

Section 3

Student Effort and Educational Progress





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This List of Indicators includes all the indicators in Section 3 that appear on *The Condition of Education* web site (<http://nces.ed.gov/programs/coe>), drawn from the 2000–2004 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: Student Effort and Educational Progress

The indicators in this section of *The Condition of Education* report on the progress students make through the education system. There are 18 indicators in this section: 6, prepared for this year's volume, appear on the following pages, and all 18, including indicators from previous years, appear on the web (see Web Site Contents on the facing page for a full list of the indicators). Particular attention is paid to how various subgroups in the population proceed through school and attain different levels of education and what factors are associated with their success along the way.

The first two subsections consider the educational aspirations and expectations of students as precursors of their progress through the education system, and the levels of effort they devote to their studies and other activities. The main indicator of these aspirations is the postsecondary expectations of students as 10th-graders. The indicators in this subsection measure students' effort by their patterns of school attendance and the importance they attach to schooling for their future success. Students' use of time has also been described in past indicators.

The remaining subsections trace the progress of students through the education system in a series of stages. In the first stage, students progress through elementary and secondary education to graduation from high school or some alternate form of completion. The main indicator of this progress is the number of students who leave high school (drop out) before completion. Dropouts are measured by event rates (the percentage of students in an age range who leave school in a given year) and status rates (the percentage of students in an age range who are not enrolled in school and who have not completed high school). An indicator on

the following pages shows the event dropout rate by family income, and an indicator on the web site shows the status dropout rate by race/ethnicity.

Next *The Condition* examines the transition to college. The principal indicator of this stage is the percentage of students who make the transition to college within 1 year of completing high school. Other indicators consider how family background, educational risk factors, and other factors such as perceptions of the costs of attendance are associated with students' likelihood of enrolling in college. A new indicator on the following pages compares the rate of first-time enrollment in postsecondary education in the United States to the rates in other countries.

The fourth stage concerns the percentage of students who enter postsecondary education who complete a credential and how much time they take to do so. This stage also includes relationships between the qualifications and characteristics of students who enter postsecondary education and their success in completing a credential.

An overall measure of the progress of the population through the education system is attainment, which is the highest level of education completed by a certain age. The principal indicator of attainment in *The Condition of Education* is the level of attainment by those ages 24–29. Other indicators examine factors related to the level of attainment.

The indicators on student effort and educational progress from previous editions of *The Condition of Education*, which are not included in this volume, are available at <http://nces.ed.gov/programs/coellist/i3.asp>.

Student Attitudes and Aspirations

Postsecondary Expectations of 10th-Graders

In 2002, 9 of 10 students in the 10th grade expected to participate in postsecondary education, and 8 of 10 expected to attain a bachelor's or higher degree.

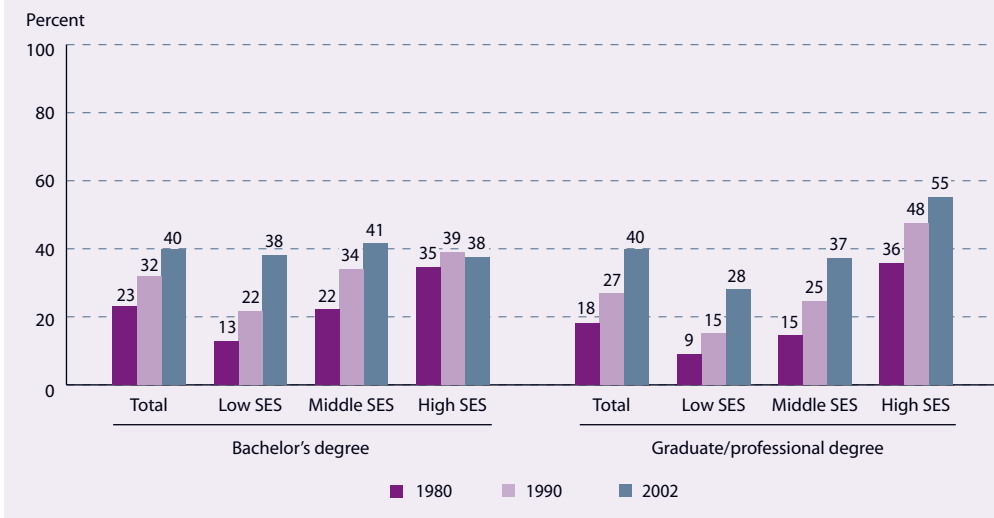
Forty percent of 10th-graders in 2002 expected to complete a bachelor's as their highest degree, and another 40 percent expected to attain a graduate or professional degree. About 11 percent expected some postsecondary education but less than a bachelor's degree (see supplemental table 15-1).

The proportions of 10th-graders who expected to attain bachelor's or higher degrees increased from 1980 to 1990 and again from 1990 to 2002. For example, the proportion of 10th-graders expecting to complete a bachelor's as their highest degree nearly doubled (from 23 to 40 percent), and the proportion aspiring to attain a graduate degree more than doubled (from 18 to 40 percent). The proportions expecting to attain less than a bachelor's degree correspondingly declined. In 1980, 27 percent of 10th-graders said they expected to complete no formal education beyond high school, compared with 9 percent in 2002. Similarly, in 1980, 33 percent expected to participate in postsecondary education but not earn a bachelor's degree, while 11 percent intended to do so in 2002.

Rising aspirations were notable among students from families with low socioeconomic status (SES). In 1980, about 13 percent of such students intended to earn a bachelor's degree, but this figure tripled (to 38 percent) in 2002. The proportion of low-SES students expecting to complete a graduate degree also tripled over this 22-year period (from 9 to 28 percent). In contrast to 1980, by 2002 there was no longer a statistically significant difference in the proportions of low- and high-SES students who expected to earn a bachelor's degree. In 2002, however, low-SES students were half as likely as their high-SES peers to expect to earn a graduate degree.

Many high school students hold high expectations that are not realized by subsequent attainment. Ten years after these 1990 10th-graders stated their expectations, 46 percent had some postsecondary experience but less than a bachelor's degree (compared with 30 percent who had expected that level), 26 percent had completed a bachelor's degree (versus 32 percent), and 3 percent had earned a graduate degree (versus 27 percent).¹

POSTSECONDARY EXPECTATIONS: Percentage of 10th-graders who expected to attain bachelor's or higher degrees, by socioeconomic status (SES): 1980, 1990, and 2002



¹U.S. Department of Education, NCES, National Education Longitudinal Study of 1988 (NELS:88/2000), "Fourth Follow-up, 2000."

SOURCE: Rasinski, K.A., Ingels, S.J., Rock, D.A., Pollack, J.M., and Wu, S.-C. (1993). *America's High School Sophomores: A Ten Year Comparison* (NCES 93-087), table 6.1 (1980 and 1990 data) and previously unpublished tabulation (2002 data). Data from U.S. Department of Education, NCES, High School and Beyond Longitudinal Study of 1980 Sophomores (HS&B-So:80); National Education Longitudinal Study of 1988 (NELS:88/90), "First Follow-up, 1990"; and Education Longitudinal Study of 2002, Base Year (ELS:2002).

FOR MORE INFORMATION:
Supplemental Notes 3, 11
Supplemental Table 15-1





Elementary/Secondary Persistence and Progress

Event Dropout Rates by Family Income, 1972–2001

During the 1970s and 1980s, event dropout rates declined, but rates remained unchanged for all income groups during the 1990s.

Event dropout rates represent the percentage of students who drop out of high school each year. “Dropouts” are those who were enrolled in high school in October but 1 year later had not completed high school and were not enrolled in school. According to this definition, “not completing high school” means they had not earned a diploma or received an alternative credential.¹ In October 2001, 5 percent of students ages 15–24 had dropped out of school since the previous October.

Income is one of a number of factors that may be related to a student’s decision to drop out. Other factors that might be related include a number of individual, family, and school factors such as the student’s academic performance, family mobility, and the types of individuals that attend the student’s school (NCES 2004–057). For this indicator, family income is divided into three groups: the lowest 20 percent of all family incomes, the middle 60 percent, and the highest 20 percent.

During the 12 months ending in October 2001, high school students living in low-income fami-

lies dropped out of school at six times the rate of their peers from high-income families (see supplemental table 16-1). About 11 percent of students from low-income families (the lowest 20 percent) dropped out of high school; by comparison, 5 percent of middle-income students and 2 percent of students from high-income families did so.

Dropout rates on average and for each of these three income groups declined in the 1970s and 1980s. Since 1990, event dropout rates for all income groups have stabilized, with event dropout rates for low-income youth varying between 10 and 13 percent. Event dropout rates for students in middle- and high-income families have also shown no upward or downward trend since 1990, with rates fluctuating between 4 and 6 percent, and 1 and 3 percent, respectively.

Another dropout measure is the status dropout rate.² Since 1972, status dropout rates for Whites and Blacks ages 16–24 have declined, while rates for Hispanics have not decreased and remain higher than those for other racial/ethnic groups (NCES 2003–067, *indicator 17*).

¹Such as one earned by passing the General Educational Development (GED) examination.

²The status dropout rate represents the percentage of an age group that is not enrolled in school and has not earned a high school diploma or equivalent (such as a GED).

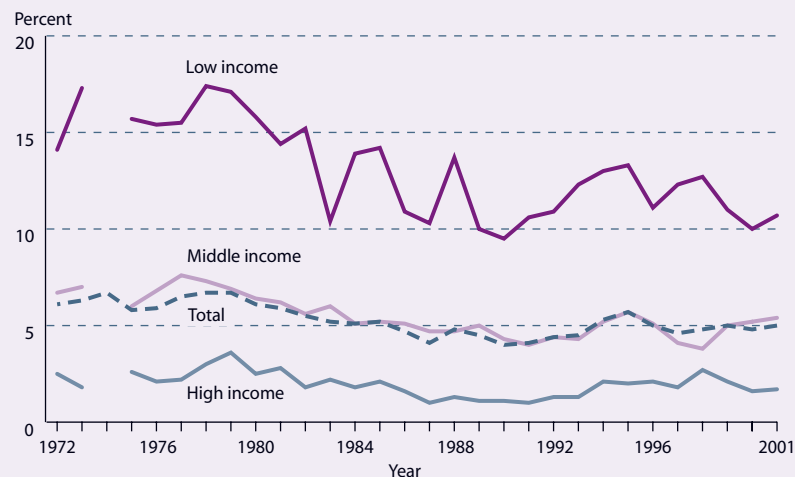
NOTE: The numerator of the event dropout rate for 2001 is the number of people ages 15–24 surveyed in 2001 who were enrolled in high school in October 2000, were not enrolled in October 2001, and had not completed high school by October 2001. The denominator of the event rate is the sum of the dropouts (i.e., the numerator) plus the number of all people ages 15–24 who attended grades 10–12 in 2000 and were still enrolled in 2001 or had graduated or earned a high school credential. See *supplemental note 2* for a more detailed definition of family income. Data on family income are missing for 1974.

SOURCE: Kaufman, P., and Chapman, C. (forthcoming). *Dropout Rates in the United States: 2001* (NCES 2004–057), table A-1. Data from U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October Supplement, 1972–2001.



FOR MORE INFORMATION:
Supplemental Note 2
Supplemental Table 16-1

EVENT DROPOUTS: Event dropout rates of 15- through 24-year-olds who dropped out of grades 10–12, by family income: October 1972–2001



Transition to College

International Comparison of Transition to Postsecondary Education

First-time entry rates into programs that lead to a bachelor's or higher degree increased in many OECD-member countries from 1998 to 2001. In 2001, the U.S. rate was lower than the OECD country average.

Rates of entry into postsecondary education provide an indication of the degree to which a country's population is acquiring higher-level skills and knowledge. The Organization for Economic Cooperation and Development (OECD) calculates these rates for its member countries by adding the entry rates for each single year of age from 15 to 29 and for older students in 5-year age groups. Doing so promotes comparability across countries that have different typical entry ages.¹ In addition, the OECD distinguishes between postsecondary (or tertiary) programs that are based largely on theory and designed to prepare students for advanced research programs or high-skill professions (*tertiary-type A*) and those that focus on occupationally specific skills for direct entry into the labor market (*tertiary-type B*). In the United States, tertiary-type A programs are mostly offered at 4-year institutions and lead to bachelor's degrees. Tertiary-type B programs are often provided at community colleges and lead to associate's degrees.

Among the OECD countries with available data, the average first-time entry rate into tertiary-type A programs rose from 40 percent in 1998 to 47 percent in 2001 (see supplemental table 17-1). Increases occurred in 20 of the 22 OECD countries with data. In 2001, the U.S. first-time entry rate was 42 percent. Australia, Finland, Iceland, New Zealand, Norway, Poland, and Sweden had entry rates of 60 percent or more. Females had higher rates of entry into tertiary-type A programs than males in 19 of the 26 OECD countries, including the United States. In contrast, males had higher entry rates than females in a number of countries (e.g., Japan, Korea, Mexico, and Turkey).

In general, entry rates into tertiary-type B programs are lower than in type A programs. In 2001, the average first-time entry rate into tertiary-type B programs was 15 percent for the 23 OECD countries with data and 13 percent for the United States. Females in many OECD countries, including the United States, had higher entry rates into tertiary-type B programs than males.

TRANSITION TO POSTSECONDARY EDUCATION: First-time net entry rates into postsecondary (tertiary) education for the United States and the OECD country average, by program type and sex: 2001



¹For further details on the calculation of entry rates, see supplemental note 7.

NOTE: Entry rates for tertiary-type A and B programs cannot be combined to obtain the total tertiary-level entry rate because entrants into both types of programs would be double counted. For further details on the classification of postsecondary education programs used in this indicator, see supplemental note 7.

SOURCE: Organization for Economic Cooperation and Development (OECD), Center for Educational Research and Innovation. (2000). *Education at a Glance: OECD Indicators, 2000*, table C3.1, and (2003) *Education at a Glance: OECD Indicators, 2003*, table C2.1. Data from OECD Education Database.

FOR MORE INFORMATION:

Supplemental Note 7

Supplemental Table 17-1





Postsecondary Persistence and Progress

Remediation and Degree Completion

Postsecondary students who take remedial reading are about half as likely as those who take no remedial courses to earn a degree or certificate.

Many students enter postsecondary education underprepared for college-level work. In fall 2000, some 76 percent of postsecondary institutions offered at least one remedial reading, writing, or mathematics course (NCES 2004–010).¹ Postsecondary transcripts of 1992 12th-graders who enrolled in postsecondary education between 1992 and 2000 show that 61 percent of students who first attended a public 2-year and 25 percent who first attended a 4-year institution completed at least one remedial course at the postsecondary level (see supplemental table 18-1). Students who first attended public 2-year institutions were more likely than their peers at 4-year institutions to enroll in a remedial reading course (18 vs. 5 percent) or one or two remedial mathematics courses (16 vs. 7 percent).

Despite assistance offered through remediation, students enrolled in remediation are less likely to earn a degree or certificate. Regardless of the combination of remedial coursework, students who completed any remedial courses were less likely to earn a degree or certificate than students who had no remediation. While 69 percent of 1992 12th-graders who had not enrolled in any postsecondary remedial courses earned a

degree or certificate by 2000, 30 to 57 percent of those who had enrolled in one or more remedial courses had earned a formal award, depending on the types and amount of remediation.

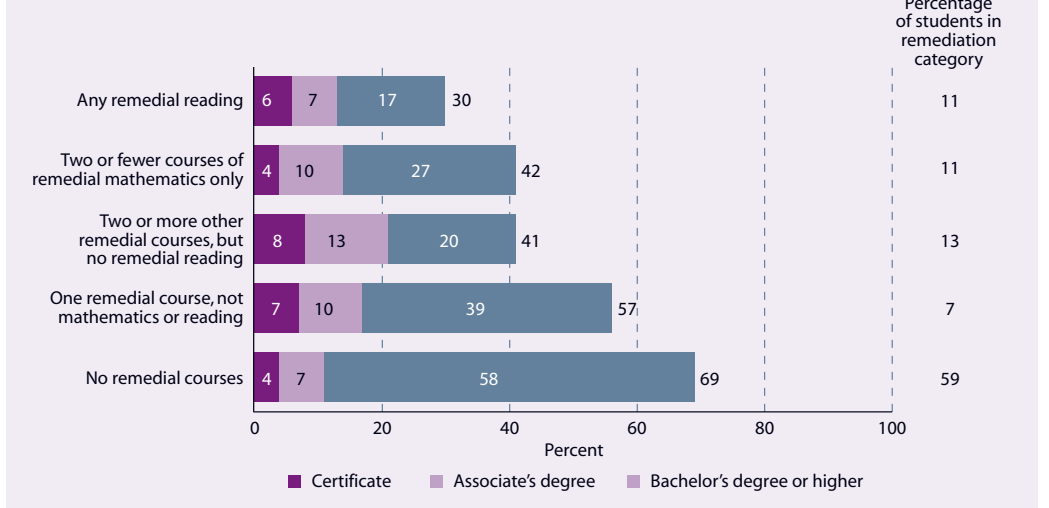
The need for remedial reading appears to be the most serious barrier to degree completion: it is associated with more total remedial coursework and with lower rates of degree attainment than other remedial course-taking patterns. Students who took any postsecondary remedial reading were less likely than their peers who took one or two remedial mathematics courses only or just one remedial course (not mathematics or reading) to complete a bachelor's degree or higher (17 vs. 27 and 39 percent, respectively). They were also less likely than their peers who took any other combination of remedial courses to have earned a formal award (30 vs. 41 to 57 percent) within 8 years of high school graduation. Enrollment in remedial reading is also associated with higher rates of total remediation. Fifty-one percent of students who took any remedial reading enrolled in four or more remedial courses, compared with 31 percent of students who took any remedial mathematics (see supplemental table 18-2).

¹Includes all Title IV degree-granting 2- and 4-year institutions that enrolled freshmen.

NOTE: Data consist of all 12th-graders who subsequently were known participants in postsecondary education. Detail may not sum to totals because of rounding. The estimates in this indicator differ from those in *indicator 31* because the populations differ. This indicator examines a cohort (1992 12th-graders who enrolled in postsecondary education) while *indicator 31* deals with entering freshmen of all ages in 2000.

SOURCE: Adelman, C. (2004). *Principal Indicators of Student Academic Histories in Postsecondary Education, 1972–2000*, table 7.3. Available at: <http://preview.ed.gov/rschstat/research/pubs/prinindicat/index.html>. Data from U.S. Department of Education, NCES, National Education Longitudinal Study of 1988 (NELS:88/2000), "Fourth Follow-up, 2000."

EDUCATIONAL ATTAINMENT OF REMEDIAL COURSETAKERS: Among 1992 12th-graders who enrolled in postsecondary education, percentage who earned a specific degree or certificate, by type and intensity of postsecondary remedial coursework: 2000



FOR MORE INFORMATION:
 Supplemental Notes 1, 3, 6, 8
 Supplemental Tables 18-1,
 18-2
 NCES 2004–010

Postsecondary Persistence and Progress

Trends in Undergraduate Persistence and Completion

While bachelor's degree completion rates have been steady over time, the likelihood of still being enrolled with no degree at the end of 5 years has increased.

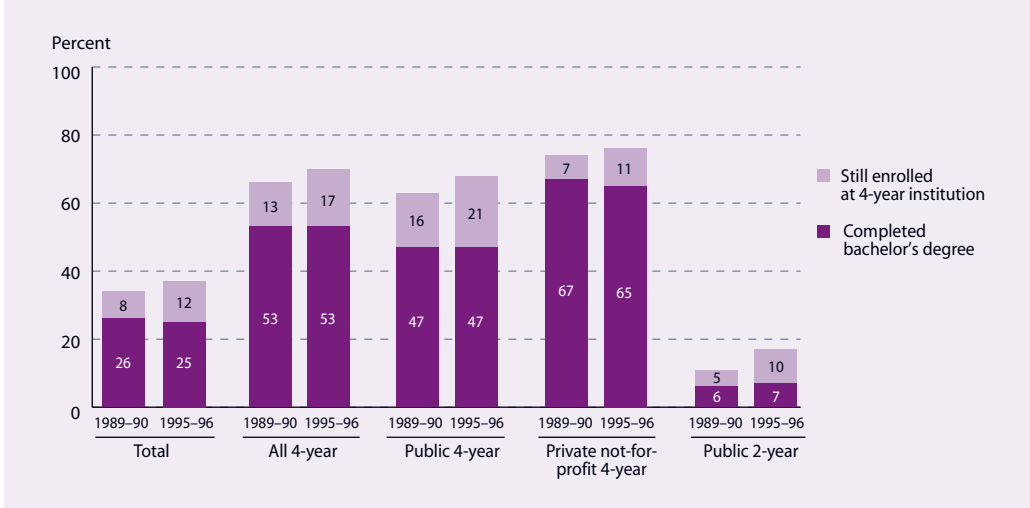
Recent analyses of data based on high school seniors in 1972, 1982, and 1992 suggest that U.S. students' access to college has increased over the last three decades, but rates of completion have not changed (Barton 2002; Adelman 2004). This indicator compares students (regardless of age) who enrolled in postsecondary education for the first time in 1989–90 with those who began in 1995–96. Among students who started at a 4-year college or university, 53 percent of both cohorts had completed a bachelor's degree at the end of 5 years. However, the later cohort was more likely than the earlier one to have no degree but still be enrolled (17 vs. 13 percent) and also less likely to have left postsecondary education without a degree (20 vs. 24 percent) (see supplemental table 19-1). The remaining students either earned an associate's degree or vocational certificate or were enrolled at a 2-year or less-than-2-year institution.

Among students who first enrolled in a public 2-year college, the likelihood of being enrolled in a 4-year institution at the end of 5 years also increased (from 5 to 10 percent). That is, for students who started at a community college, those

who began in 1995–96 were more likely than their counterparts who started in 1989–90 to be still enrolled and working toward a bachelor's degree after 5 years. At the same time, however, community college students who first enrolled in 1995–96 were less likely than their peers who first enrolled in 1989–90 to have acquired a vocational certificate (9 vs. 13 percent).

Considering all students, regardless of where they started, the likelihood of being enrolled in a 4-year institution at the end of 5 years increased for students at all income levels, for both men and women, and for White students (see supplemental table 19-2). A similar apparent increase for other racial/ethnic groups could not be confirmed statistically. At the same time, no measurable differences were detected in the bachelor's degree completion rates for any of these groups. In other words, although students in the later cohort were not more successful than those in the earlier cohort in earning a bachelor's degree within 5 years, they were more likely to be still enrolled in a 4-year institution if they had not completed their undergraduate education.

FIVE-YEAR UNDERGRADUATE COMPLETION AND PERSISTENCE: Percentage of 1989–90 and 1995–96 beginning postsecondary students who had completed a bachelor's degree or were still enrolled in a 4-year institution at the end of 5 years, by type of first institution and year first enrolled



NOTE: Total includes private not-for-profit 2-year and less-than-2-year institutions and public less-than-2-year institutions.

SOURCE: Horn, L., and Berger, R. (forthcoming). *College Persistence on the Rise? Changes in 5-Year Degree Completion and Postsecondary Persistence Between 1994 and 2000* (NCES 2004–156), table 5-A. Data from U.S. Department of Education, NCES, 1989/90 and 1995/96 Beginning Postsecondary Students Longitudinal Studies (BPS:90/94 and BPS:96/01).

FOR MORE INFORMATION:

Supplemental Notes 1,3,8
Supplemental Tables 19-1, 19-2

Adelman 2004

Barton 2002





Completions

Degrees Earned by Women

Women have earned more than half of all bachelor's degrees every year since 1981–82. They still trail men in certain fields but have made substantial gains since 1970–71.

Women earn a greater number and proportion of bachelor's degrees than they did 30 years ago. Between 1970–71 and 2001–02, the number of bachelor's degrees that women earned more than doubled, from 364,100 to 742,100 (see supplemental table 20-1). Women earned 43 percent of all bachelor's degrees in 1970–71, but every year since 1981–82, they earned at least half of all bachelor's degrees awarded (NCES 2003–060, table 246). In 2001–02, women were awarded 57 percent of all bachelor's degrees.

Some traditionally female-dominated fields remain so. Women earned a majority of the bachelor's degrees awarded in health professions and related sciences, education, English language and literature/letters, and visual and performing arts in both 1970–71 and 2001–02. In each field, the percentage of degrees awarded to women either increased or remained about the same.

In other fields (psychology, social sciences and history, communications, biological sciences/life sciences, and business), women earned less than half of the bachelor's degrees awarded in 1970–71 but earned at least half by 2001–02. The greatest gains generally occurred between 1970–71 and 1984–85, particularly in business, but the propor-

tion of degrees awarded to women continued to grow between 1984–85 and 2001–02.

In 2001–02, women earned less than half of the bachelor's degrees in the traditionally male-dominated fields of mathematics (47 percent), agriculture and natural resources (46 percent), physical sciences (42 percent), computer and information sciences (28 percent), and engineering (21 percent). Nonetheless, women have made substantial gains in all these fields since 1970–71, particularly between 1970–71 and 1984–85.

Women have also made gains at the graduate level. In 2001–02, women earned 59 percent of master's degrees, compared with 50 percent in 1984–85 and 40 percent in 1970–71. At the doctoral level, women earned 46 percent of all degrees in 2001–02, up from 34 percent in 1984–85 and 14 percent in 1970–71. Women earned less than half of master's and doctoral degrees in agriculture and natural resources, mathematics, business, physical sciences, computer and information sciences, and engineering but have made substantial gains in all of those fields over the past 30 years (see supplemental tables 20-2 and 20-3).

¹Includes other fields not shown separately.

NOTE: Based on data from all degree-granting institutions. See *supplemental note 10* for more detail.

SOURCE: U.S. Department of Education, NCES. (2003). *Digest of Education Statistics 2002* (NCES 2003–060), tables 246, 276–297 and (forthcoming) *Digest of Education Statistics 2003* (NCES 2004–024), tables 265, 268, and 271. Data from U.S. Department of Education, NCES, 1969–86 Higher Education General Information Survey (HEGIS), “Degrees and Other Formal Awards Conferred” and 1987–2002 Integrated Postsecondary Education Data System, “Completions Survey” (IPEDS-C:87–02), fall 2002.



FOR MORE INFORMATION:
Supplemental Notes 3, 10
Supplemental Tables 20-1,
20-2, 20-3

BACHELOR'S DEGREES: Percentage of bachelor's degrees earned by women and change in the percentage earned by women from 1970–71 to 2001–02, by field of study: 1970–71, 1984–85, and 2001–02

Field of study	1970–71	1984–85	2001–02	Change in percentage points		
				1970–71 to 1984–85	1984–85 to 2001–02	1970–71 to 2001–02
Total¹	43.4	50.7	57.4	7.4	6.7	14.1
Health professions and related sciences	77.1	84.9	85.5	7.8	0.6	8.4
Education	74.5	75.9	77.4	1.3	1.5	2.9
English language and literature/letters	65.6	65.9	68.6	0.3	2.7	3.0
Visual and performing arts	59.7	62.1	59.4	2.4	-2.7	-0.3
Psychology	44.4	68.2	77.5	23.7	9.3	33.1
Social sciences and history	36.8	44.1	51.7	7.3	7.6	14.9
Communications	35.3	59.1	63.5	23.8	4.4	28.2
Biological sciences/life sciences	29.1	47.8	60.8	18.7	13.0	31.7
Business	9.1	45.1	50.0	36.0	4.9	40.9
Mathematics	37.9	46.2	46.7	8.3	0.5	8.8
Physical sciences	13.8	28.0	42.2	14.2	14.2	28.4
Computer and information sciences	13.6	36.8	27.6	23.2	-9.2	14.0
Agriculture and natural resources	4.2	31.1	45.9	26.9	14.8	41.6
Engineering	0.8	13.1	20.7	12.3	7.6	19.9