION:
Supplemental Notes 1, 2
Supplemental Tables 31-1, 31-2, 31-3

EDUCATIONAL ATTAINMENT: Percentage of 25- to 29-year-olds who attained selected levels of education, by race/ethnicity: March 1971 and 2000



Completions

International Comparisons of Educational Attainment

Rates of secondary educational attainment among 25- to 34-year-olds in several G-7 countries have reached a level similar to that in the United States. U.S. higher educational attainment remains higher in both the younger and older populations than in these other countries.

The percentage of the population completing secondary and higher education in other industrialized countries can be used to compare the educational level of the U.S. population with that of its economic competitors. In addition, comparing the levels of educational attainment across age cohorts provides one way of measuring whether education levels in these other countries are increasing, decreasing, or staying the same relative to those in the United States.

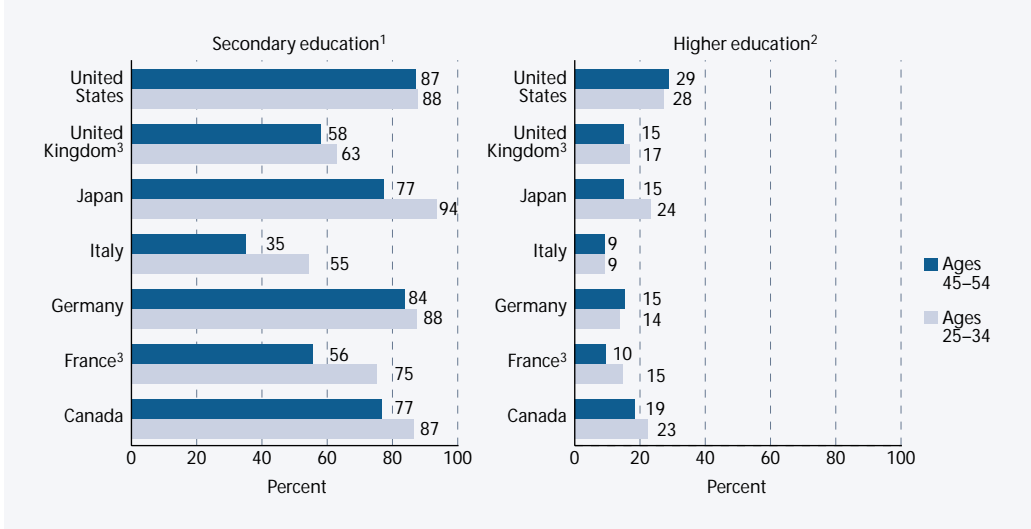
Among the G-7, large industrialized countries, at least 85 percent of adults ages 25–34 in the United States, Canada, Germany, and Japan had completed secondary education in 1998, and 75 percent had done so in France. Only in the United States and Germany did the 45- to 54-year-old cohort attain similarly high completion rates for secondary education. The similarity of the completion rates for 25- to 34-year-olds among all these countries in 1998—along with the lower levels of attainment among 45- to 54-year-olds in the other countries besides the United States and Germany—mean that the skill levels of the entire population ages 25–64 in all four countries could approach or, in Japan, even later ex-

ceed those in the United States (see supplemental table 32-1).

In that same year, the United States ranked first among the G-7 countries in higher educational attainment, with both the younger and older cohorts showing higher completion rates than their peers in the other countries. Japan had the largest difference in the attainment of the younger and older cohorts among all the countries, indicating that in the future the higher educational attainment of its population ages 25–64 may approach or exceed that of the United States.

Finally, the data also show that gaps in educational attainment between males and females have narrowed at both secondary and higher education levels in most G-7 countries. In fact, in the United States, Canada, France, and Italy, females ages 25–34 completed secondary and higher education at higher rates than did their male peers. In contrast, among the older cohorts, the higher education attainment rates were lower for females than males in all G-7 countries, and lower for females at the secondary level among the older cohorts in France and Italy (see supplemental table 32-1).

INTERNATIONAL EDUCATION ATTAINMENT: Percentage of the population in G-7 countries that had completed secondary and higher education, by age and country: 1998



¹Includes individuals who have completed at least upper secondary education.

²Includes individuals who have completed undergraduate programs at 4-year colleges and universities or advanced research programs.

³Not all secondary education programs met minimum criteria required by the International Standard Classification of Education (ISCED).

SOURCE: Organisation for Economic Co-operation and Development, Centre for Educational Research and Innovation. *Education at a Glance: OECD Indicators 2000, 2000.*

FOR MORE INFORMATION:
Supplemental Notes 1, 9
Supplemental Table 32-1



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