ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences

Early Millennials: The Sophomore Class of 2002 a Decade Later

Statistical Analysis Report

NCES 2017-437

U.S. DEPARTMENT OF EDUCATION

This page intentionally left blank

Early Millennials: The Sophomore Class of 2002 a Decade Later

Statistical Analysis Report

JUNE 2017

Xianglei Chen
Erich Lauff
Caren A. Arbeit
Robin Henke
Paul Skomsvold
Justine Hufford
RTI International

Elise Christopher
Project Officer
National Center for Education Statistics

NCES 2017-437
U.S. DEPARTMENT OF EDUCATION

ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences

U.S. Department of Education
Betsy DeVos
Secretary

Institute of Education Sciences
Thomas W. Brock
Commissioner for Education Research Deputy Director for Policy and Research
Delegated the Duties of the Director

National Center for Education Statistics
Peggy G. Carr
Acting Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high-priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high-quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public. Unless specifically noted, all information contained herein is in the public domain.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to

NCES, IES, U.S. Department of Education
Potomac Center Plaza
550 12th Street, SW
Washington, DC 20202

June 2017

The NCES Home Page address is http://nces.ed.gov.
The NCES Publications and Products address is http://nces.ed.gov/pubsearch.

This publication is only available online. To download, view, and print the report as a PDF file, go to the NCES Publications and Products address shown above.

This report was prepared for the National Center for Education Statistics under Contract No. ED-07-CO-0104 with RTI International. Mention of trade names, commercial products, or organizations does not imply endorsement by the U.S. Government.

Suggested Citation
Chen X., Lauff, E., Arbeit, C.A., Henke, R., Skomsvold, P., and Hufford, J. (2017). *Early Millennials: The Sophomore Class of 2002 a Decade Later* (NCES 2017-437). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [date] from http://nces.ed.gov/pubsearch/.

Content Contact
National Center for Education Statistics
els2002@ed.gov
(800) 677-6987

Executive Summary

This Statistical Analysis Report tracks a cohort of 2002 high school sophomores[1] over 10 years, examining the extent to which cohort members had reached such life course milestones as finishing school, starting a job, leaving home, getting married, and having children. The analyses in this report are based on data from the Education Longitudinal Study of 2002 (ELS:2002), a multifaceted survey sponsored by the U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (NCES) and designed to study the 2002 sophomore cohort's transition from adolescence to adulthood. Launched in spring 2002, ELS:2002 started with a nationally representative sample of more than 15,000 high school sophomores from public and private high schools across the United States. Over the next 10 years, these sample members were resurveyed three times—in 2004, 2006, and 2012. The final (2012) data collection occurred at a key stage of life for the 2002 sophomore cohort—most members were 26 years old and had been out of high school for 8 years, and many also had completed postsecondary education and formally entered the labor market (Lauff and Ingels 2014).

Born in the mid-1980s, members of the 2002 sophomore cohort grew up in a tumultuous period of recent history. The "dot-com bubble" of 1997–2000 burst just as most were entering high school. The terrorist attacks of September 11, 2001 occurred when these students had just started their sophomore year in high school. When the Great Recession hit in 2007–08, most cohort members were turning 22 years old, and many were in college or completing postsecondary certificates or degrees. During the next few years, the U.S. economy saw rising unemployment rates, declining earnings, and growing numbers of people living in poverty (DeNavas-Walt, Proctor, and Smith 2013). Although the long-term consequences of these economic trends are not yet fully assessed, they may be especially hard for those (including many members of the 2002 sophomore cohort) who were finishing college and entering the job market during and immediately after the recession (Bell and Blanchflower 2011; Hoynes, Miller, and Schaller 2012).

In addition to their place in the larger historical context, 2002 high school sophomores came of age during a period of change in postsecondary education. The past decades witnessed an upward trend in postsecondary enrollment and attainment

[1] This report refers to these cohort members as *10th-graders*, *2002 sophomores*, or simply *sophomores* interchangeably.

(Snyder, de Brey, and Dillow 2016), and the cost of attending college has skyrocketed (Dynarski and Scott-Clayton 2013). Today, large proportions of young people have to borrow money to pay for their postsecondary education, and many leave college with high levels of debt (Avery and Turner 2012; Woo 2013). There is widespread concern that high levels of education debt, especially among those who left college during and after the recent recession, may undermine students' ability to pursue further education, achieve financial independence, and start families (Barrow, Brock, and Rouse 2013; Rothstein and Rouse 2011; Zhang 2013).

Nevertheless, members of this cohort had high expectations for their future education. As sophomores, 9 in 10 students expressed a desire to attend postsecondary education after high school, and close to three-quarters expected to complete a 4-year-college or higher degree (Ingels et al. 2005). Large proportions of cohort members also placed great significance on their future work and family life: 84 percent rated being able to find a steady job as very important, and 80 percent thought that marrying and having a happy family life were very important.

This study is designed to examine the extent to which 2002 high school sophomores achieved various milestones of early adulthood as of 2012, including high school completion, entrance into postsecondary education, progress toward or completion of a postsecondary credential, family formation, and employment and earnings. Specifically, the study addresses the following questions:

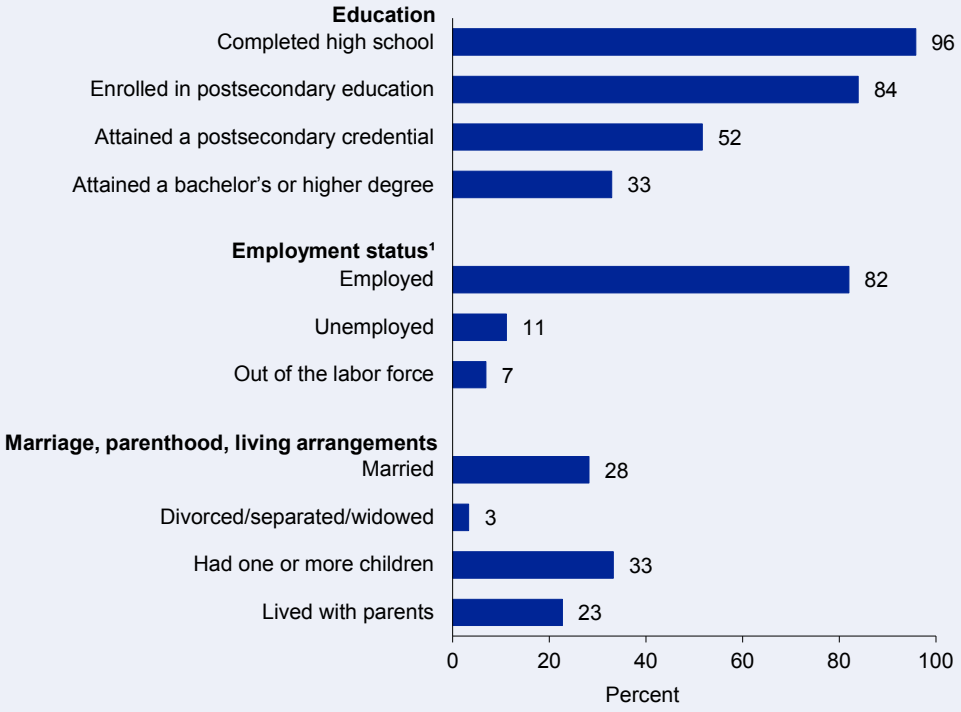
- Where did 2002 high school sophomores stand a decade later in education, the labor market, and family formation?
- Did 2002 sophomores from different demographic backgrounds and with different academic characteristics in high school achieve the same or different outcomes in these areas?
- Did various demographic and high school academic characteristics have unique associations with 2002 sophomores' later outcomes in education and the labor market when other factors were taken into account?
- How did 2002 sophomores who achieved various levels of education—from not completing high school through post-baccalaureate attainment—fare in the labor market in 2012?

This study addresses these questions by analyzing longitudinal data from ELS:2002. Key findings from this study are summarized below.

Status of 2002 High School Sophomores a Decade Later

By 2012, the year when most 2002 high school sophomores turned 26 years old, the majority of cohort members had completed high school (96 percent) by earning a regular diploma, passing a General Educational Development (GED) certificate test, or obtaining other high school equivalency such as a certificate of attendance. Many members had also made the transition to postsecondary education (84 percent) (figure A). As of 2012, about one-half of cohort members had earned a postsecondary certificate or degree. One-third of all cohort members had earned a bachelor's or higher degree by 2012.

Figure A.
Percentage of spring 2002 high school sophomores who achieved selected outcomes: 2012



[1] Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work.

NOTE: Estimates and standard errors are available in tables C-2a, C-2b, C-4a, C-4b, C-7a, C-7b, C-11a, C-11b, C-12a, C-12b, C-13a, C-13b, C-14a, C-14b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

The majority of 2002 sophomores (93 percent) were in the workforce in 2012—82 percent were employed and 11 percent were unemployed but looking for jobs—and 7 percent were out of the labor force.[2]

Fewer cohort members had taken on such adult roles as spouse and parent, however. By 2012, some 31 percent had married—28 percent were currently married and 3 percent had subsequently divorced, separated, or become widowed. Overall, one-third of cohort members had become parents as of 2012. Some 23 percent were living with their parents in 2012.

Subgroup Differences in Educational Attainment, Employment, and Earnings a Decade Later

The achievement of these milestones varied among subgroups of the cohort. In general, cohort members from advantaged backgrounds (e.g., students from high-socioeconomic status [SES] families;[3] those who demonstrated strong academic preparation via their coursetaking and performance in high school) tended to have higher educational attainment, employment rates, and earnings. To better understand subgroup differences, this study selects three 2012 outcomes—highest educational attainment, employment status, and hourly wages for 2012 jobs—and uses multivariate techniques to examine the unique association between various factors and each of these outcomes after controlling for other factors. Key findings from the multivariate analyses are summarized below.

Sex

The multivariate results show that female students had a higher probability of earning a master's or other advanced degree and a lower probability of attending college without earning any postsecondary credential as of 2012 than did their male counterparts, even after controlling for a range of factors including race/ethnicity, family SES, the type of family arrangement (single- vs. two-parent) in which students lived in 10th grade, the language students first learned to speak, students' educational expectations, and their academic experiences in high school (table A).

---

[2] ELS:2002 used the federal definitions of *employed*, *unemployed*, and *out of the labor force* (Bureau of Labor Statistics 2014). Specifically, persons are classified as *employed* if they currently have a job; *unemployed* if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or *out of the labor force* if they are neither working nor looking for work.

[3] The family SES measure used in this report combines information about parents' education, occupation, and income. See appendix A for more information about this variable.

Table A.
Selected subgroup differences in the probability of 2002 high school sophomores achieving various levels of education after controlling for other factors in multivariate regression analysis: 2012

Selected subgroups	Subgroup difference in the probability of achieving the following level of education in 2012[1]: Received some college education but no postsecondary credential	Earned an undergraduate certificate or associate's degree	Earned a bachelor's degree	Earned a master's or higher degree
Demographic characteristics				
Female vs. male	<	>	ns	>
Black vs. White	ns	ns	ns	ns
Hispanic vs. White	ns	ns	ns	ns
Asian vs. White	ns	ns	ns	ns
High- vs. low-SES family	ns	<	>	>
High- vs. middle-SES family	ns	<	>	>
High school academic characteristics				
Expected master's/higher degree vs. high school education/less	ns	ns	>	>
Expected master's/higher degree vs. some college	ns	<	>	>
Had low vs. high academic risk[2]	ns	<	>	>
Had low vs. high disengagement with school[3]	ns	ns	ns	ns
Completed rigorous vs. below-standard curriculum[4]	ns	ns	ns	>
Took calculus vs. no/low-level math[5]	<	ns	>	>
Took advanced vs. no/low-level science[6]	ns	ns	>	>
Earned an academic GPA of 3.5–4.0 vs. below 3.0	<	<	>	>

[1] Each row represents the difference between the first group (e.g., female) and its counterpart (e.g., male) in the probability of achieving a particular level of education after controlling for other factors in the multivariate regression model. The symbol "ns" indicates that the difference is not significant. The symbol ">" indicates that the difference is significant, with the first group surpassing its counterpart (e.g., female > male). The symbol "<" indicates that the difference is significant, with the first group being surpassed by its counterpart (e.g., female < male).

[2] Academic risk is a composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[3] School disengagement is a composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[4] Rigor of curriculum is a composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language that are reported on students' high school transcripts. See appendix A for detailed information about this variable.

[5] Low-level math includes basic math and pre-algebra.

[6] Advanced science includes chemistry II, physics II, and advanced biology. Low-level science includes primary physical science, secondary physical science, and basic biology.

NOTE: Results in this table are based on a multinomial probit regression predicting the probability of 2002 high school sophomores achieving various levels of education as their highest educational attainment as of 2012. The regression includes the following independent variables: sex, race/ethnicity, family socioeconomic status, language student first spoke, type of family in which student lived in 10th grade, student's educational expectation in 10th grade, academic risk in 10th grade, school disengagement in 10th grade, rigor of high school curriculum, highest math and science courses taken in high school, GPA earned in academic subjects in high school, and 10th-grade school sector. See table 17 for detailed results.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Despite their higher educational achievement, females appeared to have more obstacles than males when entering the labor market: females were more likely than males to be unemployed, out of the labor force, or working part time in 2012, even after controlling for various factors (table B). Employed females also earned a lower hourly wage in their 2012 job than did employed males, even under similar circumstances with respect to demographic and academic characteristics, educational attainment, occupational field, work intensity, region of residence, current enrollment status, and current marital and parenthood status.

Table B.
Selected subgroup differences in the probability of being out of the labor force, unemployed, or employed part time, and in the hourly wage for current job after controlling for other factors in multivariate regression analysis: 2012

Selected subgroups	Subgroup difference in the probability of being[1,2] Out of the labor force	Unemployed	Employed part time	Subgroup difference in hourly wage for 2012 job[1]
Demographic characteristics				
Female vs. male	>	>	>	<
Black vs. White	<	>	ns	ns
Hispanic vs. White	<	ns	ns	ns
Asian vs. White	>	>	ns	>
High- vs. low-SES family	ns	ns	ns	>
High- vs. middle-SES family	>	ns	ns	>
High school academic characteristics				
Had low vs. high academic risk[3]	ns	ns	ns	>
Had low vs. high disengagement with school[4]	ns	ns	>	ns
Completed rigorous vs. below-standard curriculum[5]	ns	ns	ns	ns
Took calculus vs. no/low-level math[6]	ns	<	ns	>
Took advanced vs. no/low-level science[7]	ns	ns	ns	ns
Earned an academic GPA of 3.5–4.0 vs. below 3.0	ns	ns	ns	>
Highest educational attainment in 2012				
Attained a master's/higher degree vs. high school education/less	<	ns	ns	>
Attained a bachelor's degree vs. high school education/less	<	ns	ns	>
Attained a certificate/associate's degree vs. high school education/less	<	ns	ns	>
Other 2012 status				
Enrolled vs. not enrolled in postsecondary education	>	ns	>	<
Married vs. single (never married)	>	<	<	>
Had one or more vs. no children	>	>	ns	ns

[1] Each row represents the difference between the first group (e.g., female) and its counterpart (e.g., male) in the probability of achieving a labor market participation outcome or in hourly wage for 2012 job after controlling for various factors in the multivariate regression model. The symbol "ns" indicates that the difference is not significant. The symbol ">" indicates that the difference is significant, with the first group surpassing its counterpart (e.g., female > male). The symbol "<" indicates that the difference is significant, with the first group being surpassed by its counterpart (e.g., female < male).

[2] Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work.

[3] Academic risk is a composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[4] School disengagement is a composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[5] Rigor of curriculum is a composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language that are reported on students' high school transcripts. See appendix A for detailed information about this variable.

[6] Low-level math includes basic math and pre-algebra.

[7] Advanced science includes chemistry II, physics II, and advanced biology. Low-level science includes primary physical science, secondary physical science, and basic biology.

NOTE: Results in this table are based on two multivariate regressions. The first is a multinomial probit regression predicting the probability of 2002 high school sophomores having various labor market participation outcomes in 2012. The second is an ordinary least squared regression predicting employed cohort members' hourly wage in their 2012 job. Both regressions include the following independent variables: sex, race/ethnicity, family socioeconomic status, language student first spoke, type of family in which student lived in 10th grade, academic risk in 10th grade, school disengagement in 10th grade, rigor of high school curriculum, highest math and science courses taken in high school, GPA earned in academic subjects in high school, 10th-grade school sector, highest educational attainment in 2012, postsecondary enrollment status in 2012, region of residence in 2012, marital status in 2012, and parenthood status in 2012. The regression on hourly wage includes two additional independent variables: job intensity in 2012 and occupational field for 2012 job. See tables 18 and 19 for detailed results.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Race/Ethnicity

The multivariate analysis reveals no significant differences between students from various racial/ethnic subgroups and their White counterparts in terms of educational attainment in 2012 after controlling for sex, family SES, the type of family arrangement in which students lived in 10th grade, the language students first learned to speak, students' educational expectations, and their academic experiences in high school (table A). In other words, among students with similar socioeconomic and academic backgrounds, Blacks, Hispanics, and Asians in the 2002 sophomore cohort had a similar probability of attaining various levels of education as of 2012 relative to their White peers.

As for labor market outcomes, the multivariate results show that Whites had a higher probability than Blacks and Hispanics of being out of the labor force and had a lower probability than Blacks of being unemployed in 2012, but once employed, the gaps in hourly wages between these groups were not evident (table B). The pattern for Asians was different: Asians were more likely than Whites to be unemployed or out of the labor force in 2012; but once employed, Asians had higher hourly wages than did Whites.

Family Socioeconomic Status

The multivariate analysis indicates that students from low- or middle-SES families had a higher probability of earning a subbaccalaureate credential as of 2012, while their counterparts from high-SES families had a higher probability of earning a bachelor's or higher degree (table A).

With respect to labor market outcomes, family SES was generally not uniquely associated with employment status, but it did demonstrate unique associations with hourly wages (table B). Employed cohort members from high-SES family backgrounds earned higher hourly wages in their 2012 job than did their counterparts from low- or middle-SES backgrounds after controlling for such factors as educational attainment, occupational field, job intensity, region of residence, other demographic characteristics (e.g., sex, race/ethnicity, and language first spoken), high school academic experiences and current status in school enrollment, marriage, and parenthood.

High School Academic Experiences

High school academic experiences—particularly math and science coursetaking, academic performance, educational expectations, and academic risk[4]—were significantly associated with 2002 sophomores' later educational attainment (table A). For example, after controlling for other factors in the multivariate analysis, 2002 sophomores who expected to attain a master's or higher degree, who took calculus and advanced science courses in high school, who earned an academic GPA[5] of 3.5 or higher, or who exhibited a low risk of academic failure while in 10th grade were more likely to have earned a bachelor's or higher degree a decade later than were their corresponding counterparts who expected to complete high school at most, took no or low-level math and science courses in high school, earned an academic GPA of below 3.0, or exhibited a high risk of academic failure in 10th grade.

Some of these high school characteristics were also associated with sophomores' labor market outcomes in 2012, particularly hourly wages (table B). The multivariate analysis shows that employed cohort members who took calculus in high school earned higher hourly wages in their 2012 job than did their counterparts who took no or low-level math courses even after controlling for a range of factors in the model. Employed cohort members who exhibited a low risk of academic failure while in 10th grade also earned higher hourly wages for their 2012 jobs than did their peers with high risk of academic failure. High school grade was another significant factor: independent of educational attainment, job characteristics, demographic backgrounds, other high school academic variables, and current status in school enrollment, marriage, and parenthood, employed cohort members who earned an academic GPA of 3.5 or higher in high school earned higher hourly wages in their 2012 jobs than did their peers with an academic GPA of below 3.0.

Educational Attainment and Labor Market Outcomes

Educational attainment was associated with labor market outcomes, even after controlling for many factors related to the outcomes. For example, cohort members who completed a postsecondary credential had a lower probability of being out of the labor force in 2012 than did those who just completed high school or less (table B). Employed cohort members with a postsecondary credential earned higher hourly wages than did those with only a high school credential at most. For example, even after controlling for differences in demographic and academic characteristics,

---

[4] Academic risk is a composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for a detailed discussion of the construction of this variable.

[5] Average GPA accumulated since grade 9 in academic subjects including English, mathematics, science, social sciences, foreign language, and arts. See appendix A for more information about this variable.

job classification, work intensity, region of residence, and current status in school enrollment, marriage, and parenthood, employed master's or advanced degree holders earned a significantly higher hourly wage in their 2012 job than did those who completed only a high school education or less ($21 vs. $15, see table 19).

Coming of Age: Other Experiences

During the transition to young adulthood, 2002 high school sophomores experienced some outcomes that may reflect or be the consequences of historical events, economic circumstance, and larger social trends at the turn of the century. These outcomes are highlighted below. Readers should note that, unlike the findings presented in the preceding section, these analyses reflect bivariate relationships and do not control for other factors.

Borrowing for Postsecondary Education

To cope with rising college costs, many young people rely on student loans to pay for their postsecondary education (Avery and Turner 2012; Dynarski and Scott-Clayton 2013). Among 2002 high school sophomores who subsequently enrolled in postsecondary education, 60 percent reported taking out a student loan to pay for their postsecondary education, and, on average, they had borrowed a total of $30,000 as of 2012 (see table 8).

Borrowing was more prevalent among female students than male students (63 percent vs. 57 percent), among Black students than those from other racial/ethnic subgroups (67 percent vs. 55–60 percent), among students from middle-SES families (62 percent) than those from low- and high-SES families (58 and 59 percent, respectively), and among those who first attended private institutions (75 percent for both private nonprofit 4-year institutions and for-profit institutions) than those who first attended public institutions (65 percent for those who first attended public 4-year institutions and 48 percent for those who first attended public 2-year institutions).

Student loan debt had various effects on employment: 25 percent of borrowers said that because of their student loan debt, they had to work at more than one job at the same time, 34 percent took a less desirable job, 36 percent worked more hours than desired, and 37 percent worked outside their field of study (see figure 10). The percentages of students who reported these effects generally increased with their cumulative loan amount.

Students Who First Enrolled in Public 2-year Institutions

Among members of the 2002 sophomore cohort who entered postsecondary education after high school, 36 percent chose a public 2-year institution to start their postsecondary education (see figure 7). By 2012, some 34 percent of these students had left college without a degree or certificate (see table C-7a). While 47 percent of students who began at public 2-year institutions had earned a postsecondary credential by 2012, most of their credentials (30 percent) were at the subbaccalaureate level (i.e., undergraduate certificates or associate's degrees); and just 17 percent had earned a bachelor's or advanced degree. In comparison, educational attainment among students who first enrolled in public 4-year institutions or private nonprofit 4-year institutions was much higher: by 2012, at least 72 percent of students in these two groups had earned a postsecondary credential, most of which were at the bachelor's or advanced level, and about 15 percent had left college without earning a postsecondary credential (see table C-7a).

Marriage and Parenthood

Leaving home and starting a family are traditional milestones of adulthood (Settersten, Furstenberg, and Rumbaut 2005). Relative to earlier generations, recent generations have delayed these traditional milestones (Cherlin 2005; Furstenburg 2010; Sawhill 2014). In 2012, when most 2002 high school sophomores had reached their mid-20s, 31 percent of cohort members had married and 33 percent had at least one child (see figures 11 and 12). Among 1988 eighth-graders, 46 percent had married and 41 percent had at least one child when most of them reached their mid-20s, in 2000 (Ingels et al. 2002).

Proportionally more females than males were married (31 percent vs. 26 percent) and had children in 2012 (40 percent vs. 26 percent). Although a higher percentage of Whites (32 percent) than all other racial/ethnic subgroups (14–29 percent) were married in 2012, a lower proportion of Whites and Asians than other racial/ethnic subgroups had children (29 percent of Whites and 13 percent of Asians vs. 47 percent of Blacks, 43 percent of Hispanics, and 37 percent of those whose race/ethnicity was categorized as "other").

Marriage and childbearing rates were also related to educational attainment. For example, about 51 percent of bachelor's or higher degree holders were single and never married in 2012, compared with 40–46 percent of those with less education. About 70 percent of those who lacked a high school credential and 53 percent of those who had a high school education had children in 2012, compared with 13 percent of bachelor's degree holders and 9 percent of master's or higher degree holders.

Cohabiting

Cohabitation (i.e., living with a partner) has become an increasingly common alternative to marriage among young people (Settersten and Ray 2010). Among the 2002 sophomore cohort, 23 percent were cohabiting in 2012 (see figure 11); as background, just 1 percent of the 1988 eighth-grade cohort members were cohabiting in 2002 when most of them were 26 years old (Ingels et al. 2002). Cohabitation was most common among cohort members with less than a high school education: 31 percent versus 19–26 percent among those with higher levels of educational attainment.

Living With Parents

Besides cohabitation, increasing numbers of young people have been living with their parents into their 20s and beyond, and men were more likely than women to do so (Aud, KewalRamani, and Frohlich 2011; Settersten and Ray 2010). In 2014, living with parents became the most common living arrangement for young adults ages 18 to 34 for the first time since the 1960s (Fry 2016). Among 2002 sophomores, 23 percent were living with their parents in 2012, and doing so was more common among males than females (25 percent vs. 21 percent); Blacks, Hispanics, and Asians than Whites (28–39 percent vs. 18 percent); those from low-SES families than those from high- or middle-SES families (26 percent vs. 18 percent and 22 percent, respectively); and those who had only a high school education or less compared with master's or advanced degree holders (27–28 percent vs. 15 percent) (see table 9).

Military Service

Six percent of 2002 sophomores reported having ever served in the military as of 2012 (see figure 17). Significantly more men than women served in the military (10 percent vs. 2 percent). Military service was more prevalent among cohort members with lower levels of educational attainment: about 7 percent of those with a high school diploma or an associate's degree and 10 percent of those who had some postsecondary education but had not yet earned a postsecondary credential have served in the military, compared with 3 percent of those with a bachelor's degree and 2 percent of those with a master's or higher degree (see table 10). Other key demographic characteristics such as race/ethnicity, family SES, and most high school academic characteristics, however, did not appear to be related to military service among the 2002 sophomore cohort.

Unemployment Since 2009

The Great Recession of 2007–09 resulted in the highest U.S. unemployment rates since 1983 (DeNavas-Walt, Proctor, and Smith 2013). The 2012 survey of ELS:2002

asked sample members about their unemployment history during 2009–12, a time period generally considered to be post recession but still characterized by high unemployment rates, particularly for young adults. Overall, 41 percent of 2002 sophomores reported having been unemployed at least once during 2009–12 (see table 14). Those who had been unemployed during this period reported an average of 10 months of unemployment, and 56 percent experienced one unemployment spell (i.e., a period of unemployment lasting at least one month), while 23 percent experienced three or more unemployment spells.

The incidence, duration, and frequency of unemployment declined with increasing levels of educational attainment. Unemployment was particularly prevalent among individuals who had a lower educational attainment: 53 percent of high school noncompleters and 58 percent of GED certificate or other equivalency holders had been unemployed at least once since 2009 for an average of 13 months, compared with 30–36 percent of those with a bachelor's degree or more education for an average of 7 months (see table 14). Both Blacks and Hispanics experienced more and longer unemployment than did Whites. Similar differences were also evident for cohort members from low-SES families compared with those from high-SES families, those who completed less rigorous high school curricula compared with those who completed rigorous high school curricula, and those who earned academic GPAs below 3.0 in high school compared with their counterparts who earned academic GPAs of 3.5–4.0 (see table 15).

Underemployment

In addition to high unemployment rates, an economic recession often results in high levels of underemployment or underutilization of workers' human capital in the labor market (Abel, Deitz, and Su 2014). A typical form of underemployment occurs when individuals work in a job that does not require the level of education that they have attained. Among the 2002 sophomore cohort, 35 percent of bachelor's degree recipients and 29 percent of those with a master's or higher degree reported that they currently or recently worked in a job requiring just a subbaccalaureate credential (see table 13). Twenty percent of associate's degree holders reported that they worked in a job requiring an undergraduate certificate.

Another way to measure potential underemployment is to determine the alignment between an individual's education and job. Overall, 29 percent of bachelor's degree recipients and 10 percent of those with a master's or higher degree reported that their job was not related to their degree (see table 13). The percentages of associate's degree and undergraduate certificate holders whose job was not related to their degree were even higher: 41 and 42 percent, respectively. For individuals who

attended some college but did not yet earn a postsecondary credential, 63 percent worked in a field unrelated to their postsecondary major.

Socioeconomic Status of 2002 Sophomores

This report also examined cohort members' SES based on their earnings from 2011 employment, the prestige of their 2012 or most recent job, and their educational attainment as of 2012.[6] Although 40 percent of 2002 sophomores who grew up in low-SES families were found in the lowest quarter of the SES distribution in 2012, more than one-half (60 percent) of this group had moved up the socioeconomic ladder into the middle half or highest quarter of SES by their mid-20s (see figure 24).

[6] Individuals' SES is measured differently from the traditional measure of their parents' SES. While the latter reflects the household's SES, the former reflects individuals' SES (i.e., excluding the contribution of their spouse or partner). Individuals' SES may not reflect their true socioeconomic situation. For example, a physician's stay-at-home spouse, while living in a relatively high-SES family, has a relatively low score of SES him/herself. In addition, there is still a lot of flux in education and employment at age 26. For example, individuals who pursue a doctoral or professional degree may have a low SES score, due to income and occupation, which does not accurately reflect their SES. The reader should keep this caveat in mind when interpreting data on individuals' SES.

This page intentionally left blank

Contents

PAGE

List of Tables

TABLE PAGE

TABLE PAGE

TABLE PAGE

TABLE PAGE

TABLE PAGE

TABLE PAGE

TABLE PAGE

List of Figures

FIGURE PAGE

FIGURE PAGE

This page intentionally left blank

Introduction

In the spring term of the 2001–02 school year, a nationally representative sample of more than 15,000 high school sophomores from public and private high schools in the United States participated in the Education Longitudinal Study of 2002 (ELS:2002). Sponsored by the U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (NCES), ELS:2002 is a multifaceted longitudinal survey designed to provide data on the transition from adolescence to adulthood (Ingels et al. 2005). In the 10 years after the launch of this study, sample members were resurveyed three times—in 2004, 2006, and 2012. Comprehensive data about their background and experiences were collected from students, their parents, teachers, and school administrators; transcripts were requested from all high schools that students had attended since ninth grade;[7] and additional information from such sources as the federal financial aid system and college entrance examination providers was gathered (Lauff and Ingels 2014). Together, the multiple surveys and supplemental data sources of ELS:2002 provide researchers with opportunities to study the critical transitions of American adolescents as they progress through high school into postsecondary education, the workforce, and other adult roles such as spouse and parent.

This Statistical Analysis Report uses data from ELS:2002 to examine the status of 2002 high school sophomores a decade later, focusing on the extent to which cohort members had reached such life course milestones as finishing school, starting a job, leaving home, getting married, and having children. In so doing, this study draws heavily on data collected during the base-year and the third follow-up surveys of ELS:2002. In other words, this study describes the status of 2002 high school sophomores in 2012, when most cohort members were 26 years old, in relation to various characteristics observed during their high school years.

Representing approximately 3.4 million students from the sophomore class of 2002, ELS:2002 sample members came from diverse backgrounds. About 40 percent of the cohort were members of racial/ethnic minority groups, and 14 percent were non-native-English speakers (Ingels et al. 2005). When in 10th grade, some 22 percent lived in a single-parent household, and one in five came from a family with a total annual income below $25,000. About 43 percent of 2002 sophomores had at least one parent with a bachelor's or higher degree, and 25 percent had parents with no education beyond high school. In terms of academic achievement,

[7] Postsecondary transcripts were also collected in 2013–14, but they were not available in time for the analysis of this report.

while at least two-thirds of sophomores had mastered basic math skills by 10th grade (e.g., simple arithmetic operations), 20 percent showed proficiency in understanding intermediate-level math concepts and 1 percent demonstrated the mastery of knowledge and skills typically taught in upper-level high school math classes (e.g., solving complex multistep word problems). In reading, nearly 90 percent of sophomores were proficient at simple reading comprehension, and 8 percent were at a much more advanced level, already capable of combining information from multiple sources and making complex inferences or judgments.

Members of this sophomore cohort had high expectations for their future education (Ingels et al. 2005). Nine in 10 expressed a desire to attend postsecondary education after high school, and close to three-quarters expected to complete a 4-year-college or higher degree. Many also placed great significance on their future work and family life: 84 percent rated being able to find a steady job as very important, and 80 percent thought that marrying and having a happy family life were very important.

This study is designed to examine the extent to which 2002 high school sophomores achieved various milestones of early adulthood as of 2012, including high school completion, entrance into postsecondary education, progress toward or completion of a postsecondary credential, family formation, and employment and earnings. Specifically, the study addresses the following questions:

- Where did 2002 high school sophomores stand a decade later in education, the labor market, and family formation?
- Did 2002 sophomores from different demographic backgrounds and with different academic characteristics in high school achieve the same or different outcomes in these areas?
- Did various demographic and high school academic characteristics have unique associations with 2002 sophomores' later outcomes in education and the labor market when other factors were taken into account?
- How did 2002 sophomores who achieved various levels of education—from not completing high school through post-baccalaureate attainment—fare in the labor market in 2012?

This study addresses these questions by providing a descriptive portrait of 2002 sophomores in 2012, focusing on both the outcomes of students overall and differences in outcomes among various groups of students. Recognizing that many demographic and academic characteristics are interrelated, this study selects three 2012 outcomes—highest educational attainment, employment status, and hourly wages for 2012 jobs—and uses multivariate techniques to determine which characteristics had a unique association with these outcomes after controlling for related factors. To provide a context for these analyses, the following section

presents a brief review of the current research literature on the transition into young adulthood and of the historical context unique to the 2002 sophomore class.

Changing Transition to Adulthood: A Brief Review of the Literature

Becoming an adult in the United States has traditionally been conceived as a young person completing four core milestones—finishing school, leaving home, entering the labor force, and forming a family of one's own. Considerable evidence indicates that both the length and sequence of adult transitions are changing (Arnett 2000; Furstenberg 2010; Settersten and Ray 2010). Compared with their parents' and grandparents' generations, today's young people are taking longer to reach adult milestones: they are extending education, living at home longer, delaying full participation in the labor market, and postponing marriage and childbearing (Aud, KewalRamani, and Frohlich 2011; Danziger and Rouse 2009; Furstenberg 2010; Settersten, Furstenberg, and Rumbaut 2005).

In addition, the passage to adulthood has become less orderly and predictable (Settersten and Ray 2010). Compared with earlier generations, fewer young people nowadays have followed the sequence of finishing school, working, leaving home, getting married, and becoming parents. Instead, many combine school with work; some have children before marriage; and increasing numbers of young adults continue to live with their parents after college and beyond (Furstenberg 2010). Between 1974 and 2006, for example, the percentage of 20-year-olds who had ever worked while enrolled in college rose from 63 percent to 78 percent (Ingels et al. 2012). Between 1980 and 2008, the number of births to unmarried women ages 20 to 29 more than doubled, from 37 to 78 per 1,000 women (Aud, KewalRamani, and Frohlich 2011). In 1970, some 13 percent of single 25-year-old White men without children and 7 percent of single 25-year-old White women without children were living at home with their parents; by 2007, these percentages had increased to 26 percent for men and 20 percent for women (Settersten and Ray 2010). Attitudes are shifting as well: although more than 95 percent of Americans still consider completing school, leaving home, and being employed full time as necessary markers of adulthood, fewer (50 percent) view marriage and parenthood as such markers (Settersten, Furstenberg, and Rumbaut 2005; Settersten and Ray 2010).

The 2002 sophomore cohort not only shares in this larger trend of the lengthening transition to adulthood, but also has experienced some unique historical events at the end of the 20th century and beginning of the 21st century—events that may influence their educational expectations, career goals, and decisions about marriage and parenthood. Born in the mid-1980s, members of the 2002 sophomore cohort belong to the "Millennial Generation," a term frequently used by researchers to

describe a generation born after 1980 and ranging in age from 18 to 33 in 2014 (Pew Research Center 2014a).[8] While the period of the mid-1980s through 2012 witnessed Americans' increased participation and attainment in postsecondary education (Snyder, de Brey, and Dillow 2016), it has also seen terrorism, wars, and devastating natural disasters; experienced both economic booms and busts; watched the rapid growth of the Internet, mobile technology, and social networking; and was subject to waves of reform in the nation's educational system (Elsby, Hobijin, and Sahin 2010; Holmes, Rauch, and Cozza 2013; Pew Research Center 2014a; Taylor 2011). In trying to understand the later outcomes of the sophomore class of 2002, it may be helpful to review some of the most important historical events, economic trends, and educational reform movements that may have shaped the coming of age of this cohort.

Historical Context

Students who were high school sophomores in 2002 grew up in a tumultuous period of recent history. The terrorist attacks of September 11, 2001 occurred at the beginning of these students' sophomore year, and in response, the United States and its allies initiated military action in Afghanistan in 2001 (Taylor 2011). Additional military action in Iraq followed in 2003. Both wars continued well into the next decade, producing more than 50,000 casualties and resulting in over 2 million children growing up in military families (Holmes, Rauch, and Cozza 2013). Consequently, the ELS:2002 sophomore cohort came of age while the United States was actively engaged in military actions for a prolonged period of time. Thus far, few researchers have studied the long-term impact of these wars on Americans' lives in general and on the development of children growing up in wartime in particular, but there is some evidence that the recent wars may have influenced young people's decisions to serve in the military. Trend data have shown that the percentage of young adults who entered the military within 2 years after high school declined from 7 percent in 1974 and 6 percent in 1982 to 3 percent in 2006 (Ingels et al. 2012).

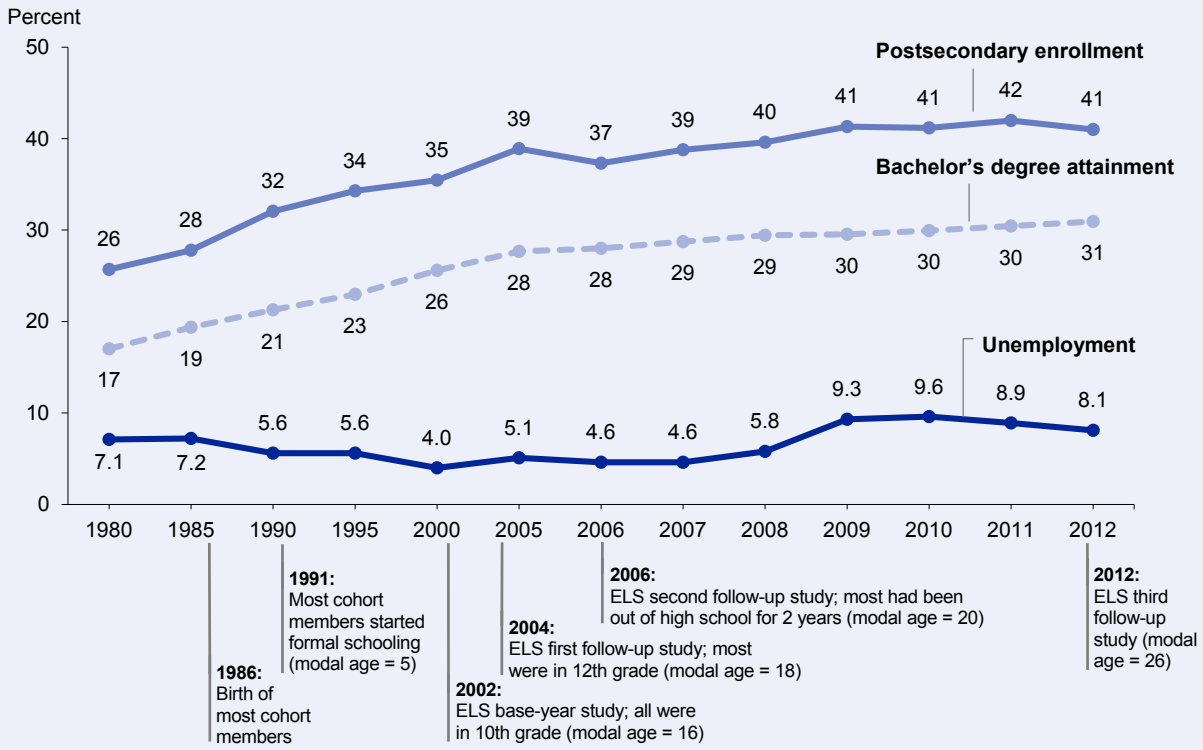
Economic Context

The U.S. economy went through significant turbulence during the 2002 sophomore cohort's middle school years and beyond (Elsby, Hobijin, and Sahin 2010). The

[8] Emerging research has found that the millennial generation has some distinctive characteristics (Howe and Strauss 2007; Rainie and Wellman 2012; Pew Research Center 2010b, 2014a). Compared with earlier generations, they are more confident, motivated, optimistic, and achievement-oriented—qualities that may have contributed to their status as the best-educated cohort of young adults in American history. Millennials are also relatively unattached to organized politics and religion; widely connected by digital media; overburdened by debt; and in no rush to marry and start families. Except for marriage and parenthood, many of these characteristics are not measured in ELS:2002 and thus, cannot be explored in this report.

"dot-com bubble" of 1997–2000 burst just as most cohort members were entering high school. Within a few years of the "dot-com bust," the real estate market boomed and then went bust in 2007–08, when many ELS:2002 cohort members were either enrolled in college or finishing their undergraduate education. The U.S. unemployment rate among persons aged 16 years and older climbed steadily since 2007, reaching its peak by 2010 (figure 1). The nation's poverty rate rose from 11 percent in 2000 to 14 percent in 2009 (Aud, KewalRamani, and Frohlich 2011). The long-term consequences of this Great Recession have yet to be measured but may be especially severe for those who entered the job market during and immediately after the recession (Kahn 2010), including many members of the 2002 sophomore cohort.

Figure 1.
U.S. postsecondary enrollment, bachelor's degree attainment, and unemployment rates among young adults in selected age groups: 1980–2012



NOTE: The postsecondary enrollment rate is the percentage of 18- to 24-year-olds who are enrolled in all U.S. degree-granting institutions. The bachelor's degree attainment rate is the percentage of persons 25 years and older who hold a bachelor's degree. The unemployment rate is the percentage of persons 16 years and older in the labor force who are jobless, looking for a job, and available for work; the labor force consists of people who are employed or seeking employment. Estimates are available in table C-1.

SOURCE: Postsecondary enrollment rates and bachelor's degree attainment rates are from Snyder, T.D., de Brey, C., and Dillow, S.A. (2016). *Digest of Education Statistics 2015* (NCES 2016-014). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Unemployment rates are from the Bureau of Labor Statistics tabulation, https://data.bls.gov/timeseries/LNU04000000?years_option=all_years&periods_option=specific_periods&periods=Annual+Data.

Economic hardship may be one reason that increasing numbers of young adults today depend on their parents and are slower to get married than their counterparts of earlier generations (Danziger and Rouse 2009; Roksa and Arum 2012). Both the median age at first marriage—now 29 for men and 27 for women—and the share of young adults living with their parents are now the highest in modern history (Pew Research Center 2014a). Further, increasing globalization, expanding markets, and fast-growing technologies have given rise to new industries and employment uncertainties, all of which may complicate young adults' decisions about their careers and investments in education (Blossfeld et al. 2005).

Education Policy Context

Since the release of *A Nation at Risk* in 1983, the United States has seen repeated waves of education reform focused on increasing student achievement, reducing performance gaps, and raising the standing of U.S. students on international tests. By 2000, when members of the 2002 sophomore cohort started high school, most states had raised high school graduation requirements, mandated standardized tests, tightened teachers' certifications, and increased schools' accountability for the outcomes of their students (Lee and Ready 2009; Rouse and Kemple 2009). These reforms may have brought about changes in students' coursetaking—2004 high school seniors in ELS earned more credits in math and science and took more advanced-level courses in these subject areas than did their counterparts in the 1982 and 1992 cohorts (Dalton et al. 2007).

In 2002, when members of the ELS:2002 cohort were 10th-graders, the No Child Left Behind Act of 2001 (NCLB) was signed into law, and provisions of the legislation were implemented throughout their remaining high school years. The goal of the legislation was to provide incentives for states to implement various reforms to ensure that all students in each state were proficient in mathematics and reading by 2014. NCLB also included school- and district-level accountability not only for students' achievement test results but also for the high school graduation rate. Given its limited implementation during the early 2000s, which were the cohort's final years of high school, the effects of NCLB on 2002 sophomores' outcomes may be minimal.

At the postsecondary education level, changes in federal policy, coupled with shifts in public attitudes and expectations, opened up higher education as never before (Brock 2010). From a policy perspective, the Higher Education Act (HEA) of 1965 has played a key role in the expansion of higher education. The law was designed to provide need-based financial assistance to postsecondary students. Since 1965, the law has been reauthorized nine times, most recently in 2008, with each authorization intended

to expand college access through financial aid to underserved populations (e.g., minorities, low-income, and disabled students) (Barrow, Brock, and Rouse 2013).

Fueled at least partly by the HEA, college enrollment has increased dramatically. Among U.S. 18- to 24-year-olds, the percentage who were enrolled in postsecondary institutions increased from 26 percent in 1980 to 41 percent in 2012 (figure 1). During the same period, the bachelor's degree attainment rate among persons aged 25 years and older nearly doubled, rising from 17 percent to 31 percent. The ELS:2002 cohort was part of this upward trend, in which 62 percent of 2004 seniors enrolled in postsecondary education within 2 years of high school completion, compared with 40 percent of 1974 seniors and 49 percent of 1982 seniors (Ingels et al. 2012).

Along with increased enrollments, rising college costs and the deep economic recession in the late 2000s have led unprecedented numbers of students to take out student loans to pay for their college education (Avery and Turner 2012; Dynarski and Scott-Clayton 2013). Between 1995 and 2012, borrowing rates for undergraduate education rose from 26 percent to 42 percent (Horn and Paslov 2014). Two-thirds of 2007–08 college graduates had outstanding student loans upon receiving their bachelor's degree, with an average debt of $25,000; 15 years before, about half of graduates had college debt, and the average debt was $15,000 (in constant 2009 dollars) (Woo 2013). There has been increasing concern that high levels of education debt, especially among those who left college during and after the recent recession and entered a weak job market, may undermine students' ability to pursue further education, achieve financial independence, and start families (Barrow, Brock, and Rouse 2013; Danziger and Rouse 2009; Minicozzi 2005; Roksa and Arum 2012; Rothstein and Rouse 2011; Zhang 2013).

The historical, economic, and education policy contexts are presumed to have helped shape the distinctive experiences of the sophomore class of 2002. The final follow-up survey conducted in 2012 provides the data this study uses to examine the status of and choices made by members of this cohort as they move into adulthood and begin to take on adult roles and responsibilities.

Report Background and Organization

Report Background

NCES has collected longitudinal data on high school students for more than 40 years. Starting with the National Longitudinal Study (NLS-72), followed by the High School and Beyond (HSB) Study of 1980 Sophomores and Seniors and the National Education Longitudinal Study of 1988 (NELS:88), and continuing with the two recent studies, ELS:2002 and the High School Longitudinal Study of 2009

(HSLS:2009), NCES has provided nationally representative longitudinal data to education policymakers and researchers, allowing them to link secondary school educational experiences with such important adult outcomes as postsecondary attainment, employment outcomes, and family formation.

In 2002, NCES published *Coming of Age in the 1990s: The Eighth-Grade Class of 1988 12 Years Later,* using data from NELS:88 to examine the status and outcomes of 1988 eighth-graders 12 years later in 2000 (Ingels et al. 2002). The report portrayed the transition of the 1988 eighth-graders into young adulthood during the last decade of the 20th century, which was marked by such far-reaching changes as the end of the Cold War, the explosive growth of the Internet and personal computers, and continued scrutiny and reform of the nation's education systems.

ELS:2002 provides the first opportunity to examine the transition of high school students into young adulthood during the early 21st century. As with NELS:88, the final follow-up survey of ELS:2002 occurred when most cohort members were 26 years old and had been out of high school for 8 years. Many, by 2012, had already completed postsecondary education and entered the workforce, and some had also started their own families (Lauff and Ingels 2014).

Report Organization

This report is organized into five sections. The first section presents detailed estimates regarding high school completion in this nationally representative cohort of students who were enrolled in 10th grade in spring 2002, answering such questions as what percentage completed high school via a regular diploma, GED, or other equivalency, and how long it took them to complete high school. The second section focuses on cohort members' participation and attainment in postsecondary education, examining enrollment rates, the type of the first institution attended, degree completion, time to bachelor's degree, and the extent and perceived impact of borrowing for postsecondary education. The third section looks at family formation, presenting the percentage of cohort members who got married, started families, or were still living with parents as of 2012. The fourth section examines cohort members' labor market experiences and outcomes, presenting their 2012 employment status, occupation, the relationship between their education and job, and hourly wage for their 2012 job. This section also provides a first look at 2002 sophomores' 2012 socioeconomic status (SES) and its relationship with their parents' SES.

The last section of this report turns to multivariate analysis, exploring how various demographic and high school academic characteristics were associated with cohort members' later postsecondary attainment and labor market outcomes, while controlling for covariation among the variables included in the model. The section

also examines how sophomores' educational attainment was associated with their labor market outcomes. The primary purpose of this section is to determine which factors are uniquely associated with students' later outcomes and whether various gaps identified in the bivariate analysis persist after controlling for other related factors. Details on model specifications are provided in the multivariate analysis section below.

The main text of this report uses tables and figures to highlight the major findings of these analyses. More detailed results are presented in the tables in appendix C as an additional source for readers. Estimates in the appendix tables are sometimes referred to in the text for ease of presentation.

All bivariate comparisons in this report were tested for statistical significance using a two-tailed Student's *t* statistic to ensure that the differences were larger than might be expected due to sampling variation. Unless specifically noted, all differences cited in the report were statistically significant at the .05 level. Adjustments were not made for multiple comparisons.

Data Source and Study Sample

Data Source

The data source for this study is ELS:2002, an integrated, multilevel data collection designed to provide data about students' transitions from high school to postsecondary education or early careers. The ELS:2002 base-year data collection started in the spring term of the 2001–02 school year with a nationally representative sample of about 15,400 high school sophomores in approximately 750 public and private schools across the United States.[9] Over the next 10 years, these sample members were resurveyed in three follow-ups: in 2004 (when most members were seniors in high school[10]); in 2006 (approximately 2 years after the sample's modal high school graduation date); and in 2012 (when the majority of the sample was approximately 26 years old).[11]

---

[9] Students who had dropped out of school prior to the 2001–02 school year were not included in the base-year sampling frame for ELS:2002 (Ingels et al. 2014).

[10] In the first follow-up survey in 2004, base-year students who remained in their base-year schools were resurveyed, along with a freshening sample that makes the study representative of spring 2004 high school seniors nationwide. Efforts were also made to track students who had changed schools, switched to a homeschool environment, completed high school early, and dropped out of school between the base-year and first follow-up surveys (Ingels et al. 2014).

[11] The ELS:2002 third follow-up data collection began in July 2012 and continued until late January 2013. For brevity, this report refers to students' current status "as of 2012," although some students were interviewed in 2013.

ELS:2002 provides a wealth of information from multiple sources (achievement tests, questionnaires, administrative records, and both high school and postsecondary transcripts) about the factors and circumstances related to the performance and development of 2002 high school sophomores (Lauff and Ingels 2014). These data permit us to see what the 2002 sophomore class had accomplished 10 years after the 2002 baseline survey. More details on the design and structure of ELS:2002 can be found in *Education Longitudinal Study of 2002 Third Follow-up Data File Documentation* (Ingels et al. 2014).

Study Sample

To describe the outcomes of 2002 high school sophomores 10 years later, this study selects cohort members who participated in both the base-year survey in 2002 and the third follow-up survey in 2012. Of about 15,400 students who participated in the base-year survey, approximately 13,100 also participated in the third follow-up. These 13,100 respondents became the base sample for this study. Some specific analyses were further restricted to subgroups of this base sample; for example, in the section on postsecondary education, several analyses included only 2002 sophomores who had attended postsecondary education by 2012. Data reported in this report reflect nationally representative estimates of spring 2002 high school sophomores as of the third follow-up survey in 2012.

Limitations

This study provides numerous findings about the status and outcomes of 2002 sophomores in 2012. At the same time, the study leaves unanswered some basic *why* questions—e.g., why were some students able to make the transition to postsecondary education and the labor market and others not? Although the multivariate analyses in the last part of the report control for a wide range of characteristics when looking at such outcomes and do yield some insights, they do not control for many other potential factors that may be associated with the outcomes examined in this study (i.e., educational attainment, employment status, and hourly wages) and, hence, do not reveal a complete story. While the multivariate results may suggest topics for further research that might examine questions of causality, this study remains descriptive and does not purport to identify causal relationships.

High School Completion

High school completion is a key milestone in the transition to young adulthood, as it often serves as a requisite step in accessing subsequent postsecondary education, finding stable employment, and earning a living wage (Baum, Ma, and Payea 2013; Berlin, Furstenberg, and Waters 2010). Failing to achieve this critical milestone can burden individuals (e.g., more unemployment and lower earnings), their families (e.g., greater need for families to support young adults), and society (e.g., lower tax revenues, greater public spending on public assistance and health care, and higher crime rates) (Kingston et al. 2003; Tyler and Lofstrom 2009). Demographic, family, and academic characteristics that might facilitate or interfere with high school completion and, by extension, the transition to adulthood, are therefore of particular interest.

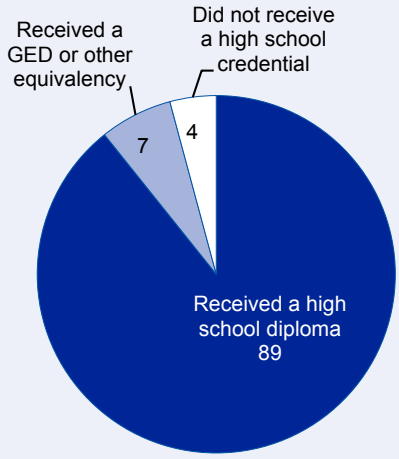
This section explores the high school completion status and timing among 2002 high school sophomores as of 2012. These outcomes are examined in terms of students' demographics; high school coursetaking patterns (e.g., rigor of curriculum); academic performance (e.g., GPA); and behavior while in high school (e.g., 10th-grade school disengagement). Results of additional bivariate analyses of high school completion can be found in appendix C of this report.

High School Completion Status

By 2012, most members of the 2002 sophomore cohort (89 percent) had earned a high school diploma (figure 2). An additional 7 percent had earned an alternative credential by passing a GED certificate test or earning other high school equivalency such as a certificate of attendance. A small fraction (4 percent) had failed to complete high school by either method.

Past research has shown a wide range in reported estimates of U.S. high school graduation rates (Heckman and LaFontaine 2010; Seastrom et al. 2006); these rates often vary according to the definitions, data sources, and methods used in their calculation. It is therefore worth noting several nuances related to the high school completion rates reported here relative to those from other studies.

Figure 2.
Percentage distribution of spring 2002 high school sophomores' high school completion status: 2012



NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-2a and C-2b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

First, as described earlier in this report, estimates for this report were generated using data from ELS:2002, which makes up a nationally representative cohort of 2002 high school sophomores; consequently, these data do not capture students who dropped out of high school prior to 10th grade. The resulting high school completion rates presented in this report may therefore appear higher than estimates generated for some other cohorts—e.g., a cohort of ninth-graders (Stetser and Stillwell 2014; Stillwell, Sable, and Plotts 2011).

Second, ELS:2002 is a longitudinal study, allowing collection of high school completion information up to 8 years after the cohort's modal high school completion year. The high school completion rates reported here may appear higher than "on-time" graduation rates calculated based on the duration of 4 years in other studies (Stetser and Stillwell 2014; Stillwell, Sable, and Plotts 2011).

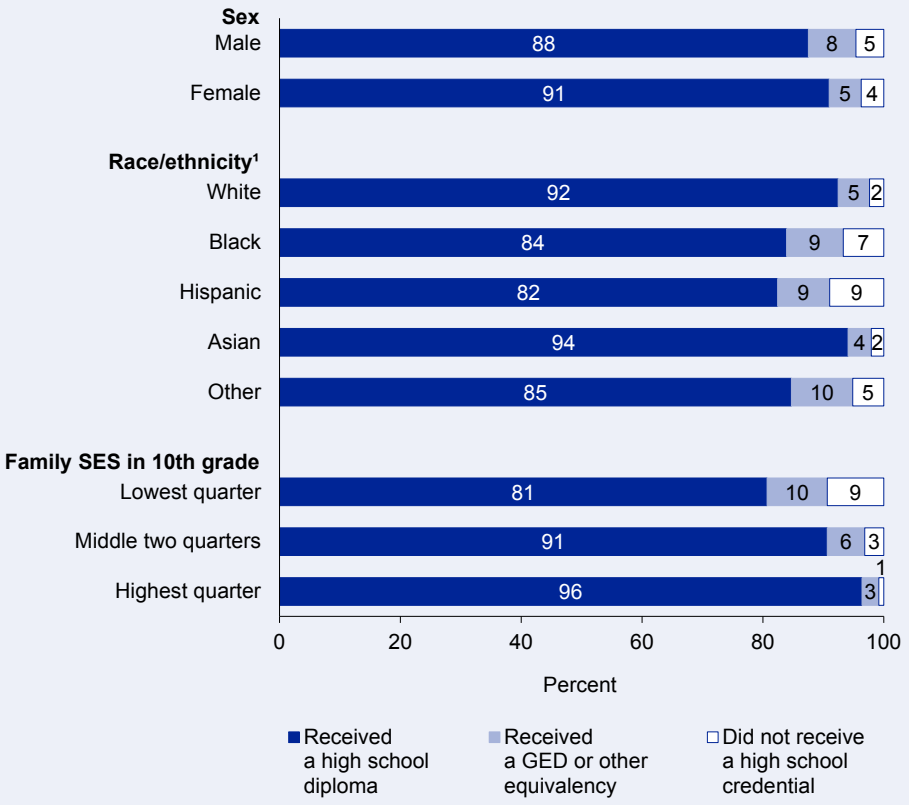
Lastly, while most earlier studies focus on completion rates among those attending public high schools, ELS:2002 comprises students from both public and private high schools. Private high schools typically have higher graduation rates than public schools (Ingels et al. 2002; Snyder, de Brey, and Dillow 2016); hence, the ELS:2002-based high school completion rates may appear higher than those calculated based on public high school students (Stetser and Stillwell 2014).

Completion Status by Demographic Characteristics

Although the high school completion rates presented here may differ from those in other studies, the differences observed among demographic subgroups in this study are consistent with the findings of past research—i.e., high school completion rates tend to be higher among females, Whites and Asians, and economically advantaged students than among their peers who are males, Blacks and Hispanics, and economically disadvantaged (Aud et al. 2012; Balfanz et al. 2014; Heckman and LaFontaine 2010; Stillwell, Sable, and Plotts 2011; Tyler and Lofstrom 2009).

Specifically, a greater proportion of females in the 2002 sophomore cohort received a high school diploma than did males (91 percent vs. 88 percent) (figure 3). In contrast, a greater proportion of males than females received a GED or other high school equivalency (8 percent vs. 5 percent).

Figure 3.
Percentage distribution of spring 2002 high school sophomores' high school completion status, by selected demographic characteristics: 2012



[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-2a and C-2b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

In terms of race/ethnicity, greater proportions of White and Asian students received high school diplomas than did Black or Hispanic students (92 and 94 percent vs. 84 and 82 percent, respectively), while greater proportions of Black and Hispanic students received GEDs or other equivalencies (9 percent for both groups) than did White and Asian students (5 and 4 percent, respectively). In addition, 7–9 percent of Black and Hispanic students had not earned any high school credential (i.e., a high school diploma, GED, or other equivalency), compared with 2 percent of White and Asian students.

High school completion rates also differed by the SES of students' families.[12] Among students from high-SES families (i.e., families in the highest quarter of the SES distribution), 96 percent had earned a high school diploma; 3 percent had earned a GED or other equivalency; and 1 percent had not earned a high school credential by 2012. High school completion rates among students from middle-SES families (i.e., families in the middle two quarters of the SES distribution) were slightly lower than those of students from high-SES families: 91 percent had earned a high school diploma; 6 percent had earned a GED or other equivalency; and 3 percent had not earned a high school credential by 2012. The corresponding percentages among students from low-SES families (i.e., families in the lowest quarter of the SES distribution) were 81 percent, 10 percent, and 9 percent, respectively.

Completion Status by High School Academic Characteristics

Past research has shown that high school completion—as well as subsequent postsecondary enrollment and attainment—is related to students' coursetaking in high school (Atanda 1999; Long, Conger, and Iatarola 2012). To facilitate examination of these relationships in the 2002 sophomore cohort, a composite measure of the rigor of high school curriculum completed by students was derived for this report. This measure is based on information collected from high school transcripts and is aligned with the four curriculum levels (below-standard, standard, moderately rigorous, and rigorous) developed for the National Assessment of Educational Progress (NAEP) High School Transcript Studies (Nord et al. 2011). Details on the construction of this variable can be found in appendix A of this report. An early analysis, using ELS:2002 high school transcript data to link students' coursetaking to their achievement gains in mathematics, found that various curricular pathways and coursetaking sequences were related to growth in math performance over time (Bozick and Ingels 2008). This study takes a longitudinal perspective (which is not possible in NAEP) and provides an important piece of evidence concerning the role of the rigorous curriculum in students' later outcomes.

[12] The family SES measure used in this report combines information about parents' education, occupation, and income. See appendix A for more information about this variable.

As shown in table 1, at least 98 percent of students who completed a standard, moderately rigorous, or rigorous high school curriculum had earned a high school diploma by 2012. In comparison, among those whose high school curriculum was below standard, 80 percent had earned a high school diploma. An additional 12 percent of this subgroup had earned a GED or other high school equivalency, and 8 percent had not earned a high school credential.

Students' high school completion status was also related to whether they took specific courses in mathematics and science. Almost all students who had taken a course in trigonometry, statistics, precalculus, or calculus had received a high school diploma by 2012. In comparison, among those whose highest math course was algebra I, geometry, or algebra II, 87 percent had received a high school diploma, and an additional 8 percent had earned a GED or other equivalency. Among those who took no or low-level math in high school, 56 percent had earned a high school diploma; 23 percent had earned a GED or other equivalency; and 21 percent had not graduated with a high school credential as of 2012. A similar pattern appeared with respect to students' science coursetaking: at least 97 percent of those who had taken chemistry 1, physics 1, or a higher level science course had received a diploma by 2012, compared with 59 percent among those who had taken no or low-level science.[13] Among students with no or low-level science courses, 22 percent had received a GED or other equivalency, and 19 percent had not received any credential by 2012.

Past research has shown that disengaged students and those with a high propensity for academic failure are at greater risk of dropping out of school (Finn 1989, 2006; Kaufman and Bradbury 1992; Osterman 2000). To include these factors in the analyses of this report, two composite measures were derived (details on the construction of these two composites can be found in appendix A of this report).

1. Students' academic risk level in 10th grade was derived from students' 9th- and 10th-grade GPAs, their scores on the ELS:2002 10th-grade mathematics and reading assessments, and the number of grades they had repeated prior to 10th grade.

2. Students' school disengagement level in 10th grade was derived from sophomores' responses to questions about absenteeism, tardiness, suspension/probation, and other potential sources of disciplinary action.

[13] Throughout this report, "low-level science" refers to primary physical science, secondary physical science, and basic biology.

Table 1.
Percentage distribution of spring 2002 high school sophomores' high school completion status, by selected student high school characteristics: 2012

Selected student high school characteristics	Received a high school diploma	Received a GED or other equivalency	Did not receive a high school credential
Total	**89.3**	**6.6**	**4.2**
Academic risk in 10th grade[1]			
Low	99.2	0.6 !	‡
Moderate	91.0	6.2	2.8
High	70.3	14.5	15.2
School disengagement in 10th grade[2]			
Low	96.8	1.6	1.6
Moderate	93.4	4.3	2.3
High	77.3	13.9	8.8
Rigor of high school curriculum[3,4]			
Below-standard	79.5	12.1	8.3
Standard	98.4	1.3	‡
Moderately rigorous	99.7	‡	‡
Rigorous	99.9	‡	#
Highest math coursetaking since grade 9[4]			
No math, basic math, or pre-algebra	55.8	23.3	20.8
Algebra I, geometry, or algebra II	86.8	8.4	4.8
Trigonometry, statistics, or precalculus	98.7	0.8	0.5 !
Calculus	99.7	‡	#
Highest science coursetaking since grade 9[4]			
No science or low-level science	59.1	22.3	18.5
General biology	82.6	10.8	6.6
Chemistry I or physics I	96.7	2.2	1.1
Chemistry I and physics I	99.0	0.7 !	‡
Chemistry II, physics II, or advanced biology	98.8	0.9	‡
Cumulative academic GPA			
0.00–1.99	72.0	16.1	11.9
2.00–2.49	93.3	4.4	2.3
2.50–2.99	98.3	1.3	0.4 !
3.00–3.49	98.6	1.2	‡
3.50–4.00	99.7	‡	‡
School control in 10th grade			
Public	88.6	6.9	4.5
Private	97.6	2.1 !	‡

Rounds to zero.
! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
[1] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[2] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[3] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.
[4] Excludes about 15 percent of students with no or partial transcript information.
NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-2b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Students' high school completion status varied with the level of academic risk and school disengagement observed in 10th grade (table 1). About 15 percent of sophomores who were at high risk of academic failure had not earned a high school credential as of 2012, compared with 3 percent of those at a moderate level of risk. About 9 percent of students exhibiting a high level of school disengagement in 10th grade had not earned a high school credential, compared with 2 percent of those with moderate or low disengagement.

As found in earlier studies (Allensworth and Easton 2007; Mac Iver and Messel 2013), students' academic performance was related to their high school completion: at least 98 percent of those whose high school academic GPA was 2.5 or higher had received a high school diploma, compared with 72 percent of those whose GPA was under 2.0. Among students with GPAs under 2.0, some 16 percent had received a high school equivalency, and 12 percent had not completed high school.

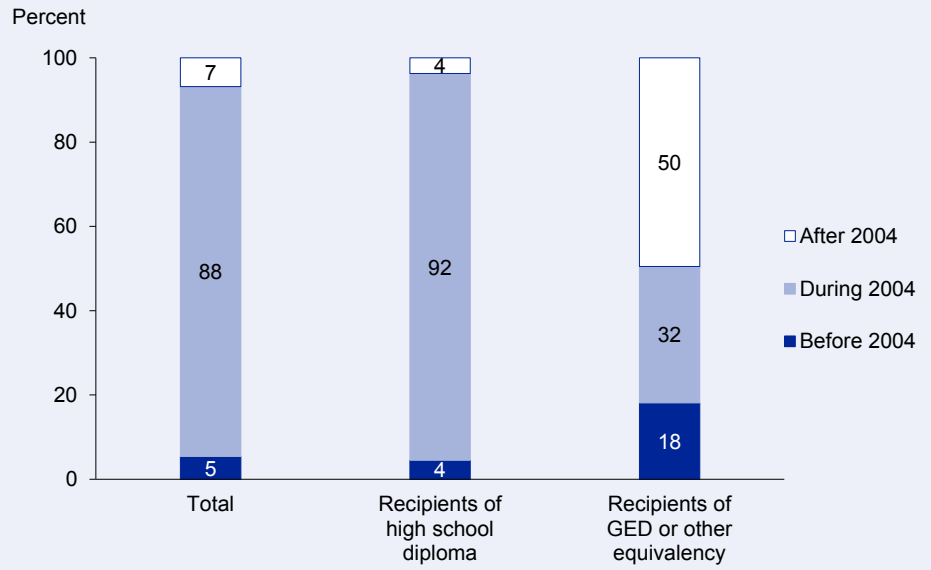
In terms of school sector, proportionally more private school than public school students graduated from high school with a diploma. Among those who attended a private school in 10th grade, almost all (98 percent) had earned a high school diploma, and an additional 2 percent had earned a GED or other equivalency. In comparison, among those who attended a public school in 10th grade, 89 percent had received a high school diploma; 7 percent had received a GED or other equivalency; and 4 percent had not completed high school.

Timing of High School Completion

The timing of high school completion may have some impact on students' subsequent postsecondary education, job earnings, and employment rates. For example, Kienzl and Kena (2006) found that on-time high school completers had lower unemployment rates and higher annual earnings than did late high school completers. Late high school graduates tend to delay postsecondary enrollment, putting them at greater risk of not completing postsecondary education (Horn, Cataldi, and Sikora 2005; Hull 2009).

Among 2002 high school sophomores who had earned a high school credential, 5 percent received their credential prior to 2004 (for convenience, these students are referred to as *early completers* below); 88 percent received their credential during 2004 (*on-time completers)*; and the remaining 7 percent received their credential sometime after 2004 and by 2012 (*late completers*) (figure 4).

Figure 4.
Among spring 2002 high school sophomores who subsequently received a high school credential, percentage distribution of high school completion year, by high school credential type: 2012



NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-3a and C-3b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Diploma recipients had a higher on-time completion rate than did recipients of a GED or other equivalency (92 percent vs. 32 percent). Larger proportions of recipients of a GED or other equivalency, on the other hand, completed high school either late (50 percent vs. 4 percent) or early (18 percent vs. 4 percent).[14]

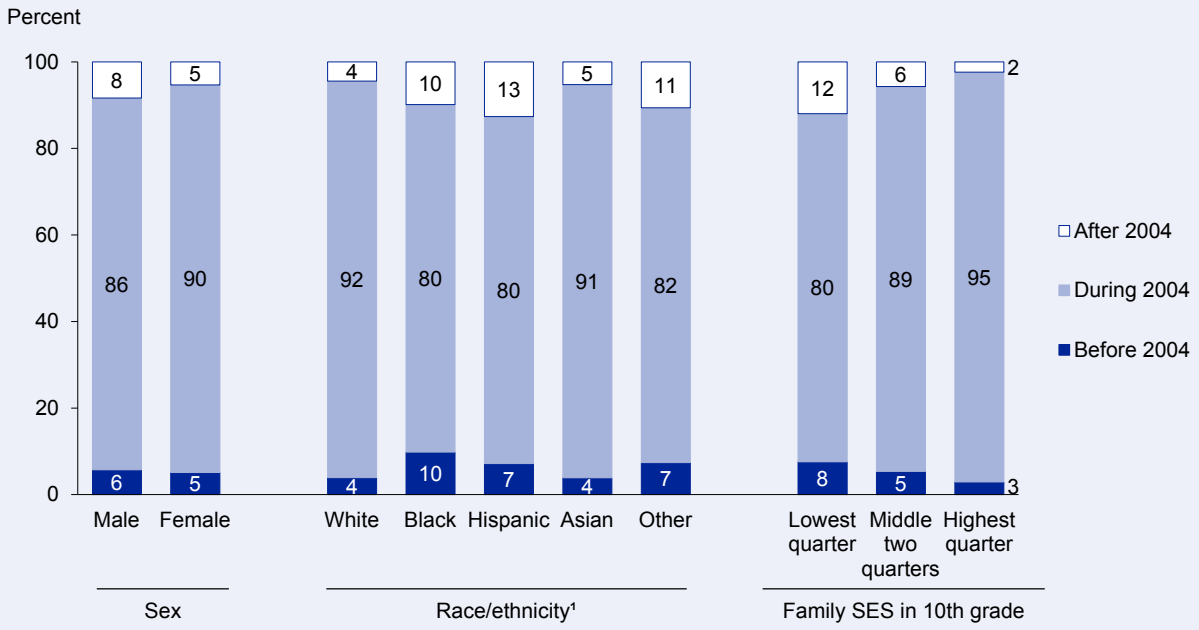
Timing of High School Completion by Demographic Characteristics

Among 2002 sophomores who had completed high school with a credential (also called "high school completers" below), 90 percent of female students completed on time and 5 percent completed late; the corresponding percentages for male students were 86 and 8 percent, respectively. About 91–92 percent of White and Asian students completed on time, and 4–5 percent completed late. In comparison, 80 percent of Black and Hispanic students completed on time, and 10–13 percent completed late (figure 5). As for family SES, 95 percent of high school completers

[14] The distribution of early/late recipients of a GED or other equivalency in the 2002 high school sophomore cohort is consistent with information provided by the GED Testing Service. For example, among all U.S. GED passers in 2004, 4 percent were age 16; 14 percent were age 17; 17 percent were age 18; 11 percent were age 19; and 54 percent were age 20 or above (American Council on Education 2006).

from high-SES families received an on-time credential, and 2 percent received a late credential, compared with 80 and 12 percent of those from low-SES families, respectively.

Figure 5.
Among spring 2002 high school sophomores who subsequently received a high school credential, percentage distribution of their high school completion year, by selected demographic characteristics: 2012



[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-3a and C-3b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Early high school completers were more common among Black and Hispanic students (10 and 7 percent, respectively) than among White and Asian students (4 percent for both groups). Relative to students from middle- and high-SES families, a greater proportion of students from low-SES families were early completers (8 percent as compared with 5 and 3 percent of students from middle- and high-SES families, respectively). These patterns are consistent with the relationship between students' demographic characteristics, the type of diploma they received, and the timing of high school completion shown in figures 3 and 4. For example, Black and Hispanic students completed high school with a GED at higher rates than did White and Asian students (figure 3), and GED recipients completed high school early at higher rates than did high school diploma recipients (figure 4).

Timing of High School Completion by High School Academic Characteristics

The timing of high school completion was also related to various academic characteristics in high school. In general, proportionally more students with strong academic backgrounds completed high school on time than did those with weak academic backgrounds. For example, at least 99 percent of those who had completed high school with a moderately rigorous or rigorous curriculum were on-time completers, compared with 84 percent of those who had completed a below-standard curriculum (table 2). About 10 percent of the below-standard curriculum subgroup were late completers, and 5 percent were early completers.

Almost all high school completers who took a course in trigonometry, statistics, precalculus, or calculus completed high school on time (98 percent); in comparison, 73 percent of those who took no or only low-level math did so. About 19 percent of the no or low-level math group completed after 2004, and 8 percent completed before 2004. The pattern was similar with respect to science coursetaking: at least 96 percent of high school credential recipients who took chemistry I, physics I, or higher completed on time, compared with 74 percent of those whose who took no or only low-level science. About 17 percent of this latter group were late completers, and 9 percent were early completers.

Other high school characteristics were also related to the timing of students' high school completion. On-time completion rates were lower among those who exhibited high academic risk or school disengagement while in 10th grade. For example, 70–78 percent of high school completers who were at high risk of academic failure or were highly disengaged with school while in 10th grade completed high school on time, compared with 95–97 percent of their counterparts who exhibited low academic risk or school disengagement. In terms of academic performance, at least 91 percent of high school completers with an academic GPA of 2.0 or higher completed high school on time, compared with 71 percent of those with an academic GPA under 2.0. One-fifth of those with an academic GPA under 2.0 were late completers, and an additional 15 percent were early completers. Proportionally more sophomores who attended a private school completed high school on time than did those who attended a public school (96 percent vs. 87 percent).

Table 2.
Among spring 2002 high school sophomores who received a high school credential, percentage distribution of high school completion year, by selected student high school characteristics: 2012

Selected student high school characteristics	Before 2004	During 2004	After 2004
Total	**5.4**	**87.8**	**6.8**
Academic risk in 10th grade[1]			
Low	2.2	97.2	0.6 !
Moderate	5.2	88.9	5.9
High	10.3	70.0	19.6
School disengagement in 10th grade[2]			
Low	3.1	94.7	2.2
Moderate	4.2	91.4	4.3
High	8.5	77.9	13.7
Rigor of high school curriculum[3,4]			
Below-standard	5.4	84.4	10.1
Standard	2.3	96.3	1.5
Moderately rigorous	1.3	98.5	0.2 !
Rigorous	‡	99.6	‡
Highest math coursetaking since grade 9[4]			
No math, basic math, or pre-algebra	8.4	72.6	19.0
Algebra I, geometry, or algebra II	4.7	87.9	7.4
Trigonometry, statistics, or precalculus	1.3	97.8	0.9
Calculus	0.9 !	98.8	‡
Highest science coursetaking since grade 9[4]			
No science or low-level science	8.5	74.3	17.2
General biology	5.5	84.9	9.7
Chemistry I or physics I	2.2	95.5	2.3
Chemistry I and physics I	1.1 !	98.5	0.5 !
Chemistry II, physics II, or advanced biology	2.1	96.7	1.1
Cumulative academic GPA			
0.00–1.99	10.0	71.1	18.9
2.00–2.49	5.0	90.7	4.2
2.50–2.99	3.2	95.5	1.3
3.00–3.49	2.8	96.6	0.6 !
3.50–4.00	2.0	97.4	0.6 !
School control in 10th grade			
Public	5.7	87.0	7.3
Private	2.1	96.3	1.6

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
[1] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[2] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[3] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.
[4] Excludes about 15 percent of students with no or partial transcript information.
NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-3b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

This page intentionally left blank

Postsecondary Enrollment, Completion, and Borrowing

Upon completing high school, students make critical choices about the next stage of their lives. Today, more than 90 percent of U.S. high school seniors expect to attend college at some point, and nearly 70 percent enroll in college immediately after high school completion (Aud et al. 2012; Kena et al. 2016). Rising college enrollment rates are partly fueled by the economy (Autor 2011; Oreopoulos and Petronijevic 2013). The share of U.S. jobs requiring postsecondary education has grown from 28 percent in 1973 to 59 percent in 2010 and is projected to reach 65 percent by 2020 (Carnevale, Smith, and Strohl 2010). The competitive pressures associated with an increasingly global economy make a college education necessary for individuals who want access to good jobs (Hout 2012). Today, young people who do not pursue education beyond high school are facing fewer job opportunities, lower career earnings, and greater chances of being unemployed than their college-educated peers (Baum, Ma, and Payea 2013; Blossfeld et al. 2005; Pew Research Center 2014b).

Within this context, this section addresses the transition of the 2002 sophomore cohort from high school to postsecondary education. It focuses on students' postsecondary entrance, choice of their first institution, degree completion, and borrowing for postsecondary education.

Entering Postsecondary Education

Postsecondary Enrollment

When asked about their future educational plans, 90 percent of 2002 sophomores indicated that they planned to attend college after high school (Ingels et al. 2005). Data from the third follow-up survey show that by 2012, some 84 percent of cohort members had entered postsecondary education (table 3).

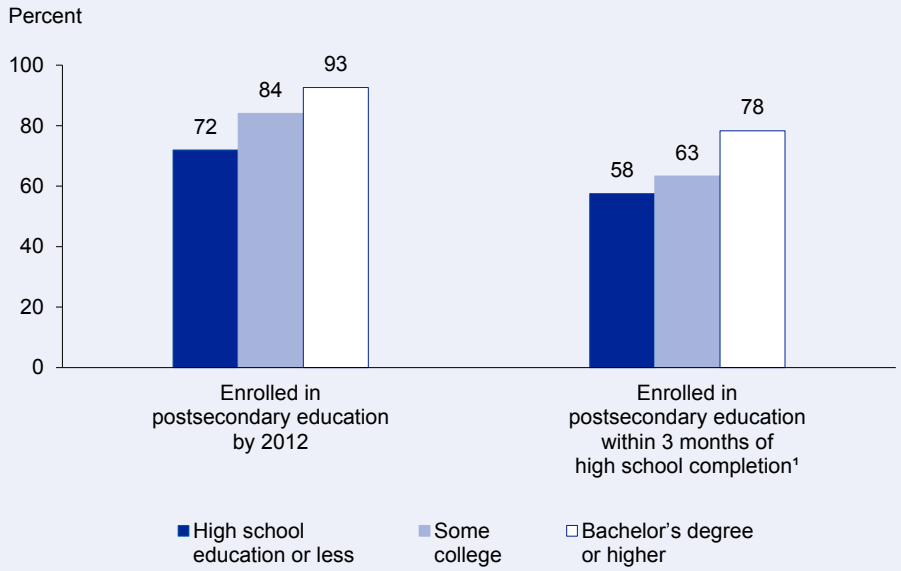
Table 3.
Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage who had enrolled within 3 months after high school completion, by selected demographic characteristics: 2012

Selected demographic characteristics	Enrolled in postsecondary education by 2012	Enrolled within 3 months of high school completion[1]
Total	**84.0**	**68.4**
Sex		
Male	79.9	65.5
Female	87.9	70.9
Race/ethnicity[2]		
White	86.2	72.3
Black	81.5	59.2
Hispanic	78.3	57.5
Asian	92.2	81.4
Other	76.4	63.7
Family SES in 10th grade		
Lowest quarter	71.0	54.9
Middle two quarters	84.9	66.4
Highest quarter	96.4	82.1

[1] Includes only students who had enrolled in postsecondary education by 2012.
[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
NOTE: Standard errors are available in table C-4b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Enrollment rates varied across many demographic subgroups, however. More female than male students (88 percent vs. 80 percent) had enrolled in postsecondary education by 2012. Larger proportions of White and Asian students (86 and 92 percent, respectively) than Black and Hispanic students (81 and 78 percent, respectively) had entered postsecondary education. The enrollment rate for students from high-SES families was 96 percent, surpassing the rates for those from middle- and low-SES families (85 percent and 71 percent, respectively). About 93 percent of sophomores whose parents had a bachelor's or higher degree had received at least some postsecondary education by 2012, compared with 72 percent of those whose parents had a high school education or less (figure 6).

Figure 6.
Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage who had enrolled within 3 months after high school completion, by parent's highest education: 2012



[1] Includes only students who had enrolled in postsecondary education by 2012.
NOTE: Estimates and standard errors are available in tables C-4a and C-4b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Enrollment rates were also related to students' 10th-grade academic characteristics (table 4). Looking at educational expectations, 51 percent of sophomores who had expected to complete a high school education or less had enrolled by 2012, compared with 71 percent of those who had expected to complete some college and 91 percent of those who had expected to complete a bachelor's or higher degree. In addition, 60–74 percent of students who were at high risk of academic failure or highly disengaged with school in 10th grade had entered postsecondary education by 2012; in contrast, 90–99 percent of their peers who were at low academic risk or not disengaged had done so.

Table 4.
Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage who had enrolled within 3 months after high school completion, by selected student high school characteristics: 2012

Selected student high school characteristics	Enrolled in postsecondary education by 2012	Enrolled within 3 months of high school completion[1]
Total	**84.0**	**68.4**
Student's educational expectations in 10th grade		
Do not know yet	73.4	54.1
High school diploma or less	51.1	35.5
Some college	71.1	48.4
Bachelor's or higher degree	91.4	74.1
Academic risk in 10th grade[2]		
Low	98.5	88.6
Moderate	85.8	67.6
High	59.9	37.3
School disengagement in 10th grade[3]		
Low	90.2	79.7
Moderate	87.6	70.4
High	73.8	53.6
Rigor of high school curriculum[4,5]		
Below-standard	76.0	58.9
Standard	87.0	70.0
Moderately rigorous	96.3	80.8
Rigorous	99.9	90.1
Highest math coursetaking since grade 9[5]		
No math, basic math, or pre-algebra	49.6	37.9
Algebra I, geometry, or algebra II	80.2	57.9
Trigonometry, statistics, or precalculus	95.8	81.0
Calculus	99.0	89.4
Highest science coursetaking since grade 9[5]		
No science or low-level science	54.9	38.8
General biology	75.7	54.4
Chemistry I or physics I	91.2	73.5
Chemistry I and physics I	97.9	82.2
Chemistry II, physics II, or advanced biology	96.1	83.8
Cumulative academic GPA		
0.00–1.99	65.7	42.4
2.00–2.49	83.2	58.0
2.50–2.99	91.1	72.4
3.00–3.49	95.1	83.1
3.50–4.00	98.7	88.6
School control in 10th grade		
Public	82.9	67.1
Private	97.0	81.2

[1] Includes only students who had enrolled in postsecondary education by 2012.

[2] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[3] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[4] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.

[5] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Standard errors are available in table C-4b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Typically, students who take high-level academic courses in high school enroll in postsecondary education at higher rates than do their peers who do not take such courses (Bozick and Lauff 2007). This pattern was also reflected in the 2002 sophomore cohort. For example, almost all students who completed a rigorous high school curriculum moved on to postsecondary education by 2012, compared with 76 percent of those who completed a below-standard curriculum. Enrollment rates increased with the level of math and science coursetaking in high school: 99 percent of students who took calculus and 96 percent of those who took advanced science courses such as chemistry II, physics II, or advanced biology had enrolled in postsecondary education by 2012, compared with 50–55 percent of those who took no or only low-level math or science courses. Enrollment rates also increased with students' academic GPAs in high school, starting at 66 percent for students with an academic GPA below 2.00 and reaching 99 percent for those with a GPA of 3.5 or higher. Furthermore, students who attended a private school in 10th grade had enrolled in postsecondary education at a higher rate than their public school peers (97 percent vs. 83 percent).

Timing of Initial Enrollment

Among 2002 sophomores who had enrolled in postsecondary education, most (68 percent) had done so within 3 months of high school completion (referred to as *immediate enrollment* below) (table 3). About 13 percent had entered within 4–12 months of high school completion, and 18 percent had delayed their enrollment by more than 1 year[15] (see table C-4a).

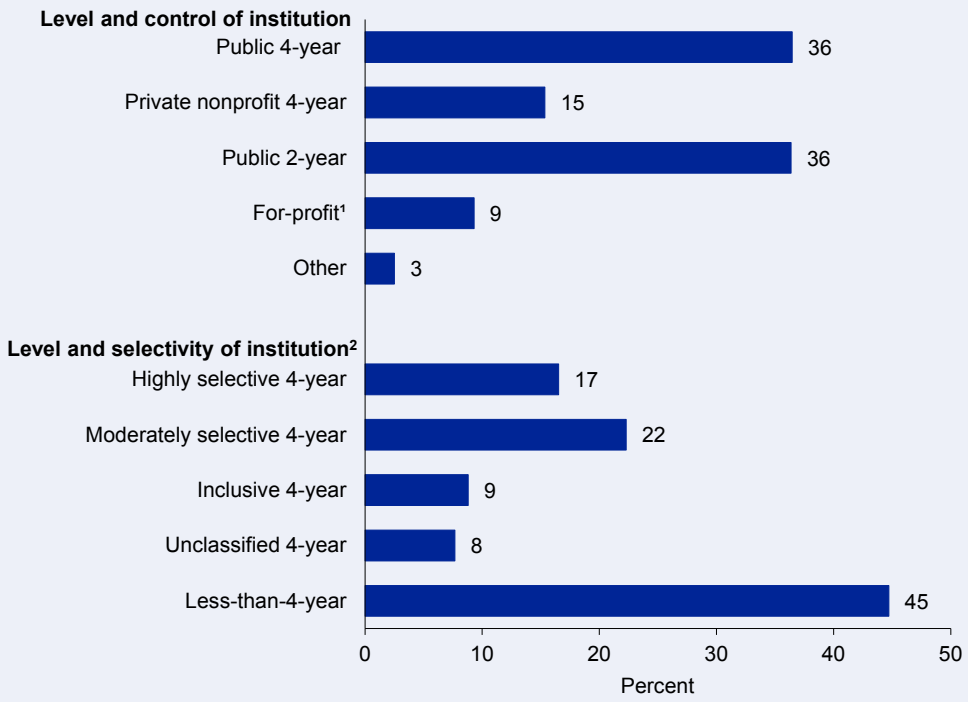
Immediate enrollment was more common among some demographic subgroups, including females, Whites and Asians, and students from high-SES families (table 3). Immediate enrollment rates were also more prevalent among students with strong academic backgrounds, including those who expected to graduate from college, those who had low-level academic risk or school disengagement, and those who had completed a rigorous curriculum, taken advanced classes in math and science, or earned high grades in high school (table 4). Among their counterparts, on the other hand, higher percentages of students delayed postsecondary enrollment by more than 1 year after completing high school (see table C-4a).

[15] The percentages do not sum to 100 because of rounding.

Choice of the First Institution

High school students intending to attend college have a wide range of institutions they can choose from. Among the 2002 sophomore cohort who had enrolled in postsecondary education, 36 percent started at a 4-year public institution, 15 percent at a private nonprofit 4-year institution, 36 percent at a public 2-year institution, and 9 percent at a for-profit institution (figure 7).

Figure 7.
Among spring 2002 high school sophomores who subsequently enrolled in postsecondary education, percentage who first attended various types of institutions: 2012



[1] The for-profit category includes for-profit institutions at all levels.

[2] Selectivity categories are based on 2010 Carnegie classifications. "Highly selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the top fifth of baccalaureate institutions; "moderately selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the middle two-fifths of baccalaureate institutions; "inclusive" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement; and "Unclassified" 4-year institutions are those that do not have information on students' postsecondary entrance test scores.

NOTE: Estimates and standard errors are available in tables C-5a, C-5b, C-6a, C-6b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

A minority of enrollees—17 percent in the 2002 sophomore cohort—first attended highly selective institutions.[16] Many first attended moderately selective or inclusive 4-year institutions (22 and 9 percent, respectively), and a larger percentage (45 percent) began at less-than-4-year institutions.

Students' choice of the first institution varied with their demographic and academic characteristics. For example, proportionally more White and Asian students started their postsecondary education at public 4-year (40 and 47 percent, respectively) or private nonprofit 4-year institutions (18 and 17 percent, respectively) than did Black and Hispanic students (33 and 24 percent, respectively, for public 4-year institutions; and 11 and 8 percent, respectively, for private nonprofit 4-year institutions) (table 5). About 50 percent of Hispanic students began at a public 2-year institution, compared with 29 percent of Asians, 34 percent of Whites, and 37 percent of Blacks. Both Black and Hispanic students started at a private for-profit institution at higher rates (14 and 15 percent, respectively) than did White and Asian students (7 and 6 percent, respectively).

In addition, proportionally more students from high-SES families first attended public 4-year or private nonprofit 4-year institutions (48 percent and 26 percent, respectively) than did students from low-SES families (25 percent and 7 percent, respectively), while the latter group first attended a public 2-year or a private for-profit institution at higher rates (48 percent and 15 percent, respectively) than did their counterparts from high-SES families (22 percent and 3 percent, respectively). Students from middle-SES families fell in between—35 percent first attended public 4-year institutions, 13 percent nonprofit 4-year institutions, and 40 percent public 2-year institutions.

More students with strong academic backgrounds started their postsecondary education at a 4-year institution and fewer of them at a public 2-year or private for-profit institution. For example, 54–56 percent of students who completed a rigorous curriculum, took calculus, or earned an academic GPA of 3.5 or higher in high school began their postsecondary education at a public 4-year institution, and 31–37 percent of them began at a private nonprofit institution. On the other hand, 46–56 percent of students who completed a below-standard curriculum, took no math or just basic math or pre-algebra, or earned an academic GPA of below 2.5 in high school began their postsecondary education at a public 2-year institution.

[16] Institution selectivity is defined only for 4-year institutions and is based on first-year students' college entrance test scores. See appendix A for detailed information about this variable.

Table 5.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and control of the institution they first attended, by selected characteristics: 2012

Selected characteristics	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit[1]	Other
Total	**36.5**	**15.4**	**36.4**	**9.3**	**2.5**
Demographic characteristics					
Sex					
Male	36.8	14.8	36.5	8.9	2.9
Female	36.2	15.8	36.2	9.6	2.2
Race/ethnicity[2]					
White	39.6	17.9	33.8	6.9	1.8
Black	33.2	11.3	36.5	14.4	4.5
Hispanic	23.9	7.7	49.7	15.3	3.4
Asian	47.0	17.2	29.0	5.7	1.1 !
Other	35.0	15.7	34.6	10.6	4.0
Family SES in 10th grade					
Lowest quarter	24.7	7.3	48.2	15.4	4.5
Middle two quarters	35.4	12.6	39.6	9.8	2.5
Highest quarter	47.5	26.1	22.3	3.4	0.7
High school academic characteristics					
Academic risk in 10th grade[3]					
Low	54.0	33.9	10.7	1.0	0.4
Moderate	35.6	12.6	40.2	9.3	2.3
High	13.1	4.6	51.1	23.3	7.9
School disengagement in 10th grade[4]					
Low	41.8	20.3	30.7	5.7	1.5
Moderate	40.4	16.4	33.0	8.3	1.9
High	23.9	8.2	48.7	14.9	4.4
Rigor of high school curriculum[5,6]					
Below-standard	26.8	10.5	46.3	12.8	3.6
Standard	34.7	13.9	40.2	9.0	2.2
Moderately rigorous	49.4	19.0	26.6	4.2	0.7
Rigorous	56.3	36.8	5.9	1.0 !	‡
Highest math course taken since grade 9[6]					
No math, basic math, or pre-algebra	10.3	1.9 !	56.4	24.1	7.3
Algebra I, geometry, or algebra II	23.9	8.4	51.5	12.7	3.5
Trigonometry, statistics, or precalculus	50.5	19.1	25.4	4.3	0.7 !
Calculus	55.1	33.8	9.7	1.3	‡
Highest science course taken since grade 9[6]					
No science or low-level science	10.0	4.8	55.6	20.3	9.3
General biology	21.1	6.4	54.7	14.3	3.4
Chemistry I or physics I	39.7	14.4	36.3	8.1	1.5
Chemistry I and physics I	52.8	24.0	19.8	2.7	0.7
Chemistry II, physics II, or advanced biology	50.0	26.9	19.2	3.0	0.9
Cumulative academic GPA					
0.00–1.99	13.1	5.7	55.2	20.1	5.9
2.00–2.49	25.3	8.4	50.8	12.3	3.3
2.50–2.99	40.4	12.4	38.2	7.4	1.6
3.00–3.49	50.6	21.3	24.9	2.7	0.5
3.50–4.00	54.4	30.9	12.7	1.5	0.5

See notes at end of table.

Table 5.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and control of the institution they first attended, by selected characteristics: 2012—Continued

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
[1] Includes for-profit institutions at all levels.
[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[5] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.
[6] Excludes about 15 percent of students with no or partial transcript information.
NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-5b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Completing Postsecondary Education

Degree Attainment

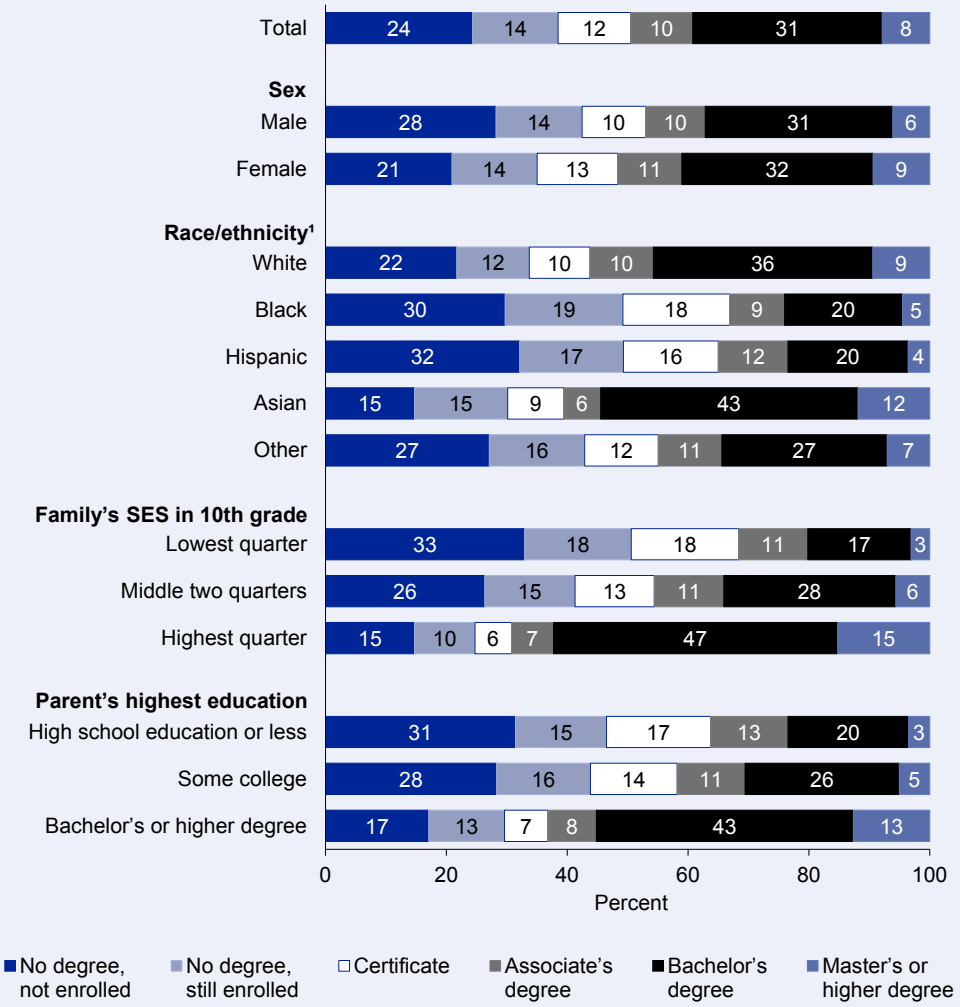
The timing of the ELS:2002 third follow-up survey, conducted 8 years after most cohort members had graduated from high school, permits examination of subbaccalaureate, bachelor's, or even higher degree attainment among students who entered postsecondary education after high school. As of 2012, 14 percent of 2002 sophomores with subsequent postsecondary enrollment were still in school and had not earned a postsecondary credential, and 24 percent had left postsecondary education without a postsecondary credential (figure 8). The remaining students had completed at least one credential, with 8 percent earning a master's or other advanced degree, 31 percent a bachelor's degree, 10 percent an associate's degree, and 12 percent an undergraduate certificate as their highest degree attainment.

Differences in educational attainment by sex have shifted over the past few decades, with gaps now in favor of females (Snyder, de Brey, and Dillow 2016). This trend was also reflected in the 2002 sophomore cohort: more females than males had earned a master's or higher degree by 2012 (9 percent vs. 6 percent), and more males than females had left college without a degree or certificate (28 percent vs. 21 percent).

Long-standing gaps between Whites and Asians compared with Blacks and Hispanics were also reflected in the 2002 sophomore cohort. After they enrolled in postsecondary education, 45 percent of Whites and 55 percent of Asians had earned a bachelor's or higher degree by 2012, compared with 25 percent of Blacks and

24 percent of Hispanics. On the other hand, 18 percent of Blacks and 16 percent of Hispanics had earned an undergraduate certificate, compared with 9 percent of Asians and 10 percent of Whites. In addition, 30 percent of Blacks and 32 percent of Hispanics had left college before earning a postsecondary credential, while 22 percent of Whites and 15 percent of Asians had done so.

Figure 8.
Among spring 2002 high school sophomores who subsequently enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected demographic characteristics: 2012



[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-7a and C-7b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

The percentage of students from high-SES families who earned a bachelor's or higher degree was about three times as high as that for those from low-SES families (62 percent vs. 20 percent). The percentage for students from middle-SES families (34 percent) put them in between. Looking specifically at the highest level of education completed by either parent (one of the components included in the family SES measure), 56 percent of students whose parents were college graduates had earned a bachelor's or higher degree by 2012, compared with 23 percent of those whose parents had a high school education or less.

Degree attainment was also related to students' high school academic experiences (table 6). Among 2002 sophomores who enrolled in postsecondary education after high school, those who had high academic risk in 10th grade had lower rates of attaining a bachelor's or advanced degree than did their peers who had low academic risk (5 percent vs. 78 percent). Students who were highly disengaged with school in 10th grade also had lower rates of attaining such degrees than did their peers who were not disengaged (20 percent vs. 53 percent). Students who expected to complete only a high school education or less had substantially lower bachelor's or advanced degree attainment rates than did their counterparts who expected to earn a bachelor's or higher degree later (6 percent vs. 46 percent).

About 80 percent of enrollees who completed a rigorous high school curriculum had earned a bachelor's or higher degree as of 2012, compared with 26 percent of those who completed a below-standard curriculum. The bachelor's degree attainment rate for those who took calculus in high school was about 14 times as high as that of students who took no or only low-level math courses (56 percent vs. 4 percent), and the rate for students with an academic GPA of 3.5 or higher was about 8 times as high as that for students with an academic GPA of below 2.00 (56 percent vs. 7 percent).

Finally, degree attainment rates were related to enrollment timing and the type of institution that students first attended. Students who entered college immediately after high school and who first attended a 4-year institution, especially a highly selective 4-year institution, had earned a bachelor's or advanced degree at higher rates than did their counterparts who delayed enrollment by at least 1 year or began at a public 2-year or a less selective, inclusive institution (see table C-7a).

Table 6.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected student high school characteristics: 2012

Selected student high school characteristics	Highest postsecondary degree					
	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
Total	**12.0**	**10.3**	**31.4**	**7.9**	**14.2**	**24.3**
Student's educational expectations in 10th grade						
Do not know yet	15.7	10.4	19.8	4.2	16.0	34.0
High school diploma or less	22.0	9.9	6.4	‡	17.5	43.7
Some college	20.1	14.9	10.9	1.4	16.7	36.0
Bachelor's or higher degree	10.2	9.6	36.5	9.4	13.4	20.9
Academic risk in 10th grade[1]						
Low	2.9	4.1	56.3	21.7	7.2	7.7
Moderate	12.5	11.7	29.4	5.8	14.9	25.6
High	23.1	9.6	5.4	‡	20.0	41.8
School disengagement in 10th grade[2]						
Low	8.0	11.2	40.4	12.1	10.1	18.1
Moderate	11.6	10.1	33.5	8.3	13.7	22.9
High	17.1	10.2	17.1	2.9	18.6	34.2
Rigor of high school curriculum[3,4]						
Below-standard	15.4	10.9	22.2	4.3	16.5	30.8
Standard	12.6	11.6	30.0	6.5	15.2	24.1
Moderately rigorous	7.9	10.6	42.0	10.7	10.5	18.2
Rigorous	2.2	3.1	56.4	24.1	7.9	6.3
Highest math coursetaking since grade 9[4]						
No math, basic math, or pre-algebra	23.7	9.0	4.0	‡	20.8	42.5
Algebra I, geometry, or algebra II	16.9	13.3	18.2	2.3	17.1	32.3
Trigonometry, statistics, or precalculus	7.0	9.2	43.8	10.8	11.5	17.8
Calculus	3.1	4.7	56.3	21.8	7.0	7.1
Highest science coursetaking since grade 9[4]						
No science or low-level science	21.5	11.0	6.9	‡	19.3	40.7
General biology	18.4	12.4	14.9	1.6	17.9	34.8
Chemistry I or physics I	11.2	12.3	32.9	6.6	13.7	23.3
Chemistry I and physics I	5.6	7.8	49.6	14.2	9.5	13.4
Chemistry II, physics II, or advanced biology	5.1	6.5	48.0	16.7	10.0	13.8
Cumulative academic GPA						
0.00–1.99	19.4	9.5	7.0	0.5	22.8	40.8
2.00–2.49	14.8	13.1	18.3	1.9	18.0	33.9
2.50–2.99	13.2	13.9	30.3	4.8	12.8	24.9
3.00–3.49	7.5	9.9	49.4	10.3	9.4	13.5
3.50–4.00	2.8	4.8	55.7	23.3	6.0	7.3

‡ Reporting standards not met.

[1] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[2] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[3] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.

[4] Excludes about 15 percent of students with no or partial transcript information.

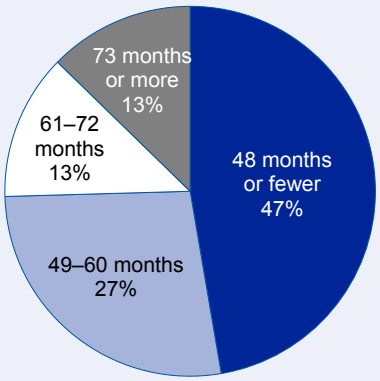
NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-7b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Time to Bachelor's Degree

Among 2002 high school sophomores who had earned a bachelor's degree by 2012, the average time between initial postsecondary entry and first bachelor's degree completion was 55 months (figure 9). About 47 percent of bachelor's degree recipients had attained their first bachelor's degree within 48 months (4 years) of their initial postsecondary enrollment; 27 percent completed within 49–60 months (5 years); and 13 percent finished within 61–72 months (6 years). The remaining 13 percent took more than 6 years to finish their first bachelor's degree.

Figure 9.
Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, percentage distribution by time to first bachelor's degree attainment: 2012



Average total months between initial postsecondary enrollment and first bachelor's degree: 55 months

NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-8a and C-8b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Characteristics related to degree attainment were also related to time to degree. Specifically, proportionally more females (51 percent), Whites and Asians (49 and 51 percent, respectively), and students from high-SES families (54 percent) completed their bachelor's degree within 4 years than did their counterparts who were males (42 percent), Blacks and Hispanics (36 and 41 percent, respectively), and from low-SES families (38 percent) (table 7). Students with a strong academic preparation in high school—e.g., completing a rigorous curriculum; taking calculus or advanced science courses such as chemistry II, physics II, or advanced biology; and earning an academic GPA of 3.5 or higher (55–65 percent)—completed their

bachelor's degree within 4 years at higher rates than did their counterparts with less academic preparation, such as those who completed a below-standard curriculum, took no or low-level math and science courses, or earned an academic GPA of below 2.5 (24–43 percent).

Time to bachelor's degree was also related to other academic characteristics observed in 10th grade: proportionally more of those who exhibited low academic risk or school disengagement (62 and 51 percent, respectively) completed their bachelor's degree within 4 years than did their counterparts who had a high academic risk or school disengagement (23 and 33 percent, respectively).

About 66 percent of bachelor's degree recipients who first attended a private nonprofit 4-year institution completed their bachelor's degree within 4 years. In comparison, 46 percent of students who first attended a public 4-year institution and 19 percent of those who first attended a public 2-year institution had done so (see table C-8a). In addition, 65 percent of bachelor's degree recipients who first attended a highly selective 4-year institution completed their bachelor's degree within 4 years, compared with 47 percent of those who started at a moderately selective institution and 37 percent of those who started at an inclusive institution.

Table 7.
Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, percentage who completed their first bachelor's degree within 4 years, by selected characteristics: 2012

Selected characteristics	Percent completing first bachelor's degree within 4 years
Total	**47.3**
Demographic characteristics	
Sex	
Male	42.4
Female	51.2
Race/ethnicity[1]	
White	49.1
Black	36.3
Hispanic	40.9
Asian	51.2
Other	47.1
Family SES in 10th grade	
Lowest quarter	38.3
Middle two quarters	41.9
Highest quarter	53.7
High school academic characteristics	
Academic risk in 10th grade[2]	
Low	61.7
Moderate	40.7
High	23.0 !
School disengagement in 10th grade[3]	
Low	50.9
Moderate	47.2
High	32.6
Rigor of high school curriculum[4,5]	
Below-standard	42.6
Standard	43.5
Moderately rigorous	45.8
Rigorous	65.3
Highest math coursetaking since grade 9[5]	
No math, basic math, or pre-algebra	28.0 !
Algebra I, geometry, or algebra II	30.0
Trigonometry, statistics, or precalculus	46.7
Calculus	62.7
Highest science coursetaking since grade 9[5]	
No science or low-level science	32.9 !
General biology	33.3
Chemistry I or physics I	42.0
Chemistry I and physics I	50.9
Chemistry II, physics II, or advanced biology	55.3
Cumulative academic GPA	
0.00–1.99	23.6
2.00–2.49	26.9
2.50–2.99	34.8
3.00–3.49	44.7
3.50–4.00	63.2

See notes at end of table.

Table 7.
Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, percentage who completed their first bachelor's degree within 4 years, by selected characteristics: 2012—Continued

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[2] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[3] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[4] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.
[5] Excludes about 15 percent of students with no or partial transcript information.
NOTE: Standard errors are available in table C-8b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Borrowing for Postsecondary Education

Student Loans

About 60 percent of 2002 high school sophomores with subsequent postsecondary enrollment reported taking out a student loan to pay for their postsecondary education, which may include graduate education (table 8). Based on data from the National Student Loan Data System (NSLDS),[17] 59 percent of postsecondary enrollees took out a federal loan. On average, borrowers reported that their cumulative student loan amount as of 2012 was $30,000. NSLDS data indicate that among the 59 percent of students who borrowed through federal loan programs, their cumulative amount of federal student loan debt was $24,900.

More females than males took out a student loan (63 percent vs. 57 percent); however, there was no difference by sex in the loan amount. Among various racial/ethnic subgroups, proportionally more Black (67 percent) than White, Asian, or Hispanic students (55–60 percent) reported taking out a student loan. Asian students, however, borrowed more ($47,300) than White ($31,900), Black ($25,000), and Hispanic students ($21,600).

[17] The NSLDS is the U.S. Department of Education's central database for student aid. It contains records of all federal loan and Pell Grant information for anyone who has such a loan or grant.

Proportionally more students from middle-SES families (62 percent) than those from low- and high-SES families reported taking out a student loan (58–59 percent). However, students from high-SES families borrowed more ($41,200) than those from middle- and low-SES families ($27,400 and $22,000, respectively).

Table 8.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who took out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012

	Estimated from students' reports		Estimated from NSLDS[1]	
Selected characteristics	Percent taking out a student loan[2]	Total amount of student loans[3]	Percent taking out a federal loan[4]	Total amount of federal loans[5]
Total	**60.2**	**$30,000**	**58.6**	**$24,900**
Demographic characteristics				
Sex				
Male	56.5	30,600	53.8	24,300
Female	63.4	29,600	62.9	25,400
Race/ethnicity[6]				
White	60.0	31,900	59.0	25,700
Black	66.9	25,000	69.4	23,200
Hispanic	55.3	21,600	49.0	19,300
Asian	57.6	47,300	53.6	38,700
Other	60.3	31,400	57.5	24,600
Family SES in 10th grade				
Lowest quarter	57.9	22,000	56.3	19,400
Middle two quarters	62.4	27,400	61.2	22,100
Highest quarter	58.7	41,200	58.6	34,500
Postsecondary characteristics				
Type of first-attended institution				
Public 4-year	64.6	33,400	64.3	29,000
Private nonprofit 4-year	75.3	47,200	74.9	35,600
Public 2-year	47.8	19,600	45.4	17,200
For-profit[7]	74.7	18,500	74.7	12,900
Other	41.9	18,700	28.9	13,300
Selectivity of first-attended institution[8]				
Highly selective 4-year institution	65.4	50,900	65.0	43,200
Moderately selective 4-year institution	71.1	35,000	70.8	28,000
Inclusive 4-year	73.8	27,800	75.0	22,200
Less-than-4-year institution	50.5	18,500	47.6	15,700
Highest postsecondary attainment in 2012				
Some college but no postsecondary credential	51.6	16,700	49.8	14,800
Undergraduate certificate	56.2	16,400	53.4	11,600
Associate's degree	58.5	22,100	59.8	17,100
Bachelor's degree	68.3	37,000	66.5	28,300
Master's or higher degree	77.9	71,700	76.6	67,700

See notes at end of table.

Table 8.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who took out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012—Continued

[1] NSLDS refers to the National Student Loan Data System.
[2] Student loans, which must be paid back or forgiven, include federal loans (subsidized and unsubsidized loans and Perkins Loans), state loans, institutional loans, and private or alternative loans.
[3] Includes only students who reported taking out a student loan.
[4] Includes any type of federal loan.
[5] Includes only students who took out a federal loan, as indicated by NSLDS.
[6] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[7] Includes for-profit institutions at all levels.
[8] Selectivity categories are based on 2010 Carnegie classifications. "Highly selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the top fifth of baccalaureate institutions; "moderately selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the middle two-fifths of baccalaureate institutions; and "inclusive" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement. Institutions with unclassified selectivity (i.e., those that do not have test score data) are included in the "Total" row but not displayed separately.
NOTE: Standard errors are available in table C-9b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Whether and how much students borrowed for postsecondary education were also related to the type of institution that students first attended. Students beginning at private nonprofit 4-year or private for-profit institutions (75 percent for both types) borrowed at higher rates than did those beginning at public 4- or 2-year institutions (65 and 48 percent, respectively). Those who first attended private nonprofit 4-year institutions borrowed more than did those who first attended public 4-year institutions ($47,200 vs. $33,400), and both groups borrowed more than did students who first attended public 2-year institutions ($19,600) or private for-profit institutions ($18,500). In addition, proportionally fewer students who first attended highly selective 4-year institutions (65 percent) reported taking out a student loan than did students who first attended moderately selective (71 percent) or inclusive 4-year institutions (74 percent); the former group, however, borrowed more, on average, than did the latter two groups ($50,900 vs. $35,000 and $27,800, respectively).

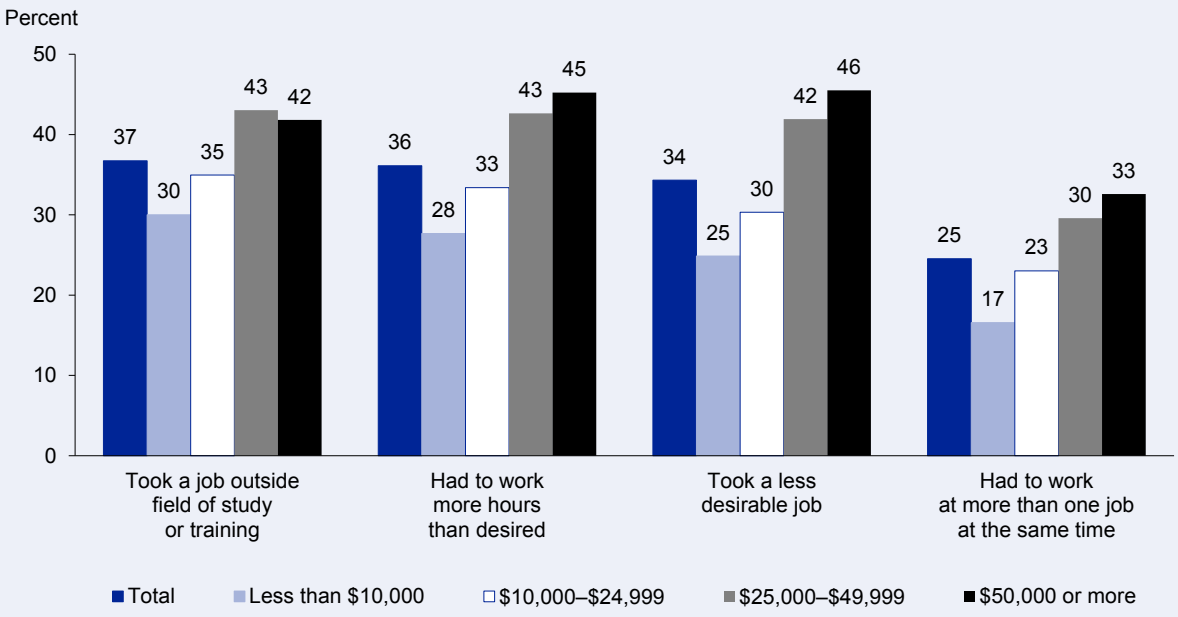
The percentage of students taking out a student loan also increased with their level of educational attainment. About 78 percent of those who earned a master's or higher degree and 68 percent of those who earned a bachelor's degree reported taking out a student loan, compared with 56–59 percent of those who earned an undergraduate certificate or an associate's degree. The average cumulative amount borrowed also increased with students' level of educational attainment, ranging from $16,400 for those who had earned an undergraduate certificate to $37,000 for those

who had earned a bachelor's degree and $71,700 for those who had earned a master's or other advanced degree.

Perceived Impact of Student Loans

In ELS:2002, students who had enrolled in and borrowed for postsecondary education were asked to indicate whether their student loan debt had impacted their employment. At least one-quarter of these students indicated that because of their student loan debt, they had to take a job outside their field of study (37 percent), work more hours than desired (36 percent), take a less desirable job (34 percent), or work at more than one job at the same time (25 percent) (figure 10). Students who borrowed more (e.g., $25,000 or more) reported these consequences of student loan debt more frequently than did students who borrowed less (e.g., less than $25,000). For example, 42 percent of students who borrowed $50,000 or more responded that they had to take a job outside their field of study because of their student loan debt, compared with 30 percent of those who borrowed less than $10,000.

Figure 10.
Among spring 2002 high school sophomores who reported taking out a student loan to pay for their postsecondary education, percentage indicating various impacts of student loan debt on their employment plans, by total amount of student loans: 2012



NOTE: Estimates and standard errors are available in tables C-10a and C-10b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

This page intentionally left blank

Family Formation

Leaving home and starting a family are traditional milestones of adulthood (Settersten, Furstenberg, and Rumbaut 2005). Relative to earlier generations, recent generations have delayed these traditional milestones as a matter of circumstance (e.g., economic hardships, caring for parents) or in favor of other priorities (e.g., postsecondary attainment, career advancement, financial independence) (Cherlin 2005; Furstenberg 2010; Sawhill 2014). While the majority of Americans (95 percent) still consider completing school, leaving their parents' home, and being employed full time as the most important markers of adulthood, fewer (50 percent) consider marriage and parenthood necessary prerequisites for adulthood (Settersten, Furstenberg, and Rumbaut 2005). A recent Pew Research Center survey found that almost 40 percent of Americans think marriage is becoming obsolete (Livingston and Cohn 2010), and other researchers found that public support of marriage has declined in recent decades (Goldrick-Rab and Han 2011).

Indeed, marriage rates in the United States have declined steadily since the 1960s (Martin, Astone, and Peters 2014; Proulx, Helms, and Buehler 2007). In 1960, about 72 percent of American adults age 18 or older were currently married; by 2008, the rate had declined to 52 percent (Pew Research Center 2010a), and the rate is projected to decrease further in the future (Martin, Astone, and Peters 2014). Not only are more people choosing not to marry, but also more are postponing marriage and childbirth (Aud, KewalRamani, and Frohlich 2011; Child Trends Databank 2013; Martin et al. 2015). Between 1980 and 2009, the median age at first marriage increased from 25 to 28 years old for males and from 22 to 26 years old for females (Aud, KewalRamani, and Frohlich 2011). Similar to marriage rates, birth rates have declined in the last 50 years, from 118 births per 1,000 women 15–44 years old in 1960 to a record low of 63 births in 2013 (Child Trends Databank 2013; Martin et al. 2015). As public opinion about marriage and family life has shifted, the pathway to family formation has become more ambiguous. Cohabiting, childbearing outside of marriage, and living with parents after college have become more common (Martin et al. 2015; Sawhill 2014; Settersten and Ray 2010; Wang and Taylor 2011). In 2014, living with parents became the most common living arrangement for young adults for the first time since the 1960s: 32 percent of adults ages 18 to 34 lived in the home of their parents, 32 percent lived with a spouse or partner in their own household, 14 percent lived alone, and 22 percent lived in the home of another family member or a nonrelative or in group quarters (such as college dormitories). (Fry 2016).

Within this context, this section examines the marital status, parenthood status, and living arrangements of the 2002 high school sophomore cohort as of 2012. Family formation activities are examined in terms of demographic characteristics in 2002 and postsecondary educational attainment as of 2012. Bivariate results for other characteristics can be found in appendix C.

Marital Status

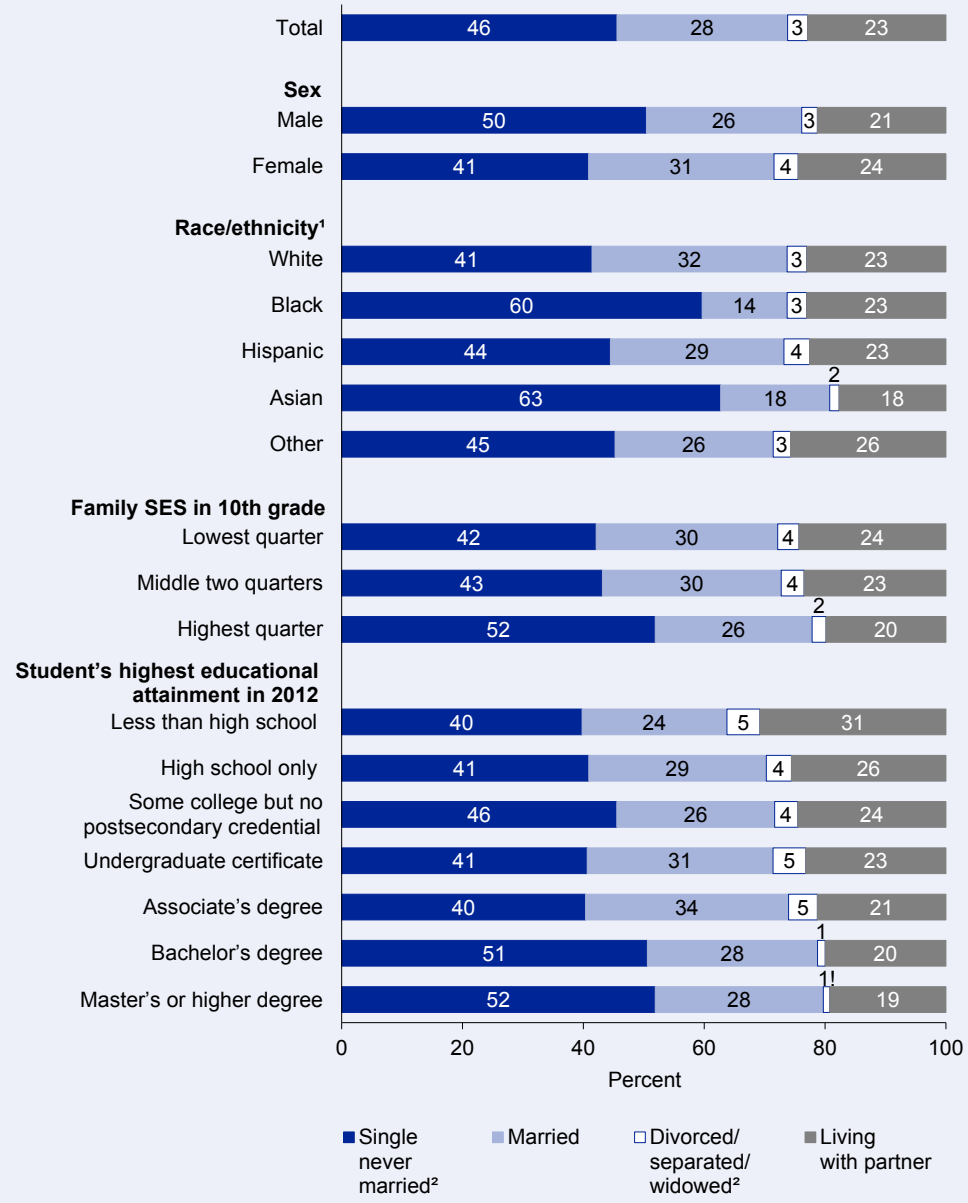
By 2012, when most 2002 high school sophomores had reached their mid-20s, 31 percent of cohort members had married—28 percent were currently married and 3 percent had divorced, separated, or become widowed (figure 11). To provide context for this figure, 46 percent of 1988 eighth-graders had married before they reached their mid-20s in 2000 (Ingels et al. 2002).

A higher percentage of females than males (31 percent vs. 26 percent) were married, while a higher percentage of males than females were single and had never married (50 percent vs. 41 percent). Marriage rates varied across racial/ethnic subgroups. A higher percentage of Whites (32 percent) than all other racial/ethnic subgroups (14–29 percent) were married in 2012. Proportionally more Blacks and Asians than all other racial/ethnic subgroups were single and had never married (60 and 63 percent, respectively, vs. 41–45 percent). Marriage rates were also related to family SES. Proportionally fewer cohort members from high-SES families (26 percent) than those from middle- and low-SES families were married (30 percent for both groups).

Postsecondary education has been associated with delayed marriage (Goldstein and Kenny 2001; Pew Research Center 2010a). In the 2002 high school sophomore cohort, 51–52 percent of those who had earned a bachelor's or higher degree were single and never married as of 2012. In comparison, 40–46 percent of their counterparts with less education were single and never married. This pattern was also observed with the NELS:88 eighth-grade cohort 10 years after high school completion (Ingels et al. 2002).

Parallel to the decline of marriage is the rising prevalence of cohabitation (Copen et al. 2012; Settersten and Ray 2010). Among the 2002 sophomore cohort, about 23 percent were cohabiting in 2012 (figure 11). To put this percentage in context, when 1988 eighth-graders turned 26 years old in 2000, just 1 percent were cohabiting (Ingels et al. 2002). Proportionally more sophomores from low-SES families than those from high-SES families lived with a partner as of 2012 (24 percent vs. 20 percent). In addition, proportionally more high school dropouts than those with at least some postsecondary education were cohabiting (31 percent vs. 19–24 percent).

Figure 11.
Percentage distribution of spring 2002 high school sophomores' marital status, by selected demographic characteristics and student's highest educational attainment: 2012



! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[2] Not living with any partner.

NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-11a and C-11b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

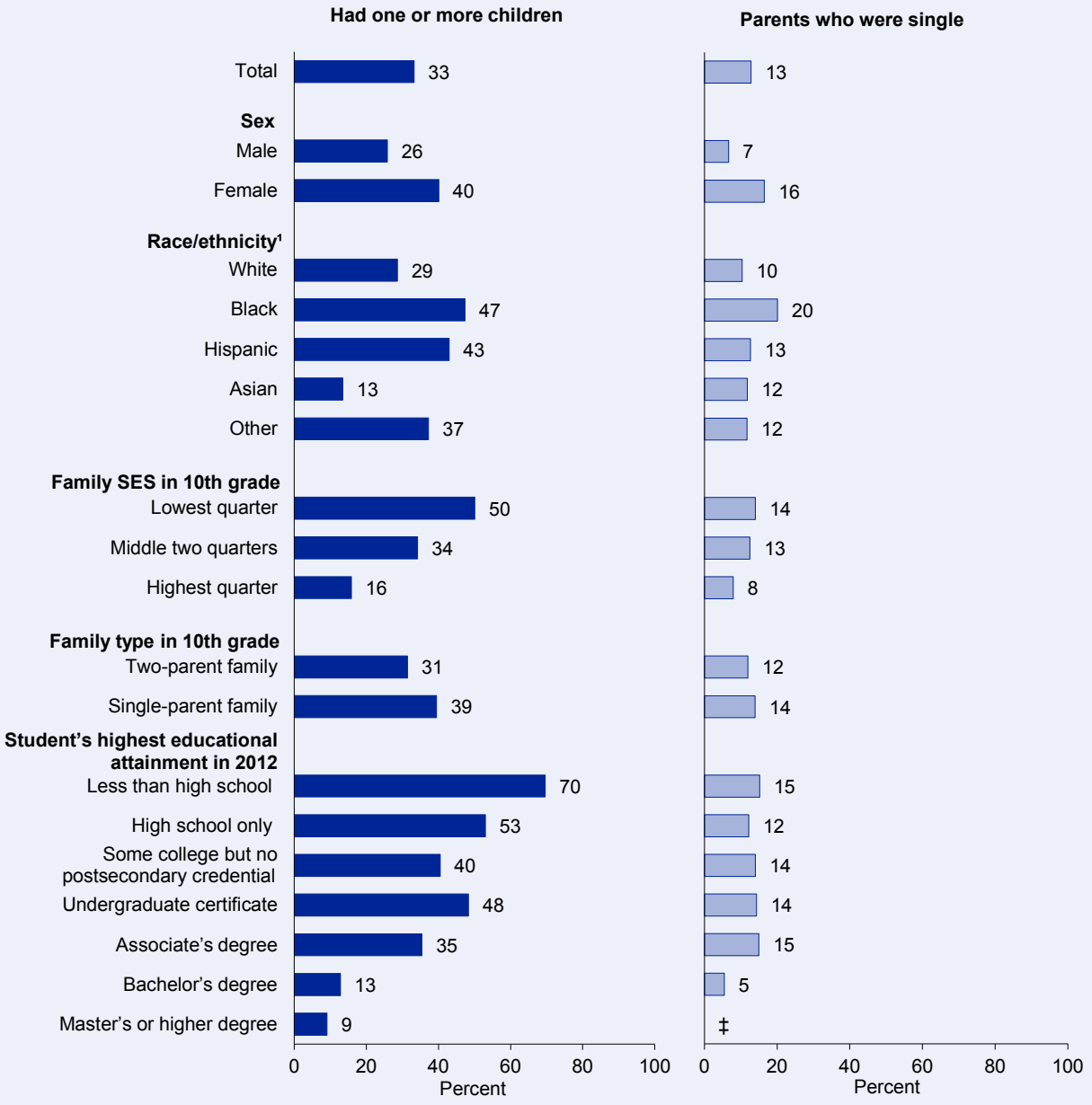
Parenthood

About one-third (33 percent) of 2002 high school sophomores had at least one child as of 2012 (figure 12). To provide context for this finding, 41 percent of 1988 eighth-graders had at least one child when they were about 26 years old (Ingels et al. 2002).

More females than males had at least one child (40 percent vs. 26 percent). Parenthood status also varied across racial/ethnic subgroups: 47 percent of Blacks and 43 percent of Hispanics had at least one child in 2012, followed by Whites (29 percent) and Asians (13 percent). The percentage of 2002 sophomores who had at least one child in 2012 was highest among those from low-SES families (50 percent), followed by those from middle-SES families (34 percent) and then those from high-SES families (16 percent). Proportionally fewer bachelor's or higher degree holders (9–13 percent) than those with a lower level of educational attainment (35–70 percent) had at least one child in 2012. The childrearing rate was highest among those who lacked a high school credential (70 percent) and among those who had only a high school education (53 percent).

Among the 33 percent of 2002 high school sophomores who reported having at least one child as of 2012, 13 percent were single parents (figure 12). Among parents, the percentage who were single and living with their children in 2012 was higher among females than males (16 percent vs. 7 percent), among Blacks than other racial/ethnic subgroups (20 percent vs. 10–13 percent), and among those from low-SES families than those from high-SES families (14 percent vs. 8 percent). About 12 percent of 2002 sophomores who grew up in a single-parent home and became parents later were single and living with their children in 2012; this rate was not different from the 14 percent observed among their counterparts who grew up in a two-parent home and became parents later.

Figure 12.
Percentage of spring 2002 high school sophomores who had one or more biological or adopted children, and of parents, percentage who were single, by selected demographic characteristics and student's highest educational attainment: 2012



‡ Reporting standards not met.

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

NOTE: Estimates and standard errors are available in tables C-12a and C-12b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Living Arrangements

About 23 percent of 2002 high school sophomores were living with parents in 2012, while 42 percent were living with a spouse or partner and another 19 percent were living alone (table 9). More males than females were living with parents (25 percent vs. 21 percent) and friends or roommates (13 percent vs. 7 percent), while more females than males were living with a spouse/partner (46 percent vs. 39 percent).

Table 9.
Percentage distribution of spring 2002 high school sophomores' living arrangements, by selected characteristics: 2012

Selected characteristics	Parents	Spouse/ partner[1]	Friends/ roommates[2]	Children[3]	Alone	Other
Total	**22.7**	**42.3**	**10.0**	**2.8**	**18.8**	**3.4**
Demographic characteristics						
Sex						
Male	24.9	38.8	12.6	1.8	17.6	4.3
Female	20.7	45.6	7.5	3.8	19.9	2.6
Race/ethnicity[4]						
White	18.1	47.8	11.4	2.1	17.9	2.8
Black	28.3	30.1	6.8	5.7	24.9	4.2
Hispanic	32.2	35.0	6.8	3.3	18.4	4.3
Asian	39.2	25.8	11.6	1.9	15.4	6.1
Other	22.6	43.4	8.8	3.8	17.5	3.9
Family SES in 10th grade						
Lowest quarter	25.9	42.0	4.7	5.0	19.1	3.3
Middle two quarters	22.4	44.8	8.7	2.8	18.0	3.3
Highest quarter	18.1	40.5	16.5	1.0	20.9	3.0
Student's highest educational attainment in 2012						
Less than high school	28.0	42.7	2.7	5.9	14.3	6.3
High school only	27.3	44.0	5.8	4.5	14.4	4.0
Some college but no postsecondary credential	25.5	40.5	7.5	3.8	19.2	3.6
Undergraduate certificate	21.2	44.4	6.6	3.8	20.3	3.7
Associate's degree	22.9	45.6	7.4	3.6	18.1	2.4
Bachelor's degree	19.6	42.0	15.9	0.7	18.9	2.9
Master's or higher degree	14.6	42.0	15.4	‡	24.5	2.9

‡ Reporting standards not met.

[1] Living with spouse/partner and not living with parents.

[2] Living with friends/roommates and not living with parents, spouse/partner, children, or siblings.

[3] Living with children and not living with parents or spouse/partner.

[4] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-13b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Proportionally more Blacks, Hispanics, and Asians than Whites were living with parents in 2012 (28–39 percent vs. 18 percent), as were individuals from low-SES families compared with those from middle- and high-SES families (26 percent vs. 18–22 percent). About 15 percent of master's or higher degree holders were living with parents in 2012, a lower percentage than that observed among those with lower levels of educational attainment (20–28 percent).

This page intentionally left blank

Labor Market Outcomes and Socioeconomic Status

The average member of the high school sophomore class of 2002 turned 21 as the Great Recession began in late 2007. During this economic turbulence, the United States saw rising unemployment rates, declining earnings, and growing numbers of people living in poverty (DeNavas-Walt, Proctor, and Smith 2013). This recession disproportionately affected younger workers beginning their careers and adult lives (Hoynes, Miller, and Schaller 2012). Various sources report the following:

- Almost 18 percent of young workers in their 20s experienced a job loss between 2007 and 2009, up from 10 percent from 2005–07 (Farber 2011).
- The youth (aged 16–24) unemployment rates climbed from 11 percent in 2005–07 to 18 percent in 2009–10 (Bell and Blanchflower 2011).
- Between 2007 and 2012, the average earnings of recent high school and college graduates declined by 10 and 5 percent, respectively (Shierholz, Sabadish, and Wething 2012).
- The median household income was 8.3 percent lower in 2012 than in 2007 (DeNavas-Walt, Proctor, and Smith 2013).
- In 2009, almost 3 million (7 percent) of young adults aged 15–24 lived in households that received some form of public assistance, compared with 1.7 million (4 percent) in 1980 (Aud, KewalRamani, and Frohlich 2011).
- In 2012, about 47 million Americans (15 percent) lived in poverty, up from 37 million (12 percent) in 2007 (DeNavas-Walt, Proctor, and Smith 2013).

Although the long-term consequences of these economic trends are not yet known, they may be especially hard for those (including many members of the 2002 sophomore cohort) who were finishing college and ready to enter the workforce during and immediately after the recession.

Since the early 1990s, the United States has also been experiencing a labor market restructuring, including changes in dominant industries and the skills and educational requirements for jobs and increases in part-time, temporary, and short-term labor (Kalleberg 2011; Kim 2013; Pedulla 2013). This restructuring has led to new divisions in the labor market with increases in low-skill and low-pay professions and, to a lesser degree, high-skill professions such as those related to science, technology,

engineering, and mathematics (STEM) and a decline in middle-skill professions (Kalleberg 2011; Autor 2011).[18] Highly educated young adults are more likely to end up in highly skilled occupations than those with lower levels of education (Kim 2013). In addition, even after taking overall labor market changes into account and controlling for education, sex and race/ethnicity remain associated with the probability of individuals working in a specific occupation (Blau, Brummund, and Liu 2013; Alonso-Villar, Del Río, and Gradín 2012).

Within this context, this section provides a portrait of the 2002 high school sophomore cohort's labor market outcomes during and after the Great Recession and their SES in 2012. It presents estimates related to cohort members' employment status, occupations, and earnings in 2012 as well as their unemployment history from 2009 to 2012. To provide a context for understanding the impact of recent wars on this group of young adults, this section also explores the extent to which the 2002 high school sophomores served in the military and the characteristics of those who entered the military by 2012. The section ends with an analysis of 2002 sophomores' SES in 2012, focusing on their SES as adults and the degree to which they received public assistance. Building on prior sections, variables indicating students' educational outcomes and family formation—in addition to 10th-grade demographic characteristics and high school experiences—are included to better understand the cohort members' labor market outcomes in 2012.

It is important to note that this section only addresses cohort members' early career and labor market outcomes. At age 25–26, many individuals are just starting their careers; some are still enrolled in undergraduate or graduate studies; and others will return to school for additional training later in their careers. ELS:2002 does not contain long-term labor market data that capture individuals' full dynamic job histories and their career growth. Nevertheless, research indicates that early labor market experiences are generally correlated with later labor market outcomes (Pedulla 2012).

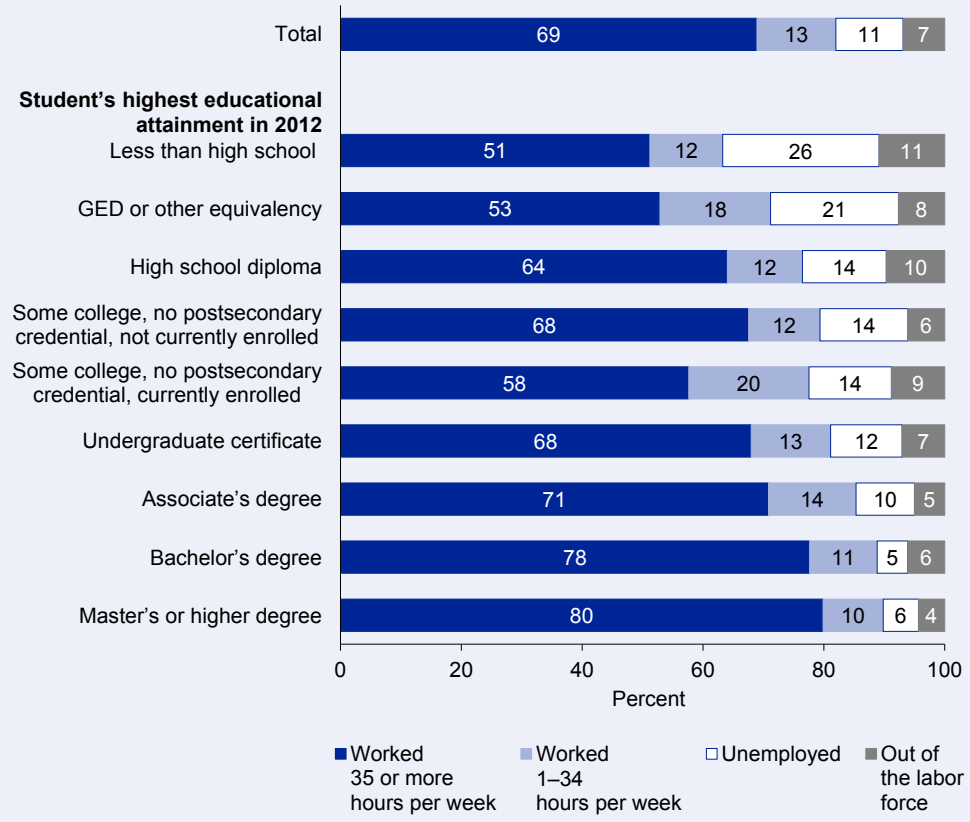
[18] Jobs are often described on continua between manual and cognitive jobs and between routine and nonroutine jobs (Cheremukhin 2014). Cognitive, nonroutine jobs are usually high-skill jobs that require problem-solving skills; workers in these jobs typically have a college degree (e.g., engineers, technical analysts, and scientists). Manual, routine jobs are often low-skill jobs that involve manual tasks (e.g., food service and personal care) and typically do not require a high school diploma. Both cognitive routine and manual nonroutine jobs tend to be middle-skill jobs that require the ability to follow precise procedures (such as sales and administrative jobs). Often, middle-skill jobs require a high school diploma or a higher level of education.

Most Recent Employment as of 2012

Employment Status

In 2012, all but 7 percent of 2002 high school sophomores were in the labor force (figure 13). About 11 percent were unemployed (Bureau of Labor Statistics 2014), while 82 percent were employed with 69 percent employed full time and 13 percent employed part time.[19]

Figure 13.
Percentage distribution of spring 2002 high school sophomores' employment status, by student's highest educational attainment: 2012



NOTE: Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work. Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-14a and C-14b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

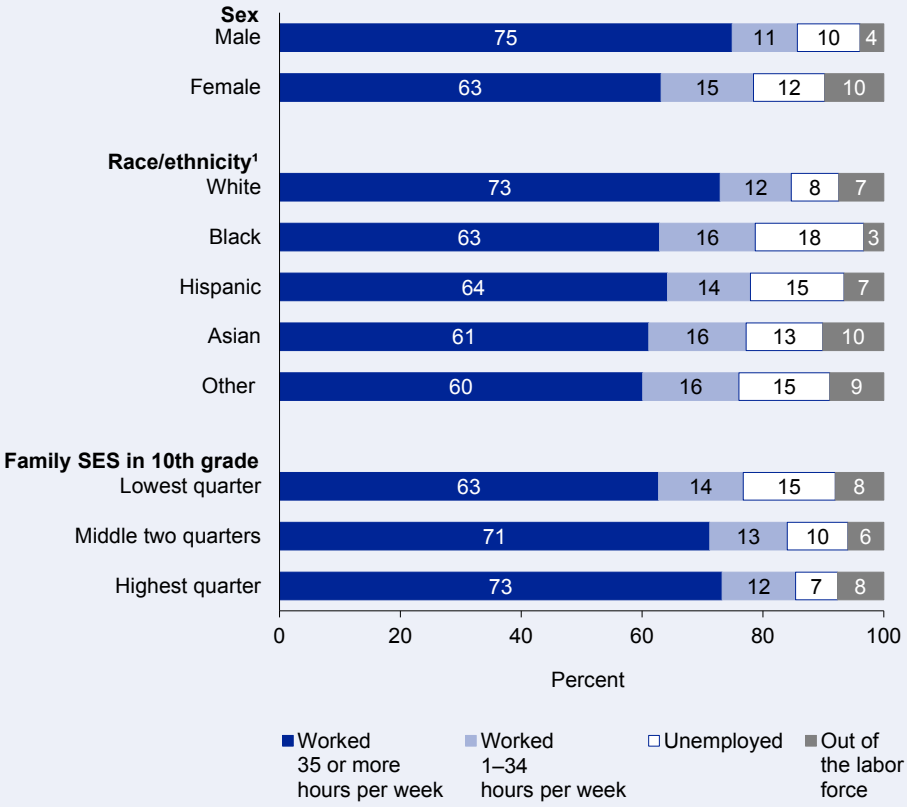
[19] ELS:2002 used the federal definitions of *employed, unemployed,* and *out of the labor force* (Bureau of Labor Statistics 2014). Specifically, persons are classified as *employed* if they currently have a job; *unemployed* if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or *out of the labor force* if they are neither working nor looking for work.

Cohort members' 2012 employment status varied considerably based on their educational attainment, with the pattern of findings reflecting the longstanding relationship between employment and educational attainment (Hout 2012; Shierholz, Davis, and Kimball 2014; Shierholz, Sabadish, and Wething 2012). That is, individuals with less education had higher unemployment rates, while those with more education had higher employment rates and were more likely to be working full time. For example, 26 percent of those who had not completed high school were unemployed, and 51 percent were employed full time in 2012. Among cohort members who had earned a GED or other high school equivalency but did not enroll in postsecondary education, 21 percent were unemployed, and 53 percent were employed full time. Among those who had earned a high school diploma but did not enroll in postsecondary education, however, proportionally fewer (14 percent) were unemployed and proportionally more (64 percent) were employed full time. Four-year college graduates, including those with a master's or higher degree, had the lowest unemployment rates (5–6 percent) and the highest rates of full-time employment (78–80 percent) among all cohort members.

Cohort members from different demographic backgrounds exhibited different levels of employment status. Compared with men, proportionally fewer women worked full time (63 percent vs. 75 percent), and more women worked part time (15 percent vs. 11 percent) or were out of the labor force (10 percent vs. 4 percent) (figure 14).

Employment status also varied among different racial/ethnic subgroups. Whites had a higher rate of full-time employment (73 percent) and lower rate of unemployment (8 percent) than did those from all other racial/ethnic subgroups (60–64 percent for full-time employment rates and 13–18 percent for unemployment rates). In contrast, Blacks had a higher rate of unemployment than did Whites and Asians (18 percent vs. 8–13 percent). In terms of family SES background, 2002 sophomores from low-SES families were unemployed at about twice the rate of those from high-SES families (15 percent vs. 7 percent), while proportionally more sophomores from high-SES families were employed full time than were their peers from low-SES families (73 percent vs. 63 percent). Those from middle-SES families fell in between—10 percent were unemployed, while 71 percent were working full time in 2012.

Figure 14.
Percentage distribution of spring 2002 high school sophomores' employment status, by selected demographic characteristics: 2012



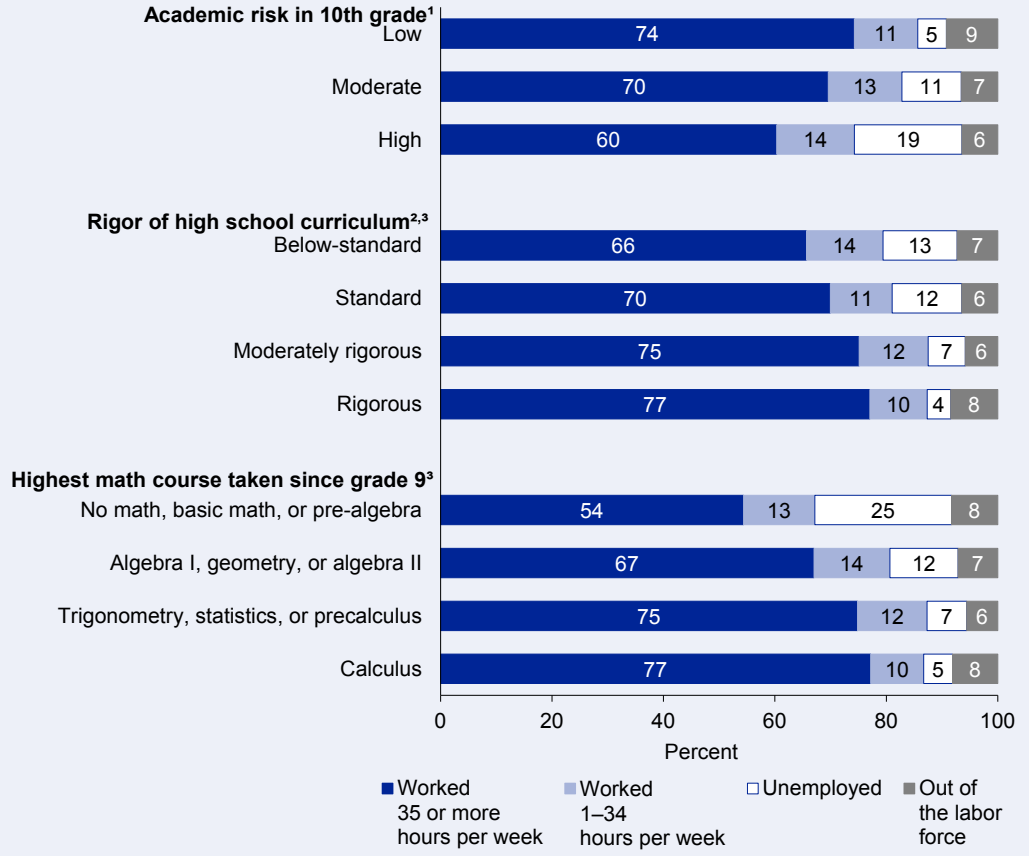
[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

NOTE: Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work. Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-14a and C-14b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

High school academic characteristics also appeared to be related to employment status 10 years later (figure 15). For example, among those at low academic risk as 10th-graders, 74 percent were employed full time and 5 percent were unemployed. In comparison, among those at high academic risk as 10th-graders, 60 percent were employed full time and 19 percent were unemployed.

Figure 15.
Percentage distribution of spring 2002 high school sophomores' employment status, by selected high school academic characteristics: 2012



[1] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[2] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language that are reported on students' high school transcripts. See appendix A for detailed information about this variable.

[3] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work. Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-14a and C-14b.

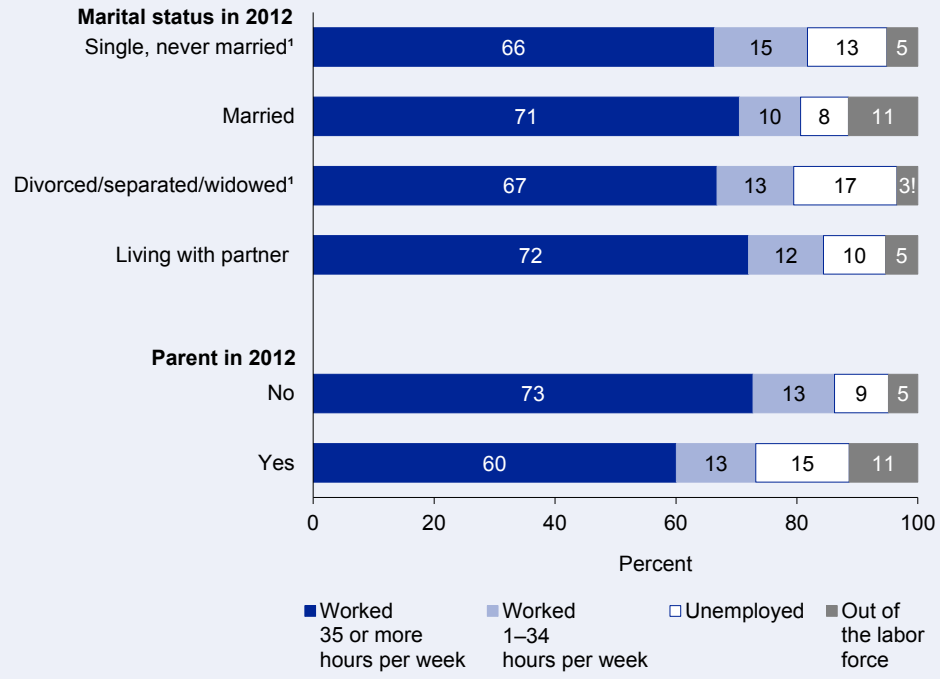
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

In terms of high school coursetaking, completing a rigorous curriculum and taking calculus and advanced science courses were associated with higher full-time employment rates and lower unemployment rates. For example, among 2002 sophomores who had taken a rigorous high school curriculum, 77 percent were employed full time, and 4 percent were unemployed in 2012; the corresponding figures for their peers who had taken a below-standard curriculum in high school were 66 percent and 13 percent, respectively. Among 2002 sophomores who had taken algebra 1 or a more advanced math course in high school, 67 percent or more were employed full time, and 12 percent or fewer were unemployed in 2012. In

contrast, among those who had not taken a math course more advanced than pre-algebra, 54 percent were employed full time, and 25 percent were unemployed.

Marriage and parenthood may influence young adults' labor market participation and employment intensity; for example, family responsibility and childrearing may make it difficult for some people to participate in the labor force (Budig, Boeckmann, and Misra 2011). The pattern observed in the 2002 sophomore cohort is consistent with this relationship: 11 percent of those who were married in 2012 were out of the labor force, compared with 3–5 percent of single, partnered, or formerly married individuals (figure 16). In addition, 11 percent of those who had become parents were out of the labor force, compared with 5 percent of those who were not parents. Married cohort members had a lower unemployment rate (8 percent) than did others (10–17 percent). Those with children had a higher unemployment rate (15 percent) than did their counterparts without children (9 percent). Proportionally fewer cohort members with children than their childless counterparts were employed full time (60 percent vs. 73 percent).

Figure 16.
Percentage distribution of spring 2002 high school sophomores' employment status, by marital and parenthood status: 2012



! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

[1] Not living with any partner.

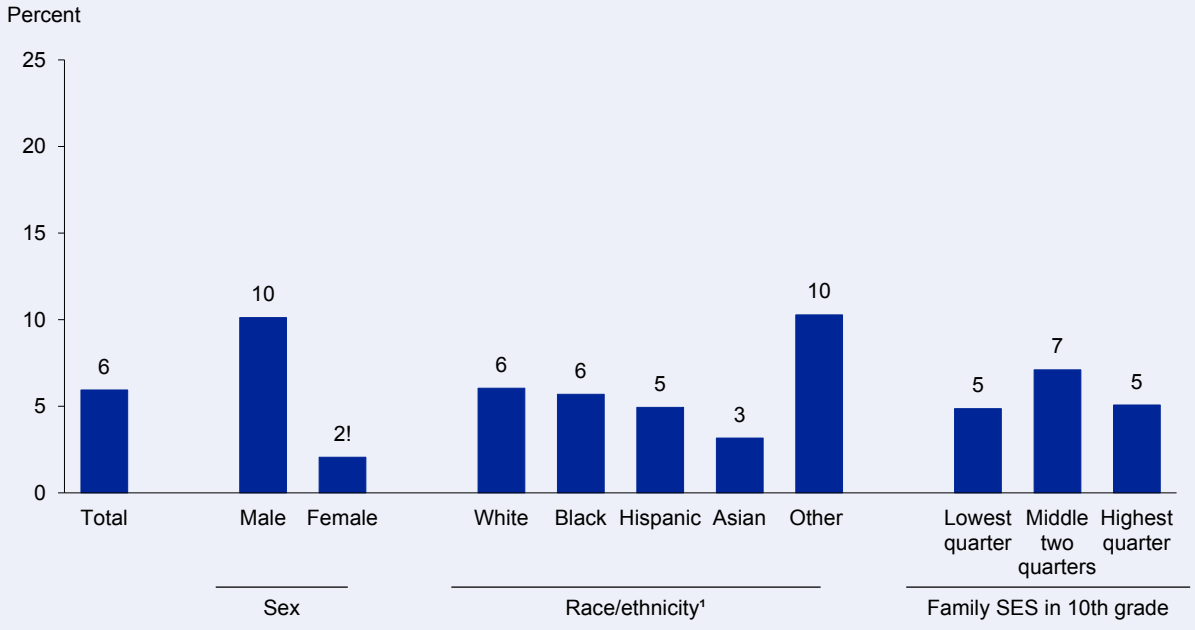
NOTE: Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work. Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-14a and C-14b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Military Service

Although less than 1 percent of Americans have served in the recent wars in Afghanistan and Iraq, those who entered the military were disproportionately young men (Kelty, Kleykamp, and Segal 2010; Kudler and Porter 2013). Among the 2002 high school sophomore cohort, a total of 6 percent reported having ever served in the military as of 2012 (including those who were still serving in the military in 2012) (figure 17). Consistent with early research, proportionally more males than females reported that they had served in the military (10 percent vs. 2 percent).

Figure 17.
Percentage of spring 2002 high school sophomores who had ever served in the military, by selected demographic characteristics: 2012



! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

NOTE: Estimates and standard errors are available in tables C-14a and C-14b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

In terms of race/ethnicity, the rate ranged from 6 percent for both Whites and Blacks to 5 percent for Hispanics and 3 percent for Asians. The rate was relatively higher (10 percent) for those whose race/ethnicity was categorized as "other." These individuals consisted of American Indians, Alaska Natives, Native Hawaiians, other Pacific Islanders, and individuals who indicated Two or more races or Other races. Military service did not appear to be related to family SES among the 2002 sophomore cohort: 5 percent of those from low-SES families entered the military, which was not measurably different from the 7 percent of those from middle-SES families and the 5 percent of those from high-SES families who served. Military service was generally not related to high school characteristics except for GPA: those who earned a lower academic GPA in high school (e.g., below 2.5) entered the military at a higher rate than did their counterparts who earned a higher academic GPA (e.g., 3.0 or above) (8 percent vs. 3 percent) (see table C-14a).

Looking at its relationship to cohort members' educational attainment in 2012, military service was more prevalent among those with some college education than among those who had completed an undergraduate certificate and those who had earned a bachelor's degree. Ten percent of cohort members who had some postsecondary education but had not yet earned a credential and 12 percent of those who were still enrolled in college in 2012 had served in the military by 2012 (table 10). In comparison, 3 percent of those with a bachelor's degree had served in the military. This difference may, in part, be due to delayed college enrollment of students who had served in the military. Facilitated by the generous educational benefits provided by the Post 9/11 GI Bill,[20] many veterans attend college after completing their service, thus increasing their time to degree relative to high school completion (Kelty, Kleykamp, and Segal 2010).

[20] The GI Bill provides a range of benefits to returning veterans, including low-cost mortgages, low-interest loans to start a business, and payments of tuition and living expenses to attend college, high school, or vocational education. The benefits are available to every veteran who had been on active duty during the war years and had not been dishonorably discharged. After the 9/11 terrorist attacks, the bill was amended in 2008 with several new provisions designed to expand educational benefits for military service members and veterans who have served since September 11, 2001, including a housing allowance, a stipend for books and supplies, and full payment of their tuition and fees (U.S. Department of Veterans Affairs 2011).

Table 10.
Percentage of spring 2002 high school sophomores who had ever served in the military, by student's highest educational attainment: 2012

Student's highest educational attainment in 2012	Ever served in the military
Total	**5.9**
Student's highest educational attainment in 2012	
Less than high school	‡
High school only	6.2
GED, certificate of attendance, or other equivalence	‡
High school diploma	6.8
Some college but no postsecondary credential	9.5
Still enrolled in 2012	12.4
Not enrolled in 2012	7.8
Undergraduate certificate	5.2
Associate's degree	7.3
Bachelor's degree	3.2
Master's or higher degree	1.8 !

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
NOTE: Standard errors are available in table C-14b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Current Occupation

Looking at the current occupations reported by 2002 sophomores who were employed in 2012, about one-third (32 percent) were in a trade or technical occupation (table 11).[21] Another 16 percent worked as business support personnel or administrative assistants, and 14 percent worked in business or management occupations. One-tenth worked in health care-related occupations, 6 percent as PK–12 educators or social service professionals,[22] another 6 percent in an occupation related to STEM,[23] and the final 7 percent worked in "other" occupations.[24]

[21] This report classifies current occupations into eight broad categories listed in table 11. Current occupations are coded based on the 2010 Standard Occupational Classification (SOC). More information on the 2010 SOC codes can be found at http://www.bls.gov/soc/.
[22] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.
[23] For this report, STEM-related occupations include natural scientists, mathematics-related occupations, engineers, and computer/information systems occupations.
[24] "Other" occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.

Table 11.
Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012

Selected characteristics	Business/ management occupations	STEM occupations[1]	Health care occupations	PK–12 educators/ social service professionals[2]	Sales occupations	Business support/ administrative assistants	Trade/ technical occupations	Other[3]
Total	**13.5**	**5.9**	**10.2**	**6.4**	**7.9**	**16.5**	**32.4**	**7.2**
Student's highest educational attainment in 2012								
Less than high school	8.0	#	3.1 !	‡	7.6	15.2	64.5	‡
High school only	7.2	1.0 !	3.4	0.8 !	9.4	18.6	57.2	2.3
Some college but no postsecondary credential	12.4	3.5	5.9	3.0	9.8	19.9	41.2	4.4
Undergraduate certificate	8.5	1.9	22.9	2.4	5.4	14.9	41.1	2.9
Associate's degree	9.7	4.9	17.7	3.2	7.9	20.6	30.1	5.9
Bachelor's degree	20.7	12.3	8.2	11.0	7.7	13.9	14.6	11.5
Master's or higher degree	13.7	7.8	23.1	23.8	1.2 !	6.5	4.5	19.5
Demographic characteristics								
Sex								
Male	14.1	8.7	3.7	3.0	7.8	11.5	45.2	6.0
Female	13.0	3.0	16.9	10.1	8.0	21.7	18.9	8.5
Family SES in 10th grade								
Lowest quarter	9.0	3.0	10.4	5.0	8.2	18.8	41.8	3.9
Middle two quarters	13.0	5.2	10.1	5.9	7.7	17.8	34.2	6.1
Highest quarter	18.7	9.7	10.1	8.9	7.8	11.8	20.6	12.3
High school academic characteristics								
Rigor of high school curriculum[4,5]								
Below-standard	12.1	4.6	8.0	4.8	8.7	16.8	40.0	5.1
Standard	13.4	5.9	11.8	6.0	5.8	17.5	32.5	7.1
Moderately rigorous	16.1	6.3	13.0	9.8	7.7	15.9	21.9	9.2
Rigorous	19.2	15.2	14.1	10.1	4.6	9.4	12.6	14.9
Highest math course taken since grade 9[5]								
No math, basic math, or pre-algebra	7.1	2.0 !	4.8	2.1 !	9.9	17.3	54.5	2.4 !
Algebra I, geometry, or algebra II	11.6	2.8	9.1	4.6	8.8	18.4	39.4	5.3
Trigonometry, statistics, or precalculus	16.4	6.7	12.2	10.4	6.8	15.4	23.7	8.3
Calculus	18.9	17.8	13.8	7.5	4.7	10.2	13.1	14.0

See notes at end of table.

Table 11.
Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012—Continued

Rounds to zero.

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

‡ Reporting standards not met.

[1] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.

[2] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.

[3] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.

[4] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.

[5] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-15b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Cohort members' 2012 occupations varied with their educational attainment. Among those who had not completed high school, almost all (96 percent) of those who had not completed high school were employed in occupations that fell into four of the eight occupational categories, including the 65 percent who worked in trade or technical occupations, the 15 percent who worked as business support personnel or administrative assistants, and another 8 percent who worked in each of the business/management and sales occupation categories. These four occupation categories also accounted for 92 percent of employed 2002 sophomores who had just completed a high school education. Three percent of those who had no more than a high school education worked in health care occupations. Among those who had earned an undergraduate certificate, however, 23 percent worked in health care occupations.

Proportionally more bachelor's degree recipients (21 percent) than their peers in other educational attainment categories (7–14 percent) worked in business/management occupations in 2012. In addition, about 12 percent of bachelor's degree recipients worked in STEM occupations, compared with 1–8 percent of their peers in other educational attainment categories. Among 2002 sophomores who had earned a master's or other advanced degree, the four largest occupation categories included elementary/secondary educators or social service professionals (24 percent), health care occupations (23 percent), "other" (19 percent), and business/management occupations (14 percent).

Consistent with past research (Gabriel and Schmitz 2007; Reskin and Bielby 2005; Blau, Brummund, and Liu 2013), men and women tended to cluster in different occupational fields, with more women than men in such fields as education, social services, and health care. For example, proportionally more women than men worked as business support personnel or administrative assistants (22 percent vs. 12 percent), in health care occupations (17 percent vs. 4 percent), and in PK–12 education or social services (10 percent vs. 3 percent). Proportionally more men than women worked in trade or technical occupations (45 percent vs. 19 percent).

Sophomores' 2012 occupations were also related to their family SES as measured in high school. Proportionally more individuals from high-SES families worked in business/management and STEM occupations (19 and 10 percent, respectively) than did their counterparts from low-SES families (9 and 3 percent, respectively). The latter group, on the other hand, had higher proportions than their high-SES peers working in trade/technical occupations (42 percent vs. 21 percent) or as business support/administrative assistants (19 percent vs. 12 percent).

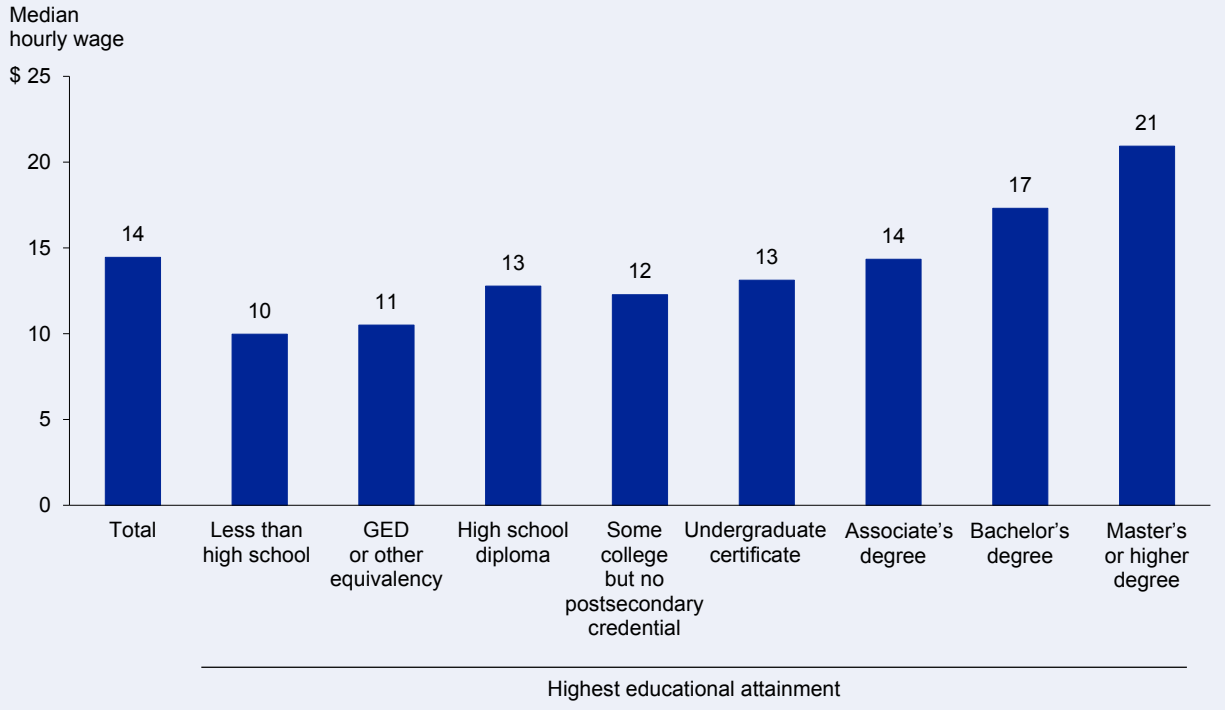
In addition, sophomores' 2012 occupations were correlated with the rigor of their curriculum in high school. For example, having taken more rigorous high school curricula was associated with lower percentages of cohort members working in trade/technical occupations: 40 percent of those who had taken a below-standard high school curriculum, 33 percent who had taken a standard, 22 percent who had taken a moderately rigorous, and 13 percent who had taken a rigorous high school curriculum worked in the trade/technical occupations. Conversely, 15 percent of those who had taken a rigorous curriculum worked in STEM fields, compared with 5–6 percent of those who had taken less rigorous curricula. The relationship between cohort members' 2012 occupations and their math coursetaking in high school exhibited similar patterns: in general, cohort members who had taken no or low-level math and science courses tended to cluster in lower skill fields such as trade/technical occupations, whereas those who had taken calculus tended to work in STEM fields and business management positions.

Wages for Current Jobs

Cohort members who worked in 2012 earned a median hourly wage of $14 in their 2012 job, which was equivalent to approximately $29,000[25] a year for a full-time, year-round job (figure 18). Hourly wages varied based on individuals' educational attainment, demographic and family characteristics, high school characteristics, and occupation. Generally, and following historical trends, the higher a student's educational attainment, the higher his or her wage. For example, the median hourly wage for those who did not complete high school was about one-half the median hourly wage for those with a master's or higher degree ($10 vs. $21). The median hourly wage for associate's degree recipients was higher than that for those who attended some college but did not earn a postsecondary credential ($14 vs. $12). Bachelor's degree holders had a higher median hourly wage than associate's degree holders ($17 vs. $14), and those with a master's or higher degree had a higher median hourly wage than bachelor's degree holders ($21 vs. $17).

[25] For an individual who works 40 hours per week and 52 weeks a year, $14 per hour would be equivalent to $29,120 per year in earnings.

Figure 18.
Median standardized hourly wage for spring 2002 high school sophomores who were currently employed, by students' highest educational attainment: 2012

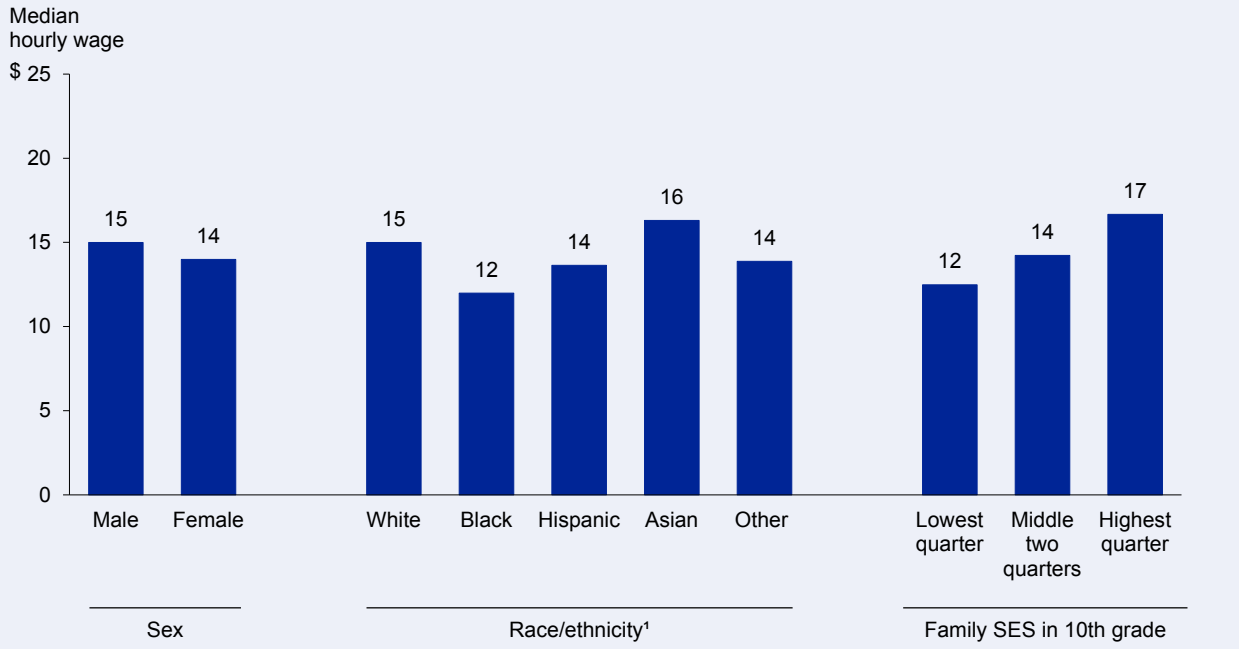


NOTE: Earnings that were reported in a format other than dollars per hour (e.g., dollars per week) were standardized to dollars per hour. Estimates and standard errors are available in tables C-16a and C-16b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Consistent with prior research (McCall and Percheski 2010), hourly wages differed between men and women. Despite having higher educational attainment, women earned less than men: women's median hourly wage was a dollar an hour lower than men's median hourly wage ($14 vs. $15) (figure 19). In addition, 28 percent of women's hourly wages fell in the lowest quarter of the wage distribution, compared with 22 percent of men's (figure 20).

Earnings also differed among racial/ethnic subgroups. Blacks had the lowest median hourly wages ($12 vs. $14–$16 for other racial/ethnic subgroups) (figure 19), and 40 percent of Blacks' hourly wages fell in the lowest quarter of the wage distribution, compared with 18–29 percent among other racial/ethnic subgroups (figure 20). Of all racial/ethnic subgroups, Whites and Asians had the highest median hourly wages ($15 and $16, respectively) and the largest percentages of individuals in the highest quarter of the wage distribution (28 and 34 percent, respectively).

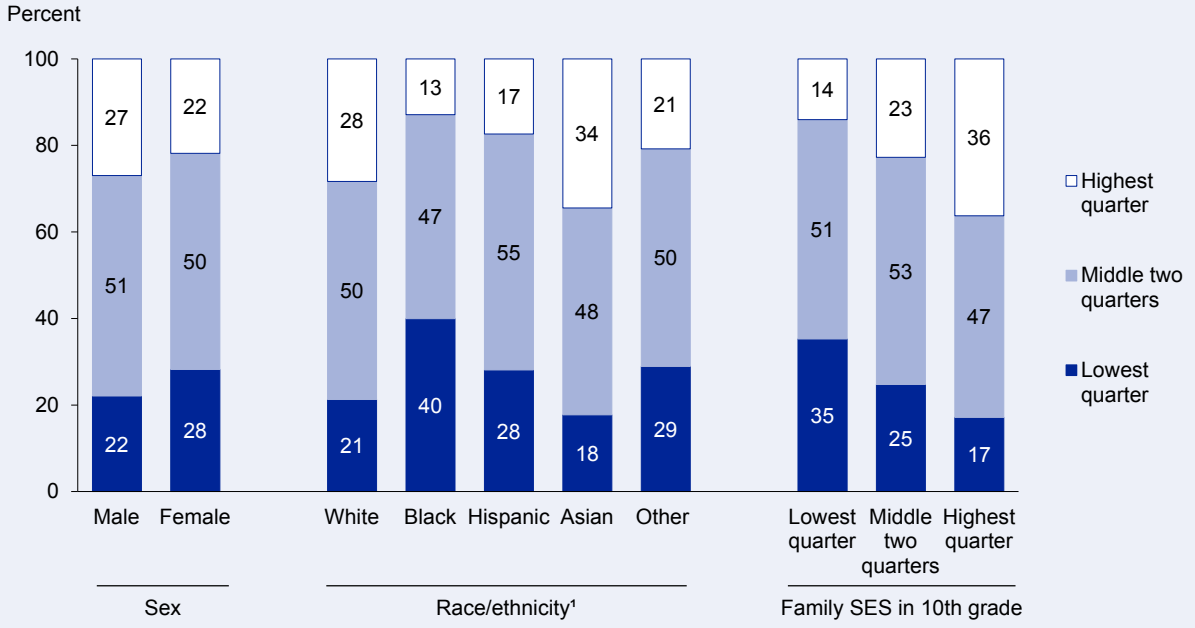
Figure 19.
Median standardized hourly wage for spring 2002 high school sophomores who were currently employed, by selected demographic characteristics: 2012



[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
NOTE: Earnings that were reported in a format other than dollars per hour (e.g., dollars per week) were standardized to dollars per hour. Estimates and standard errors are available in tables C-16a and C-16b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Cohort members from more socioeconomically advantaged families had higher median hourly wages. Sophomores from high-SES families earned a median hourly wage of $17 in their 2012 job, compared with $14 for those from middle-SES families and $12 for those from low-SES families (figure 19). Thirty-six percent of cohort members from high-SES families had wages in the highest quarter of the wage distribution, compared with 23 percent of those from middle-SES families and 14 percent of those from low-SES families (figure 20).

Figure 20.
Among spring 2002 high school sophomores who were currently employed, percentage distribution of standardized hourly wage, by selected demographic characteristics: 2012



[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
NOTE: Earnings that were reported in a format other than dollars per hour (e.g., dollars per week) were standardized to dollars per hour. Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-16a and C-16b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Such high school characteristics as 10th-grade academic risk, rigor of high school curriculum, highest math and science courses taken, and academic GPA were all related to 2002 high school sophomores' wages 10 years later (table 12). The pattern was consistent: sophomores with a stronger academic profile in high school (e.g., completed a rigorous curriculum, took calculus and advanced science courses, and earned a high academic GPA) earned higher hourly wages in 2012 than did their counterparts with a weaker academic profile. For example, 2002 sophomores whose highest math course was calculus had a median hourly wage of $20, and those whose highest math course was trigonometry, precalculus, or statistics had a median hourly wage of $16. In comparison, those who had taken no math more advanced than algebra or geometry earned a median hourly wage of $13, and those who had taken no math more advanced than pre-algebra earned a median hourly wage of $11.

Table 12.
Among spring 2002 high school sophomores who were currently employed, median and percentage distribution of standardized hourly wage for their current job, by selected student high school characteristics: 2012

Selected student high school characteristics	Median standardized hourly wage[1]	Percentage distribution of standardized hourly wage[1]		
		Lowest quarter	Middle two quarters	Highest quarter
Total	**$14.45**	**25.1**	**50.5**	**24.4**
Academic risk in 10th grade[2]				
Low	18.46	11.5	45.1	43.4
Moderate	14.40	24.8	52.0	23.2
High	11.36	42.7	48.1	9.2
Rigor of high school curriculum[3,4]				
Below-standard	13.40	30.3	50.6	19.1
Standard	14.99	23.2	50.5	26.3
Moderately rigorous	15.38	18.0	52.7	29.3
Rigorous	19.99	11.0	40.0	48.9
Highest math course taken since grade 9[4]				
No math, basic math, or pre-algebra	10.77	47.5	44.3	8.2
Algebra I, geometry, or algebra II	13.16	29.8	53.8	16.4
Trigonometry, statistics, or precalculus	15.99	17.3	51.4	31.3
Calculus	19.98	10.4	40.4	49.1
Highest science course taken since grade 9[4]				
No science or low-level science	11.91	40.7	46.3	13.0
General biology	13.00	31.3	52.6	16.1
Chemistry I or physics I	14.80	22.0	54.1	24.0
Chemistry I and physics I	16.81	15.8	49.1	35.1
Chemistry II, physics II, or advanced biology	17.45	16.4	44.1	39.4
Cumulative academic GPA				
0.00–1.99	11.99	36.1	51.0	12.9
2.00–2.49	13.27	30.1	55.3	14.5
2.50–2.99	14.25	25.4	51.2	23.4
3.00–3.49	16.29	16.8	50.3	32.8
3.50–4.00	19.14	10.1	44.4	45.5

[1] Earnings that were reported in a format other than dollars per hour (e.g., dollars per week) were standardized to dollars per hour.

[2] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[3] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this

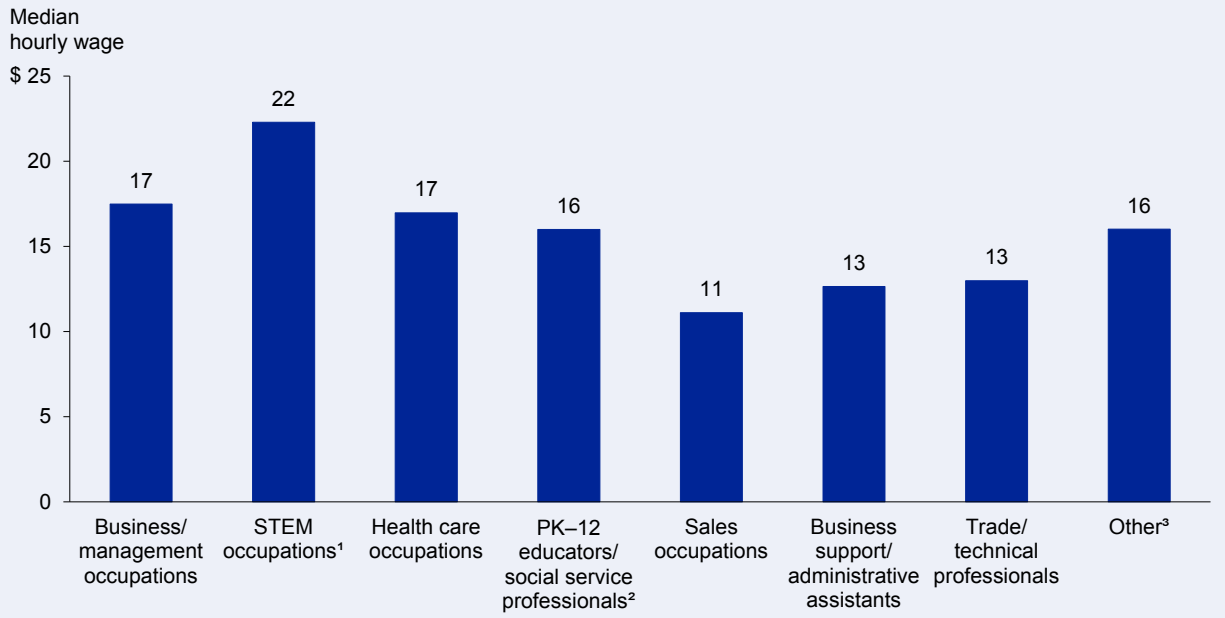
[4] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-16b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Wages were also tied to occupations. Individuals working in STEM occupations had the highest median hourly wage, $22 (figure 21). On the other hand, individuals in sales occupations had the lowest median wage, $11 per hour, followed by those in business support/administrative professions and trade/technical occupations, with a median hourly wage of $13.

Figure 21.
Median standardized hourly wage for spring 2002 high school sophomores who were currently employed, by current occupation: 2012



[1] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.

[2] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.

[3] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.

NOTE: Earnings that were reported in a format other than dollars per hour (e.g., dollars per week) were standardized to dollars per hour. Estimates and standard errors are available in tables C-16a and C-16b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Alignment Between Education and Occupation

Discussions about the value of college degrees in the labor market include the topic of underemployment, or underutilization of workers' human capital in the labor market (Abel, Deitz, and Su 2014; Robst 2007; Roksa and Arum 2012). When unemployment rates are high, underemployment is also a concern. There are generally two forms of underemployment: working fewer hours than desired and working in a job that does not require the level of education that the worker has attained.

The third follow-up survey of ELS:2002 offered two measures of underemployment. First, sample members who had ever worked since 2006 were asked whether their current or most recent job required each of the following postsecondary credentials: an undergraduate certificate, associate's degree, or bachelor's or graduate degree. Second, sample members who had worked since 2006 and attended college at some point were asked whether their 2012 or most recent job was closely, somewhat, or not at all related to the field they studied during their most recent postsecondary enrollment. These self-reported data describe sample members' perceptions of the alignment between their postsecondary education and their current or most recent jobs.

Among 2002 sophomores who had ever worked between 2006 and 2012, 18 percent reported that their current or most recent job required an undergraduate certificate; 12 percent reported that this job required an associate's degree; and 27 percent reported that their current or most recent job required a bachelor's or graduate degree (table 13). Among the subset of cohort members who had ever worked since 2006 and enrolled in postsecondary education at some point, 36 percent reported their current or most recent job was closely related to their major field of study during their most recent period of enrollment; another 22 percent reported that this job was somewhat related to that field of study; and 43 percent reported that their current or most recent job was not related to their most recent major field of study.

Individuals whose educational attainment is greater than the education required for their jobs may be underemployed. Among those who had earned an associate's degree, 20 percent reported that their current or most recent job required an undergraduate certificate. About 35 percent of bachelor's degree recipients may be underemployed—16 percent worked in a job requiring an undergraduate certificate, and 19 percent worked in a job requiring an associate's degree. Among those who had attained a master's or higher degree, approximately 30 percent reported that their current or most recent job required only an undergraduate certificate or an associate's degree.

Table 13.
Among spring 2002 high school sophomores who had worked for pay, percentage reporting the perception that their current or most recent job required various postsecondary credentials, and of those who had also enrolled in postsecondary education, percentage indicating that their current or most recent job was closely, somewhat, or not related to their most recent postsecondary major: by selected characteristics: 2012

	Current/most recent job required			Current/most recent job and most recent postsecondary major field were		
Selected characteristics	Under-graduate certificate	Associate's degree	Bachelor's or higher degree	Closely related	Some-what related	Not related
Total	**18.4**	**11.6**	**26.6**	**35.5**	**22.0**	**42.5**
Student's highest educational attainment in 2012						
Less than high school	9.5	‡	‡	†	†	†
High school only	14.7	1.5 !	1.8	†	†	†
Some college but no postsecondary credential	14.5	5.1	7.4	17.8	19.2	63.0
Undergraduate certificate	45.7	8.0	7.4	38.9	19.1	42.1
Associate's degree	20.1	31.0	7.7	40.4	18.6	41.0
Bachelor's degree	15.7	19.1	58.3	43.6	27.7	28.7
Master's or higher degree	14.7	14.7	84.4	70.8	19.2	10.0
Sex						
Male	16.3	9.9	24.0	33.0	22.7	44.3
Female	20.4	13.3	29.1	37.6	21.3	41.1
Race/ethnicity[1]						
White	16.3	12.0	30.5	39.5	21.5	39.1
Black	25.3	10.2	17.0	25.4	21.4	53.2
Hispanic	20.3	10.7	17.9	28.3	22.4	49.3
Asian	17.4	14.6	41.6	37.3	27.8	35.0
Other	20.4	11.1	19.6	31.0	23.6	45.4
Occupation of current/most recent job						
Business/management occupations	13.6	13.6	44.7	34.5	29.7	35.8
STEM occupations[2]	17.1	20.1	70.0	62.1	23.6	14.3
Health care occupations	41.1	27.2	32.9	68.8	18.8	12.4
PK–12 educators/social service professionals[3]	23.2	18.7	76.2	68.5	16.4	15.1
Sales occupations	10.0	4.6	12.0	9.7	21.2	69.1
Business support/administrative assistants	11.1	8.6	10.9	15.5	23.3	61.1
Trade/technical professionals	19.4	5.6	5.0	22.4	18.3	59.3
Other[4]	17.0	19.0	58.5	54.2	27.9	17.9

† Not applicable.

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

‡ Reporting standards not met.

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[2] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.

[3] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.

[4] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.

NOTE: Standard errors are available in table C-17b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

In general, the higher the level of individuals' educational attainment, the greater the percentage who perceived their job as closely related to their major and the lower the percentage who perceived their job as not related to their major. For example, among those who enrolled at the postsecondary level but did not earn a credential, 18 percent reported that their job was closely related to their major, and 63 percent reported that their job was not related (table 13). In comparison, among those with an associate's degree, 40 percent reported that their job was closely related to their major, and 41 percent reported that their job was not related. For bachelor's degree completers, 44 percent reported that their job was closely related to their degree, and 29 percent reported that their job and major field were not closely related. Among master's or higher degree holders, 71 percent indicated that their job was closely related to their major, the highest percentage observed across various levels of educational attainment.

Alignment between work and education were more frequently reported by females than males and less frequently reported by Blacks and Hispanics than Whites and Asians. For example, proportionally more females than males (38 percent vs. 33 percent) worked in jobs closely related to their major fields. About one-half of Blacks (53 percent) and Hispanics (49 percent) reported that their current or most recent jobs were not related to their fields of study, compared with 39 percent of Whites and 35 percent of Asians. Additionally, proportionally fewer Blacks and Hispanics (25 and 28 percent, respectively) than Whites and Asians (39 and 37 percent, respectively) reported that their current or most recent job was closely related to their major.

High-skill jobs (such as those related to STEM) usually require at least a bachelor's degree (Carnevale, Smith, and Strohl 2010). Among 2002 high school sophomores, the majority of those who worked as PK–12 educators or social service professionals (76 percent) or in STEM occupations (70 percent) reported working in jobs that required a bachelor's or graduate degree. In contrast, 5 percent of those who worked in trade/technical professions reported that their job required a bachelor's or graduate degree.

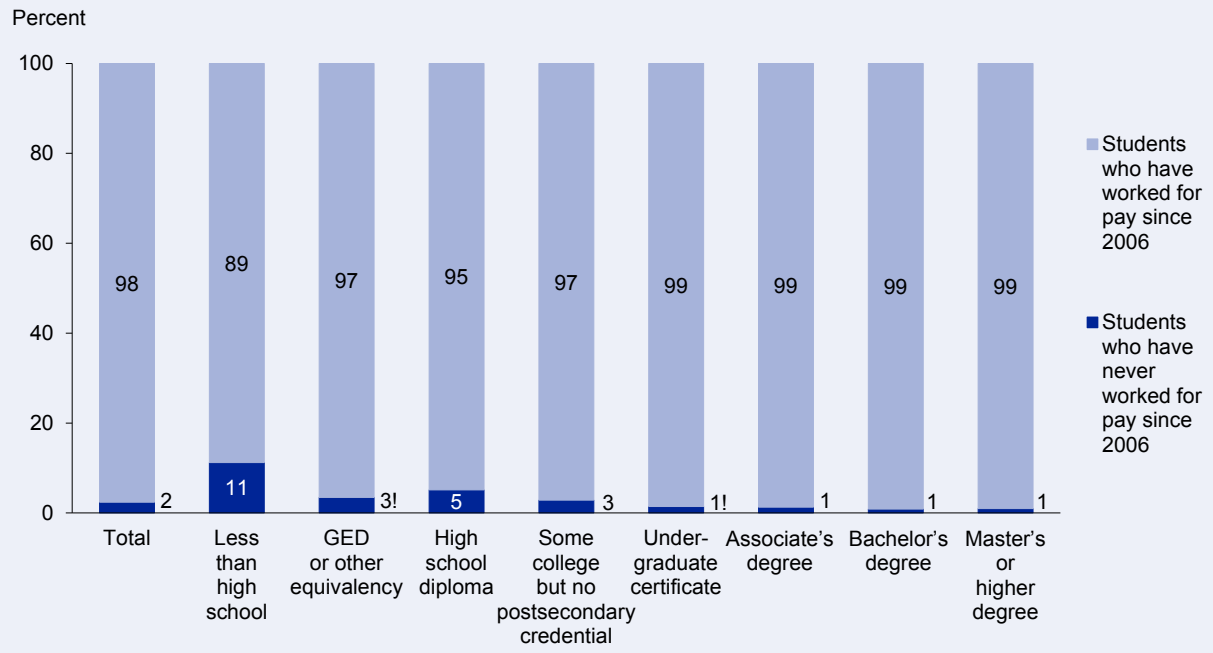
Approximately 69 percent of those who worked in health care and as PK–12 educators/social service professionals and 62 percent of those working in STEM fields reported that their jobs were closely aligned with their majors, higher than the percentages observed among individuals working in sales occupations (10 percent), as business support/administrative assistants (16 percent), and as trade/technical professionals (22 percent). In these latter three occupation categories, 59–69 percent reported that their jobs were not related to their major field of study.

Employment History

Employment Since 2006

Since 2006, when most cohort members were approximately age 20, just 2 percent had not been employed (figure 22). Eleven percent of cohort members who did not complete high school reported having no employment since 2006, a higher percentage than those observed among all other educational attainment groups (1–5 percent).

Figure 22.
Among spring 2002 high school sophomores, percentage distribution of employment since 2006, by student's highest educational attainment: 2012



! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
NOTE: Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-18a and C-18b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Unemployment Spells Since 2009

Many 2002 sophomore cohort members entered or were in the labor market during or in the wake of the Great Recession. In addition to their current employment status, the 2012 follow-up focused on cohort members' unemployment during 2009–12, a time generally considered to be post recession but still characterized by high unemployment rates (Godofsky, Zukin, and Van Horn 2011; Shierholz, Davis, and Kimball 2014; Shierholz, Sabadish, and Wething 2012).

Overall, 41 percent of 2002 sophomores reported having been unemployed at some time between 2009 and 2012 (table 14). Individuals who had been unemployed reported an average of 10 months of unemployment, and 23 percent experienced three or more unemployment spells (i.e., a period of unemployment lasting at least 1 month).

Table 14.
Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009, and of those, average number of months unemployed and percentage distribution of number of unemployment spells since January 2009, by student's highest educational attainment: 2012

Student's highest educational attainment in 2012	Ever unemployed since 2009	Average number of months unemployed since 2009[1]	Number of unemployment spells since 2009[1,2]		
			One	Two	Three or more
Total	**40.6**	**9.9**	**56.1**	**20.7**	**23.2**
Student's highest educational attainment in 2012					
Less than high school	53.0	13.3	47.5	15.6	36.9
GED or other equivalency	58.2	13.3	46.5	18.4	35.1
High school diploma	45.2	11.7	51.6	21.0	27.4
Some college but no postsecondary credential	45.0	11.0	52.7	20.0	27.3
Undergraduate certificate	41.4	10.9	53.7	19.5	26.8
Associate's degree	35.0	9.5	64.0	17.1	18.8
Bachelor's degree	35.7	6.8	60.9	24.7	14.4
Master's or higher degree	30.2	6.9	67.8	16.2	15.9

[1] Includes only students who have ever been unemployed since January 2009.
[2] An unemployment spell is a period of unemployment lasting at least one month.
NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-19b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

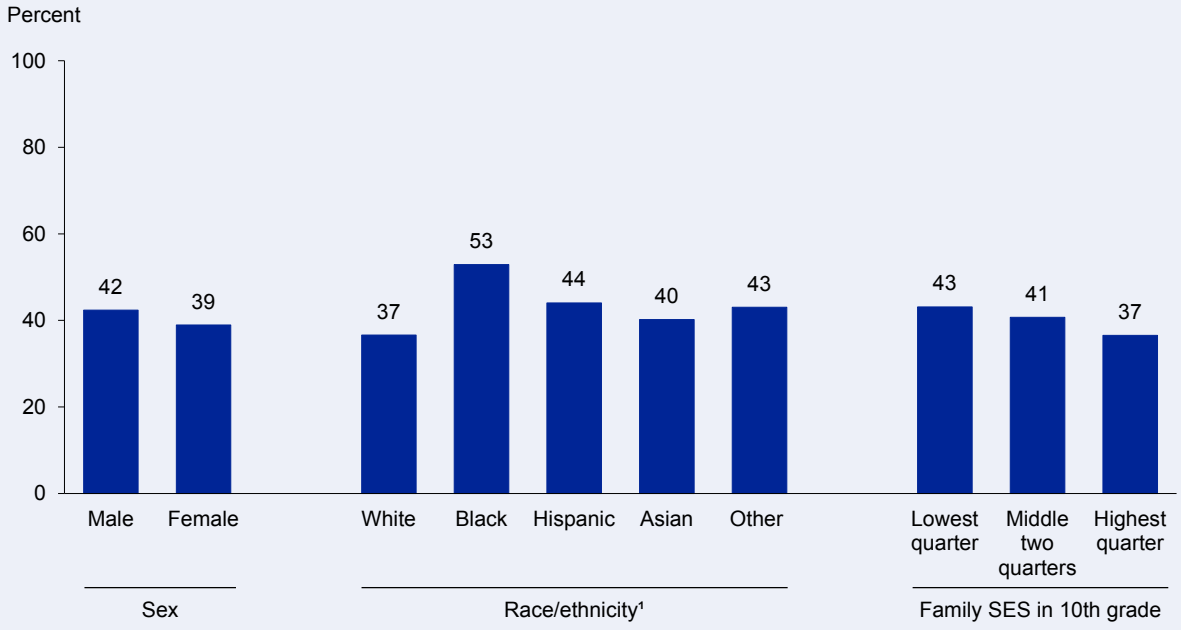
When examining the relationship between educational attainment as of 2012 and unemployment from 2009 to 2012, it is important to note that cohort members may have been unemployed before or after they enrolled in postsecondary education or completed a postsecondary credential. While unemployment has some association with educational attainment, it could also be a potential factor motivating individuals to attend college or extend their education (Shapiro et al. 2014); thus, the relationship between education and unemployment does not imply causation.

With this caveat in mind, the findings of this study indicate that proportionally fewer cohort members with higher levels of educational attainment than those with lower levels of attainment had any unemployment spell between 2009 and 2012 (table 14). For example, 30–36 percent of those with an associate's degree or more education had been unemployed at least once since 2009, compared with 53 percent of high school noncompleters and 58 percent of GED holders.

The mean number of months unemployed also decreased with increasing levels of education. Individuals who did not complete high school or who had a GED or other equivalency were unemployed for an average of 13 months between 2009 and 2012. Those with some college but no degree or with an undergraduate certificate were unemployed for an average of 11 months, and those with an associate's degree for an average of 10 months. Bachelor's or higher degree holders were unemployed for an average of 7 months.

About 40 percent of both males (42 percent) and females (39 percent) had been unemployed at least once since 2009 (figure 23), and both experienced about 10 months of unemployment during this period (see table C-19a). About 53 percent of Blacks reported having been unemployed since 2009, a higher percentage than those observed among all other racial/ethnic subgroups (37–44 percent). Among the various racial/ethnic subgroups, Whites had the lowest percentage who reported an unemployment spell (37 percent). Blacks and Hispanics also had slightly longer unemployment durations than did Whites: about 11 months for Blacks and Hispanics, compared with 9 months for Whites (see table C-19a).

Figure 23.
Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009, by selected demographic characteristics: 2012



[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
NOTE: Estimates and standard errors are available in tables C-19a and C-19b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Unemployment was related to high school academic experiences: those with a weak academic profile in high school were unemployed more frequently than their counterparts with a strong academic profile (table 15). For example, about one-half of cohort members with high academic risk (51 percent) and school disengagement (49 percent) in 10th grade had been unemployed for one or more spells since 2009. In contrast, 40 percent or fewer of those who had low to moderate levels of academic risk and school disengagement in 10th grade have experienced unemployment since 2009. Among unemployed cohort members, those at high academic risk or with high levels of disengagement experienced 11–12 months of unemployment, compared with 7–9 months among those at low academic risk and with a low level of disengagement.

About one-third (30–36 percent) of cohort members whose most advanced high school math course was trigonometry, statistics, precalculus, or calculus had been unemployed since 2009, compared with one-half of those who took no math higher than pre-algebra (50 percent). Among cohort members who had been unemployed, those who had not taken math more advanced than pre-algebra experienced an average of 13 months of unemployment. In contrast, those who had taken calculus in high school had been unemployed for an average of 6 months.

Table 15.
Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009, and of those, average number of months unemployed and percentage distribution of number of unemployment spells since January 2009, by selected characteristics: 2012

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009[1]	Number of unemployment spells since 2009[1,2]		
			One spell	Two spells	Three or more spells
Total	**40.6**	**9.9**	**56.1**	**20.7**	**23.2**
Sex					
Male	42.4	9.7	53.9	22.3	23.9
Female	38.9	10.1	58.4	19.1	22.5
Race/ethnicity[3]					
White	36.6	9.0	58.4	20.2	21.4
Black	52.9	11.0	50.1	23.0	26.9
Hispanic	44.0	10.6	56.4	20.4	23.2
Asian	40.2	9.6	57.5	19.8	22.7
Other	43.1	12.8	51.3	18.5	30.2
Family SES in 10th grade					
Lowest quarter	43.1	10.9	53.8	21.8	24.4
Middle two quarters	40.7	9.7	56.7	19.9	23.4
Highest quarter	36.5	8.3	58.4	21.2	20.4
Academic risk in 10th grade					
Low	32.8	6.5	64.9	21.3	13.8
Moderate	40.1	9.9	56.9	20.4	22.7
High	51.0	12.1	46.1	21.4	32.6
School disengagement in 10th grade					
Low	35.7	8.8	62.0	20.1	17.9
Moderate	37.5	9.4	59.0	20.7	20.3
High	49.0	10.7	50.4	20.3	29.3
Rigor of high school curriculum[4,5]					
Below-standard	43.6	10.8	51.6	22.1	26.3
Standard	39.7	9.9	57.8	18.6	23.6
Moderately rigorous	34.2	8.2	60.4	21.8	17.8
Rigorous	31.5	6.9	68.7	19.9	11.5
Highest math course taken since grade 9[5]					
No math, basic math, or pre-algebra	50.3	13.4	43.9	21.7	34.5
Algebra I, geometry, or algebra II	42.4	10.8	52.9	21.3	25.8
Trigonometry, statistics, or precalculus	36.2	8.1	61.2	21.1	17.6
Calculus	30.1	6.4	65.3	21.5	13.2
Highest science course taken since grade 9[5]					
No science or low-level science	49.2	13.0	45.6	22.5	31.9
General biology	44.9	11.4	52.1	19.8	28.0
Chemistry I or physics I	35.8	9.0	59.0	21.9	19.1
Chemistry I and physics I	35.4	7.4	60.6	23.7	15.6
Chemistry II, physics II, or advanced biology	35.1	7.7	60.8	19.5	19.7

See notes at end of table.

Table 15.
Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009, and of those, average number of months unemployed and percentage distribution of number of unemployment spells since January 2009, by selected characteristics: 2012—Continued

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009[1]	Number of unemployment spells since 2009[1,2]		
			One spell	Two spells	Three or more spells
Cumulative academic GPA					
0.00–1.99	52.2	11.4	49.0	20.9	30.1
2.00–2.49	41.6	11.4	51.2	22.9	25.8
2.50–2.99	36.9	9.6	58.4	21.3	20.2
3.00–3.49	32.1	7.5	66.0	19.3	14.7
3.50–4.00	30.6	6.1	65.3	20.3	14.4

[1] Includes only students who have ever been unemployed since January 2009.
[2] An unemployment spell is a period of unemployment lasting at least 1 month.
[3] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[4] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for a detailed construction of this variable.
[5] Excludes about 15 percent of students with no or partial transcript information.
NOTE: Detail may not sum to totals because of rounding. Standard errors are available in table C-19b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Socioeconomic Status

In addition to 2002 sophomores' recent and long-term labor market outcomes, broader measures of their SES provide information about how they were faring 10 years after the 10th grade. This section presents two measures related to sophomores' SES in 2012. The first is a composite measure of individuals' SES based on their earnings from 2011 employment, the prestige of their 2012 or most recent job, and their educational attainment as of 2012.[26] The second measure indicates whether cohort members or their spouses, partners, or children received

[26] Individuals' SES is measured differently from the traditional measure of their parents' SES. While the latter reflects the household's SES, the former reflects individuals' SES (i.e., excluding the contribution of their spouse or partner). Individuals' SES may not reflect their true socioeconomic situation. For example, a physician's stay-at-home spouse, while living in a relatively high-SES family, has a relatively low score of SES him/herself. In addition, there is still a lot of flux in education and employment at age 26. For example, individuals who pursue a doctoral or professional degree may have a low SES score, due to income and occupation, which does not accurately reflect their SES. The reader should keep this caveat in mind when interpreting data on individuals' SES.

federal public assistance through any of five federal anti-poverty programs.[27] As with the labor market experience indicators, these measures show that 2002 high school sophomores' 2012 SES was related to various characteristics measured in high school and during the subsequent 10 years.

Socioeconomic Status of 2002 Sophomores in 2012

Racial/ethnic group membership was associated with 2002 high school sophomores' SES in 2012. About 30 percent of Whites and 35 percent of Asians fell in the highest quarter of the SES distribution, compared with 14 percent of Blacks and Hispanics (figure 24). On the other hand, one-third of Blacks and Hispanics fell in the lowest quarter of the SES distribution, compared with 18–21 percent of Asians and Whites.

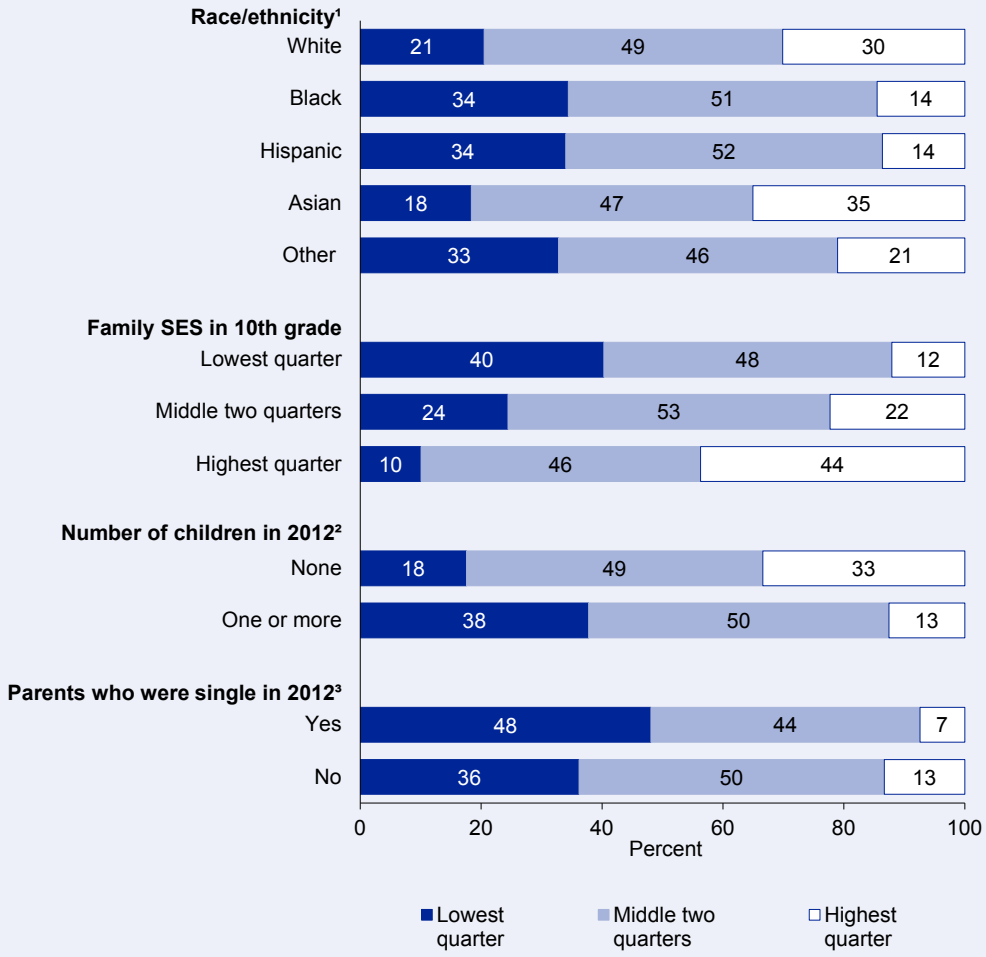
Family SES in 10th grade was also related to cohort members' SES 10 years later. Of 2002 sophomores whose families fell in the highest quarter of the SES distribution as 10th-graders, 44 percent were in the highest SES quarter as adults in 2012. In comparison, 22 percent of 2002 sophomores from middle-SES families and 12 percent of those from low-SES families found themselves in the top SES quarter as adults. Nevertheless, some students had increases in their own SES as adults relative to their family's SES when they were in 10th grade. Among 2002 sophomores whose families were in the lowest SES quarter in 2002, apart from 12 percent in the highest SES quarter another 48 percent were in the two middle SES quarters as young adults. The remaining 40 percent, like their parents, were in the lowest SES quarter.

Cohort members who had become parents by 2012 had lower SES than did their peers without children. Thirty-eight percent of cohort members who had children in 2012 were in the lowest SES quarter, and 13 percent were in the highest quarter. In comparison, among those who did not have children, 18 percent were in the lowest SES quarter, and 33 percent were in the highest SES quarter. Cohort members who were single parents in 2012 fared less well than did parents overall: 48 percent of single parents were in the lowest socioeconomic quarter, compared with 38 percent of all parents, and 7 percent were in the highest quarter, compared with 13 percent of all parents.

---

[27] The ELS:2002 survey defined "public assistance" as participation in any of the following federal programs: Supplemental Security Income (SSI); Supplemental Nutrition Assistance Program (SNAP, also known as the Food Stamp Program); Temporary Assistance for Needy Families (TANF); the Free and Reduced Price School Lunch Program (FRPL); or Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Eligibility for public assistance programs is based on household income as well as the number of adults and children in the household, with WIC specifically targeting mothers of young children. Eligibility for some programs (e.g., WIC and FRPL) also depends on the age of the child.

Figure 24.
Percentage distribution of spring 2002 high school sophomores' socioeconomic status, by selected demographic characteristics: 2012



[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[2] Includes biological and adopted children.

[3] Refers to students being a single parent in 2012. The base includes only those who reported that they had children in

NOTE: Socioeconomic status (SES) of 2002 high school sophomores is measured differently from their family SES in 2002. While the former reflects individual's SES (i.e., excluding the contribution of their spouse or partner), the latter reflects their parents' SES (including the contributions of both parents). Detail may not sum to totals because of rounding. Estimates and standard errors are available in tables C-20a and C-20b.

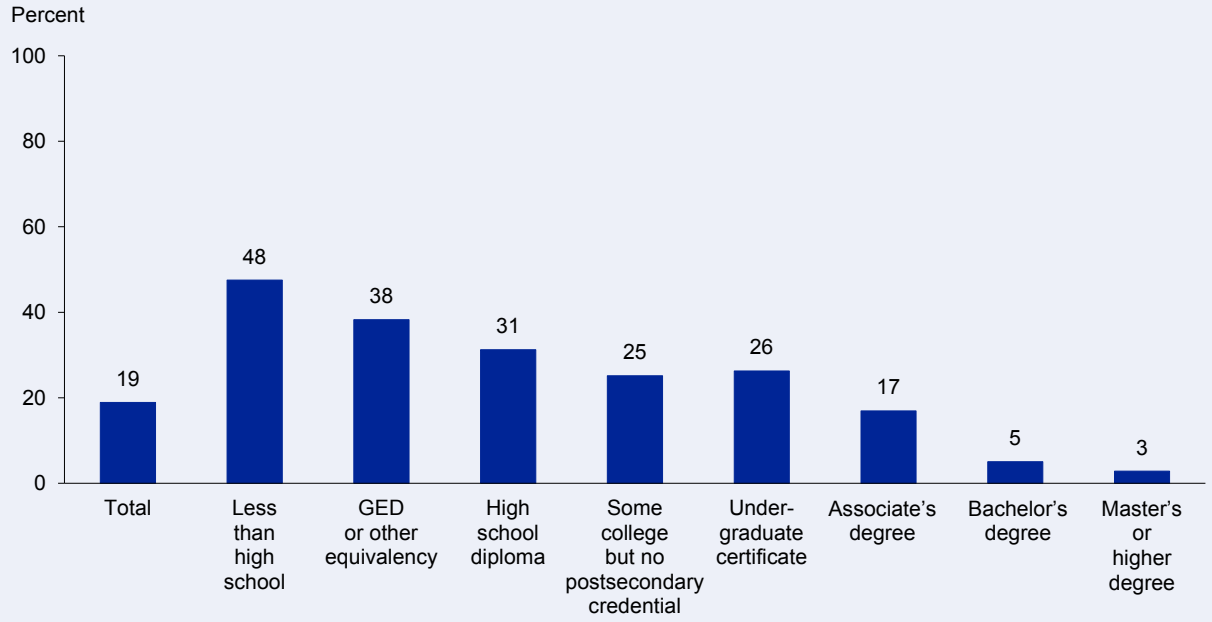
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Public Assistance

In 2012, about one-fifth (19 percent) of 2002 sophomores reported that they, their spouses or partners, or their children received some form of federal public assistance in 2011 (figure 25). To provide context, 7 percent of all young adults aged 15–24 received at least one form of federal public assistance in 2009 (Aud, KewalRamani, and Frohlich 2011).

The percentage of cohort members who reported receiving public assistance varied with their educational attainment. For example, some 25 percent of those who attended some college but had not received a postsecondary credential reported receiving public assistance, proportionally fewer than the 48 percent of high school noncompleters, 38 percent of GED holders, and 31 percent of high school diploma holders who also reported receiving public assistance (figure 25). A smaller percentage of associate's degree holders than individuals who attended some college but had not received a postsecondary credential received public assistance (17 percent vs. 25 percent). Three percent of those with master's or higher degrees and 5 percent of bachelor's degree holders received public assistance.

Figure 25.
Percentage of spring 2002 high school sophomores who or whose spouses, partners, or children received public assistance in 2011, by student's highest educational attainment



NOTE: "Public assistance" includes Supplemental Security Income (SSI), SNAP (the Food Stamp Program), TANF (the Temporary Assistance for Needy Families Program), the Free and Reduced Price School Lunch Program, or WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children). Estimates and standard errors are available in tables C-20a and C-20b.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Differences were also observed across various demographic subgroups. Proportionally more females than males received public assistance (24 percent vs. 14 percent) (table 16). Seven percent of Asians reported receiving public assistance, compared with 14 percent of Whites, 24 percent of Hispanics, and 35 percent of Blacks. The percentage of individuals from low-SES families receiving public assistance in 2011 was at least four times as large as that of those from high-SES families (31 percent vs. 7 percent). About 19 percent of those from middle-SES families reported receiving public assistance in 2011.

Whether cohort members received public assistance was also related to some high school academic characteristics. For example, 10 percent of those whose most advanced math course in high school was trigonometry, statistics, or precalculus and 4 percent of those whose most advanced math course was calculus reported receiving public assistance in 2011, compared with 24 percent of their counterparts whose most advanced course was geometry or algebra I or II and 40 percent of their peers who had not gotten as far as algebra I.

Some individuals working full time received public assistance, although proportionally fewer than did individuals who were unemployed or out of the labor force. About 13 percent of cohort members working 35 hours a week or more in 2012 received public assistance and a quarter of those working less than 35 hours a week received public assistance, compared with 39 percent of those who were unemployed and 33 percent of those who were out of the labor force.

Higher proportions of cohort members working in low- or middle-skilled occupations than those working in high-skilled occupations received public assistance. For example, 23–27 percent of individuals who worked in sales, trade/technical occupations, and business support personnel/administrative professions received public assistance, proportionally more than did those working in health care occupations (15 percent), PK–12 education/social service professions (10 percent), business management (10 percent), and STEM fields (5 percent).

One-third of divorced/separated/widowed cohort members (33 percent) received public assistance, proportionally more than did cohabitating (25 percent), single, never married (15 percent), and married individuals (19 percent). Forty-five percent of cohort members who had children received public assistance, compared with 6 percent of those without children. Sixty-four percent of those who were single parents received public assistance, compared with 42 percent of those raising children in two-parent households.

Table 16.
Percentage of spring 2002 high school sophomores who received or whose spouses, partners, or children received public assistance in 2011, by selected characteristics

Selected characteristics	Percent receiving public assistance in 2011[1]
Total	**18.9**
Sex	
Male	13.5
Female	23.9
Race/ethnicity[2]	
White	14.0
Black	34.6
Hispanic	24.2
Asian	7.3
Other	29.0
Family SES in 10th grade	
Lowest quarter	31.4
Middle two quarters	18.7
Highest quarter	6.5
Highest math course taken since grade 9[3]	
No math, basic math, or pre-algebra	39.9
Algebra I, geometry, or algebra II	24.4
Trigonometry, statistics, or precalculus	9.7
Calculus	3.6
Employment status in 2012	
Employed 35+ hours/week	13.1
Employed 1–34 hours/week	24.7
Unemployed	39.1
Out of the labor force	33.2
Occupation in 2012	
Business/management occupations	9.7
STEM occupations[4]	4.6
Health care occupations	15.3
PK–12 educators/social service professionals[5]	10.4
Sales occupations	26.7
Business support/administrative assistants	22.5
Trade/technical professionals	23.6
Other[6]	9.4
Marital status in 2012	
Single never married[7]	14.8
Married	19.3
Divorced/separated/widowed[7]	32.8
Living with partner	24.9
Number of children and single parenthood in 2012	
None	6.1
One or more[8]	44.8
Single parent	64.0
Not single parent	42.0

See notes at end of table.

Table 16.
Percentage of spring 2002 high school sophomores who received or whose spouses, partners, or children received public assistance in 2011, by selected characteristics—Continued

[1] Public assistance includes Supplemental Security Income (SSI), SNAP (the Food Stamp Program), TANF (the Temporary Assistance for Needy Families Program), the Free and Reduced Price School Lunch Program, or WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children).

[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[3] Excludes about 15 percent of students with no or partial transcript information.

[4] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.

[5] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.

[6] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.

[7] Not living with any partner.

[8] Includes biological and adopted children.

NOTE: Standard errors are available in table C-20b.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Factors Associated With Education and Labor Market Outcomes a Decade Later

The analyses in the previous sections showed that various outcomes differed among subgroups defined by 2002 sophomores' demographic, socioeconomic, and academic characteristics. These analyses, though informative, did not take into account the potentially complex relationships among these background factors. This section describes the results of multivariate analyses that introduce multiple factors simultaneously and allows examination of how each factor is independently associated with 2002 sophomores' later outcomes, net of the others. This analysis refines the preceding bivariate analyses by identifying factors that are associated with the outcomes of interest, while taking into account the interrelationships among multiple factors. The primary focus is on whether subgroup differences observed in the bivariate analysis still remain in the multivariate context.

Model Specifications

Outcome Variables

Three outcomes describing sophomores' 2012 education achievement and labor market experiences were examined in the multivariate analysis:

- The highest level of educational attainment achieved as of 2012—high school education or less; some college but no postsecondary credential; undergraduate certificate or associate's degree;[28] bachelor's degree; and master's or higher degree.
- Employment status in 2012—employed full time; employed part time; unemployed; and out of the labor force.
- Hourly wage for the 2012 job (used as a continuous variable).

Independent Variables

Many factors have been identified in the literature as potentially important to education and labor market outcomes. These factors include (but are not limited to) demographic characteristics, family background, personal goals, and academic

[28] These two categories were combined because of relatively small sample sizes.

characteristics (Kuh et al. 2006; Long, Conger, and Iatarola 2012; Ross et al. 2012). For various labor market outcomes, educational attainment and enrollment status are also important (Baum, Ma, and Payea 2013; Carnevale, Stephen, and Cheah 2011; Hout 2012; Kingston et al. 2003; Oreopoulos and Petronijevic 2013). Marital and parenthood status may also affect a person's decisions to work or stay at home (Boden, Fergusson, and Horwood 2008; Danziger and Rouse 2009; Miller 2011). For salaries, job type (e.g., full-time vs. part-time), occupational field, and geographic location matter as well (Farber 2011; McCall and Percheski 2010; Melguizo and Wolniak 2012; Mouw and Kalleberg 2010; Polachek and Siebert 1993). The regression models specified below attempted to include as many of these factors (also referred to as "independent variables") as are available in ELS:2002.

Specifically, for each outcome variable, the multivariate analysis included sex, race/ethnicity, family SES, students' first spoken language, and living in a single-parent home in 10th grade as demographic and family background factors. Each analysis also included the following variables measuring academic characteristics: students' educational expectations in 10th grade, academic risk in 10th grade, school disengagement in 10th grade, rigor of high school curriculum, the highest level of math and science courses taken in high school, GPA earned in academic subjects in high school, and 10th-grade school sector.

In addition to these variables, the multivariate analyses of the two labor market outcomes included several other variables. The analysis of 2002 sophomores' employment status in 2012 introduced five variables that were found to be related to this outcome based on the bivariate results above: 2002 sophomores' highest educational attainment; postsecondary enrollment status in 2012; the region of residence in 2012;[29] and current marital and parenthood status. The analysis of hourly wages was restricted to those currently employed in 2012 and included two additional variables that may potentially influence earnings—job intensity (full-time vs. part-time) and occupational field.

Regression Models

Depending on the type of outcome variable (categorical or continuous), either a multinomial probit (MNP) regression or ordinary least squared (OLS) regression was used to estimate the relationships between the independent variables and each outcome variable. MNP is one of the statistical techniques commonly used when an outcome variable entails three or more mutually exclusive categories, as do the educational attainment and labor market outcomes in this study (Borooah 2001;

[29] This variable is used to attempt to control for differential job markets and opportunities across different regions of the country.

Koop 2008). The model estimates the predicted probability of achieving one particular outcome (e.g., earning a bachelor's degree) among several mutually exclusive alternatives. The results are often presented as average marginal effects, which measure the change in the predicted probability of having an outcome that is associated with a one-unit change in an independent variable while all other variables in the model remain constant (Liao 1994).

OLS is used when an outcome variable of interest is continuous, e.g., hourly wage in this study. OLS estimates the change in the predicted value of the outcome associated with a one-unit change in an independent variable while keeping all other variables in the model constant (Cohen and Cohen 1983). Detailed information on both the MNP and OLS regression models are provided in appendix B.

Multivariate Results

Highest Educational Attainment

Table 17 presents the MNP regression results for the highest educational attainment that 2002 sophomores had achieved as of 2012, with the outcome of "high school education or less" as the base category. This regression yields two types of information: which individual factors (e.g., race/ethnicity) are significantly associated with this outcome after controlling for all other factors in the model; and whether the probability of attaining a certain level of education for a specific subgroup (e.g., Black students) differs from the probability of achieving the same outcome for the comparison group (e.g., White students) after controlling for related factors in the model.

To quantify this information, two estimates were presented: the average marginal effect (AME) and the average predicted probability (APP). As mentioned earlier, an AME represents the average percentage point change in the predicted probability of achieving a specific level of educational attainment associated with a one-unit change in an independent variable, net of other variables in the model. A significant AME (indicated by an asterisk) suggests that the observed change in the predicted probability is significantly different from zero. As an example, the AME for "females" associated with earning an undergraduate certificate or an associate's degree is 4.9; this means that the average predicted probability of achieving this level of education changes by 4.9 when the variable "sex" changes one unit from female (coded as "1") to male (coded as "0"). In other words, the predicted probability of achieving this level of educational attainment for female students is 4.9 percentage points higher than that for male students, and the change is statistically significant.

Table 17.
Average marginal effects of various characteristics on the probability of spring 2002 high school sophomores achieving various levels of educational attainment as of 2012 and the average predicted probability of attaining these educational outcomes among various groups of students

Characteristics	Some college but no postsecondary credential		Undergraduate certificate or associate's degree		Bachelor's degree		Master's or higher degree	
	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]
Demographic characteristics								
Sex								
Female	-2.9 *	30.7 *	4.9 *	21.0 *	-1.7	27.2	1.8 *	7.9 *
Male	†	*33.6*	†	*16.1*	†	*28.9*	†	*6.1*
Race/ethnicity[3]								
Black	3.1	34.1	0.3	18.5	-0.8	27.4	2.3	9.4
Hispanic	3.5	34.5	1.9	20.1	-1.6	26.6	-1.2	5.9
Asian	1.5	32.5	0.3	18.5	2.9	31.1	0.0	7.0
Other	-1.4	29.6	0.5	18.7	-4.3 *	23.9 *	1.8	8.9
White	†	*31.0*	†	*18.2*	†	*28.2*	†	*7.0*
Family SES in 10th grade								
Lowest quarter	2.1	33.2	3.3 *	19.6 *	-12.3 *	22.2 *	-4.0 *	5.6 *
Middle two quarters	2.8	34.0	3.9 *	20.2 *	-7.7 *	26.8 *	-3.8 *	5.8 *
Highest quarter	†	*31.2*	†	*16.3*	†	*34.5*	†	*9.6*
Family type in 10th grade								
Single-parent family	0.0	32.0	-0.7	18.0	2.3	29.8	-0.9	6.4
Two-parent family	†	*32.0*	†	*18.7*	†	*27.5*	†	*7.3*
Language student first learned to speak								
Non-English	1.4	33.2	0.2	18.7	0.5	28.3	-0.1	7.1
English	†	*31.8*	†	*18.5*	†	*27.9*	†	*7.2*

See notes at end of table.

Table 17.
Average marginal effects of various characteristics on the probability of spring 2002 high school sophomores achieving various levels of educational attainment as of 2012 and the average predicted probability of attaining these educational outcomes among various groups of students—Continued

Characteristics	Some college but no postsecondary credential		Undergraduate certificate or associate's degree		Bachelor's degree		Master's or higher degree	
	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]
High school characteristics								
Student's educational expectations in 10th grade								
Do not know yet	-0.7	34.4	-0.8	17.0	-5.1 *	24.2 *	-1.1	7.1
High school diploma or less	-0.9	34.2	0.0	17.8	-10.1 *	19.1 *	-3.8 *	4.4 *
Some college	-2.6	32.6	6.2 *	24.1 *	-7.7 *	21.5 *	-3.2 *	4.9 *
Bachelor's degree	-3.5 *	31.6 *	2.3 *	20.2 *	0.4	29.7	-2.2 *	5.9 *
Master's degree or higher	†	*35.1*	†	*17.9*	†	*29.3*	†	*8.2*
Academic risk in 10th grade[4]								
Low	†	*33.8*	†	*15.6*	†	*30.5*	†	*7.0*
Moderate	-1.3	32.5	3.4	19.0	-2.7	27.8	0.4	7.4
High	1.3	35.0	6.6 *	22.1 *	-9.1 *	21.4 *	-3.8 *	3.2 *
School disengagement in 10th grade[5]								
Low	†	*29.6*	†	*19.3*	†	*28.4*	†	*7.7*
Moderate	3.0 *	32.6 *	-0.8	18.5	-0.3	28.1	-0.9	6.8
High	3.4	33.0	-0.9	18.4	-1.8	26.6	-0.2	7.5
Rigor of high school curriculum[6]								
Below-standard	-5.5	32.9	2.7	18.8	-4.2	26.5	-2.9 *	6.3 *
Standard	-6.6	31.7	2.6	18.7	-1.0	29.7	-2.3	6.9
Moderately rigorous	-5.8	32.6	3.8	19.9	-1.9	28.8	-1.9	7.3
Rigorous	†	*38.3*	†	*16.1*	†	*30.7*	†	*9.1*

See notes at end of table.

Table 17.
Average marginal effects of various characteristics on the probability of spring 2002 high school sophomores achieving various levels of educational attainment as of 2012 and the average predicted probability of attaining these educational outcomes among various groups of students—Continued

Characteristics	Some college but no postsecondary credential		Undergraduate certificate or associate's degree		Bachelor's degree		Master's or higher degree	
	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]	Average marginal effect[1]	Average predicted probability[2]
Highest math course taken since grade 9								
No math, basic math, or pre-algebra	6.7 *	34.7 *	3.0	21.5	-12.0 *	20.6 *	-7.1 *	1.8 *
Algebra I, geometry, or algebra II	6.8 *	34.8 *	2.4	20.8	-7.8 *	24.8 *	-3.7 *	5.2 *
Trigonometry, statistics, or precalculus	5.9 *	33.9 *	-1.0	17.4	-1.6	30.9	-1.5	7.5
Calculus	†	*28.0*	†	*18.5*	†	*32.6*	†	*8.9*
Highest science course taken since grade 9								
No science or low-level science	-1.5	33.6	5.3	21.1	-9.7 *	20.1 *	-2.7 *	5.5 *
General biology	0.1	35.2	5.3 *	21.1 *	-6.1 *	23.8 *	-2.9 *	5.3 *
Chemistry I or physics I	-2.5	32.6	3.4 *	19.2 *	-1.4	28.5	-1.6	6.6
Chemistry I and physics I	-4.7 *	30.4 *	3.0	18.8	2.8	32.7	-0.3	7.9
Chemistry II, physics II, or advanced biology	†	*35.1*	†	*15.8*	†	*29.9*	†	*8.2*
Cumulative academic GPA								
0.00–1.99	21.1 *	44.4 *	4.2	18.7	-25.1 *	15.5 *	-11.5 *	2.3 *
2.00–2.49	16.7 *	40.1 *	6.6 *	21.2 *	-19.0 *	21.6 *	-10.6 *	3.3 *
2.50–2.99	11.0 *	34.3 *	9.3 *	23.8 *	-14.6 *	26.0 *	-9.5 *	4.4 *
3.00–3.49	2.1	25.4	5.9 *	20.4 *	-4.6 *	36.0 *	-7.1 *	6.8 *
3.50–4.00	†	*23.3*	†	*14.6*	†	*40.6*	†	*13.9*
School control in 10th grade								
Public	†	32.2	†	18.7	†	27.5	†	7.0
Private	*0.0*	*32.2*	*-0.1*	*18.7*	*4.9 **	*32.4 **	*1.5 **	*8.5 **

See notes at end of table.

Table 17.
Average marginal effects of various characteristics on the probability of spring 2002 high school sophomores achieving various levels of educational attainment as of 2012 and the average predicted probability of attaining these educational outcomes among various groups of students—Continued

† Not applicable for the comparison group.
* $p < .05$.

[1] Marginal effect measures the average percentage point change in the predicted probability of having an education outcome associated with a one unit change in an independent variable, after controlling for the covariation of the variables in the model.

[2] Average predicted probability of having an education outcome after controlling for the covariation of the variables in the model.

[3] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[4] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[5] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[6] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.

NOTE: F statistic for the MNP regression model is 27.44 with the degree of freedom of 370 (p <.05). The italicized category in each variable is the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

For ease of interpretation, the report also uses APP which represents the average predicted probability of achieving a particular outcome for a particular group of students. Using the variable "sex" as an example again, the average predicted probability of female students earning an undergraduate certificate or an associate's degree as their highest educational attainment is estimated at 21.0 percent, while the predicted probability for male students is 16.1 percent. Thus, females' probability is 4.9 percentage points higher than males' probability (i.e., 21.0 − 16.1 = 4.9), corresponding to the AME.

The descriptive results presented earlier (see figure 8) indicate that female students had a small advantage over male students in terms of earning a master's or higher degree. As shown in table 17, this small advantage still held after controlling for a wide range of characteristics in the multivariate analysis. The APP of earning a master's or advanced degree for female students was 8 percent, about 2 percentage points higher than males' (6 percent). Female students also had a higher probability of attaining a subbaccalaureate credential, such as an undergraduate certificate or an associate's degree, than did male students (21 percent vs. 16 percent). Male students, on the other hand, had a higher probability of having some college education without a degree than did female students (34 percent vs. 31 percent).

For some independent variables, significant differences in bivariate analyses did not correspond to significant effects in the multivariate analysis. While the bivariate analysis found that White and Asian students had higher educational attainment than did Black and Hispanic students (see figure 8), these racial/ethnic differences were no longer significant when other variables associated with educational attainment such as sex, family SES, and high school academic characteristics were controlled for in the multivariate model. Whether students lived in a single-parent home as 10th-graders was not a significant factor after controlling for other factors, nor was the first language that students learned to speak.

However, family SES remained a significant factor after controlling for other factors in the multivariate analysis: students from high-SES families had a higher probability of earning a bachelor's or higher degree than did their peers from low- and middle-SES families, while the latter two groups had higher probabilities of earning an undergraduate certificate or an associate's degree than did the former group.

Students' educational expectations in 10th grade were associated with their later educational attainment net of other factors. Students who expected to earn a master's or advanced degree had a higher probability of earning such a degree a decade later (8 percent) than did their counterparts who expected to earn a bachelor's degree (6 percent), attend some college (5 percent), or complete a high

school education or less (4 percent). On the other hand, students who expected to receive some college education not beyond an associate's degree had a higher probability of attaining an undergraduate certificate or an associate's degree (24 percent) than did those who expected to earn a master's degree (18 percent).

Several other high school academic characteristics were also found to be uniquely associated with students' educational attainment after controlling for the other variables in the model. For example, students who exhibited high academic risk in 10th grade had a lower probability of earning a bachelor's degree (21 percent) or master's or higher degree (3 percent) than did their counterparts at low academic risk (31 and 7 percent, respectively). The predicted probability of earning a bachelor's degree for students who took calculus in high school was 33 percent, which was higher than the 21 percent for those who took no or low-level math. Similarly, the predicted probability of earning a bachelor's degree for students who took advanced science was higher, when comparing with that of students who took no or low-level science courses (30 percent vs. 20 percent). In addition, the predicted probability of attaining a bachelor's degree for students with an academic GPA of 3.5–4.0 in high school was 25 percentage points higher than that for students with an academic GPA of below 2.0.

School sector in 10th grade was also found to have a unique association with educational attainment: compared with their public school peers, those attending private schools in 10th grade had a higher probability of attaining a bachelor's degree (32 percent vs. 28 percent) and a master's or higher degree (9 percent vs. 7 percent). However, while the rigor of high school curriculum and the level of school disengagement were related to educational attainment in the bivariate analysis, these relationships largely disappeared in the multivariate analysis.

Employment Status

Table 18 presents the MNP regression results for 2012 employment status among 2002 sophomores, with "full-time employment" as the base category in this analysis. The model included, in addition to the independent variables in the analysis of educational attainment, variables measuring 2002 sophomores' educational attainment, enrollment status, geographic location, marital status, and parenthood in 2012.

Table 18.
Average marginal effects of various characteristics on the probability of spring 2002 high school sophomores being out of the labor force, unemployed, or working part time in 2012 and the average predicted probability of having these labor market outcomes among various groups of students

	Out of the labor force		Unemployed		Working part time[1]	
Characteristics	Average marginal effect[2]	Average predicted probability (%)[3]	Average marginal effect[2]	Average predicted probability (%)[3]	Average marginal effect[2]	Average predicted probability (%)[3]
Highest education attainment in 2012						
High school or less	†	*14.5*	†	*9.6*	†	*13.6*
Some college but no postsecondary credential	-8.0 *	6.5 *	3.0 *	12.5 *	0.2	13.8
Undergraduate or associate's certificate	-7.3 *	7.2 *	-1.5	8.1	-1.1	12.5
Bachelor's degree	-9.2 *	5.2 *	-2.3	7.3	-1.8	11.8
Master's or higher degree	-11.4 *	3.1 *	-0.2	9.4	-1.3	12.2
Postsecondary enrollment status in 2012						
Not enrolled	-7.8 *	5.0 *	1.0	10.0	-9.5 *	10.4 *
Enrolled	†	*12.9*	†	*9.0*	†	*19.9*
Demographic characteristics						
Sex						
Female	4.4 *	8.8 *	2.6 *	11.1 *	6.4 *	15.9 *
Male	†	*4.4*	†	*8.5*	†	*9.5*
Race/ethnicity[4]						
Black	-3.2 *	4.2 *	3.5 *	12.1 *	2.8	14.6
Hispanic	-2.2 *	5.2 *	1.9	10.6	2.1	14.0
Asian	4.8 *	12.2 *	3.4 *	12.1 *	2.7	14.5
Other	0.1	7.5	3.6	12.2	3.7	15.6
White	†	*7.4*	†	*8.6*	†	*11.9*
Family SES in 10th grade						
Lowest quarter	-1.6	7.1	0.6	10.3	1.1	13.6
Middle two quarters	-3.1 *	5.7 *	-0.2	9.5	0.1	12.6
Highest quarter	†	*8.8*	†	*9.7*	†	*12.5*
Family type in 10th grade						
Single-parent family	-0.5	6.4	-0.6	9.3	1.6	14.1
Two-parent family	†	*6.9*	†	*10.0*	†	*12.5*
Language student first learned to speak						
Non-English	1.4	8.0	0.9	10.6	-1.3	11.8
English	†	*6.6*	†	*9.7*	†	*13.0*

See notes at end of table.

Table 18.
Average marginal effects of various characteristics on the probability of spring 2002 high school sophomores being out of the labor force, unemployed, or working part time in 2012 and the average predicted probability of having these labor market outcomes among various groups of students—Continued

Characteristics	Out of the labor force		Unemployed		Working part time[1]	
	Average marginal effect[2]	Average predicted probability (%)[3]	Average marginal effect[2]	Average predicted probability (%)[3]	Average marginal effect[2]	Average predicted probability (%)[3]
High school characteristics						
Academic risk in 10th grade[5]						
Low	†	*9.0*	†	*9.5*	†	*15.3*
Moderate	-2.5	6.5	0.3	9.7	-2.7	12.6
High	-3.5	5.5	0.6	10.1	-3.3	12.0
School disengagement in 10th grade[6]						
Low	†	*5.3*	†	*10.0*	†	*14.5*
Moderate	2.1	7.3	-0.6	9.4	-1.8	12.7
High	1.7	7.0	0.5	10.5	-2.7 *	11.7 *
Rigor of high school curriculum[7]						
Below-standard	-2.5	6.4	1.7	9.8	1.1	13.4
Standard	-2.5	6.5	3.8 *	11.8 *	-0.3	12.1
Moderately rigorous	-1.8	7.2	0.7	8.7	0.1	12.4
Rigorous	†	*9.0*	†	*8.1*	†	*12.4*
Highest math course taken since grade 9						
No math, basic math, or pre-algebra	-0.2	7.4	7.2 *	15.0 *	2.4	12.4
Algebra I, geometry, or algebra II	-0.5	7.1	1.9	9.7	3.2 *	13.2 *
Trigonometry, statistics, or precalculus	-1.7	5.9	1.0	8.9	3.8 *	13.8 *
Calculus	†	*7.6*	†	*7.9*	†	*10.0*
Highest science course taken since grade 9						
No science or low-level science	1.5	8.2	0.0	10.7	3.2	15.4
General biology	0.1	6.9	-0.9	9.9	-0.3	12.0
Chemistry I or physics I	-1.1	5.6	-2.1	8.6	1.3	13.5
Chemistry I and physics I	1.2	8.0	0.0	10.7	-0.1	12.1
Chemistry II, physics II, or advanced biology	†	*6.7*	†	*10.7*	†	*12.2*
Cumulative academic GPA						
0.00–1.99	-1.3	6.6	3.3	11.4	4.0	14.1
2.00–2.49	-1.3	6.6	2.6	10.7	3.4	13.5
2.50–2.99	-1.1	6.7	1.4	9.5	4.3	14.4
3.00–3.49	-1.4	6.4	-0.6	7.5	1.9	12.0
3.50–4.00	†	*7.9*	†	*8.1*	†	*10.1*

See notes at end of table.

Table 18.
Average marginal effects of various characteristics on the probability of spring 2002 high school sophomores being out of the labor force, unemployed, or working part time in 2012 and the average predicted probability of having these labor market outcomes among various groups of students—Continued

Characteristics	Out of the labor force		Unemployed		Working part time[1]	
	Average marginal effect[2]	Average predicted probability (%)[3]	Average marginal effect[2]	Average predicted probability (%)[3]	Average marginal effect[2]	Average predicted probability (%)[3]
Region of residence in 2012						
Northeast	-0.2	7.1	-2.2	8.8	-3.7 *	11.8 *
Midwest	-1.4	5.9	-1.1	9.8	-3.7 *	11.8 *
South	-0.5	6.8	-1.4	9.5	-3.3 *	12.2 *
West	†	*7.4*	†	*10.9*	†	*15.5*
Marital status in 2012						
Single never married[8]	-2.6 *	6.5 *	5.3 *	12.3 *	4.1 *	14.7 *
Divorced/separated/widowed[8]	-6.6 *	2.5 *	5.8 *	12.8 *	-0.8	9.8
Living with partner	-4.4 *	4.7 *	1.4	8.4	1.6	12.2
Married	†	*9.1*	†	*7.0*	†	*10.6*
Number of children had in 2012						
None	-6.0 *	4.8 *	-3.8 *	8.5 *	1.4	13.4
One or more[9]	†	*10.7*	†	*12.3*	†	*12.0*

† Not applicable for the comparison group.

* $p < .05$.

[1] Working less than 35 hours per week.

[2] Marginal effect measures the average percentage point change in the predicted probability of being employed associated with a one unit change in an independent variable, after controlling for the covariation of the variables in the model.

[3] Average predicted probability of being employed after controlling for the covariation of the variables in the model.

[4] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[5] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[6] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[7] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.

[8] Not living with any partner.

[9] Includes biological and adopted children.

NOTE: Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work. F statistic for the MNP regression model is 8.29 with the degree of freedom of 369 ($p < .05$). The italicized category in each variable is the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

The bivariate estimates in figure 14 showed that females had lower employment rates than males did. This finding still held after controlling for a wide range of characteristics in the multivariate analysis. Compared with males, females had higher probabilities of being out of the labor force (9 percent vs. 4 percent), being unemployed (11 percent vs. 8 percent), or working part time (16 percent vs. 10 percent) in 2012 (table 18).

Educational attainment and current enrollment status were also uniquely associated with employment after controlling for other factors in the model. Cohort members who had attained a high school education or less had the highest probability of being out of the labor force (14 percent vs. 3–7 percent for those with higher educational attainment). In addition, cohort members who were enrolled in college in 2012 had a higher probability of being out of the labor force (13 percent) or working part time (20 percent) than did their counterparts who were not currently enrolled (5 and 10 percent, respectively).

Compared with Whites, Asians had a higher probability of being out of the labor force (12 percent vs. 7 percent) and being unemployed (12 percent vs. 9 percent). While Blacks and Hispanics had lower probabilities of being out of the labor force (4 and 5 percent, respectively) than did Whites (7 percent), Blacks had a higher probability of being unemployed than did Whites (12 percent vs. 9 percent). No White-Hispanic gaps were found in unemployment rates when other factors were controlled for in the model.

Other background characteristics (e.g., family SES, coming from a single-parent home, or first speaking a language other than English) and most high school academic characteristics were not associated with employment status in 2012 after controlling for other factors in the multivariate analysis. The only notable exceptions are that cohort members with less rigorous coursetaking in high school or who took low-level math courses had a higher probability of being unemployed in 2012. For example, the probability of being unemployed among those who completed a standard curriculum was 12 percent, compared with 8 percent for those who completed a rigorous curriculum. Cohort members who took no or low-level math had a 15 percent probability of being unemployed, compared with an 8 percent probability for those who took calculus in high school.

Both marital status and parenthood were significant factors in the multivariate analysis: 2002 sophomores who were married or had at least one child in 2012 were more likely than their counterparts to be out of the labor force in 2012. While those who were married in 2012 had a lower probability of being unemployed than did their counterparts who were single or divorced/separated/widowed (7 percent vs. 12–13 percent),

those who had children had a higher probability of being unemployed than did their childless counterparts (12 percent vs. 8 percent). In addition, those who were single had a higher probability of working part time than did married ones (15 percent vs. 11 percent).

Wages for Current Jobs

Table 19 presents the OLS regression results of the model estimating the hourly wages of 2002 sophomores who were employed in 2012. In addition to the independent variables included in the employment status analysis, this model included two independent variables that may influence earnings: occupation field and job type (full-time vs. part-time).

As previous studies have indicated (Farber 2011; McCall and Percheski 2010; Melguizo and Wolniak 2012; Mouw and Kalleberg 2010; Polachek and Siebert 1993), hourly wages were associated with occupation field, work intensity, and geographical location. Individuals who were employed in STEM; worked full time; or were living in the western region of the United States in 2012[30] generally had higher hourly wages than did their counterparts who were employed in other occupations (except for health care occupations), worked part time, or were living in other regions of the country (except for the northeast region). For example, after controlling for other factors, the hourly wage for STEM workers was about $21, which was higher than the hourly wage earned by those in PK–12 education/social service occupations ($15), business support/administration occupations ($15), sales ($16), trade/technical fields ($16), and business/management positions ($18). Only healthcare workers earned an hourly wage ($21) similar to that of STEM workers.

When job-related factors and such other factors as educational attainment, enrollment status, and marital and parenthood status are controlled for, females still earned less than males: the hourly wage for employed females was $16, about $2 less than that for employed males ($18) with comparable demographic and academic backgrounds, educational attainment, occupational field, region of residence, work intensity, and marital and parenthood status.[31]

[30] ELS:2002 classified the following states as being in the western region of the United States: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

[31] This finding was also held even after the sample was restricted to students who earned less than $51 per hour in their 2012 job.

Table 19.
Average marginal effects of various characteristics on hourly wage for current job among spring 2002 high school sophomores who were employed in 2012 and the average predicted hourly wage for various groups of students

Characteristics	Average marginal effect[1]	Average predicted hourly wage ($)[2]
Highest education attainment in 2012		
High school or less	*†*	*14.88*
Some college but no postsecondary credential	0.69	15.57
Undergraduate or associate's certificate	2.00 *	16.89 *
Bachelor's degree	3.47 *	18.35 *
Master's or higher degree	6.53 *	21.41 *
Postsecondary enrollment status in 2012		
Not enrolled	*†*	17.38
Enrolled	-1.17 *	16.21 *
Demographic characteristics		
Sex		
Female	-2.33 *	15.97 *
Male	*†*	*18.29*
Race/ethnicity[3]		
Black	-0.31	16.72
Hispanic	0.03	17.07
Asian	1.56 *	18.60 *
Other	1.01	18.05
White	*†*	*17.04*
Family SES in 10th grade		
Lowest quarter	-1.53 *	16.40 *
Middle two quarters	-0.98 *	16.95 *
Highest quarter	*†*	*17.93*
Family type in 10th grade		
Single-parent family	-0.23	16.93
Two-parent family	*†*	*17.16*
Language student first learned to speak		
Non-English	0.09	17.19
English	*†*	*17.10*
High school characteristics		
Academic risk in 10th grade[4]		
Low	*†*	*17.78*
Moderate	-0.70	17.08
High	-1.51 *	16.27 *
School disengagement in 10th grade[5]		
Low	*†*	*16.89*
Moderate	0.12	17.00
High	0.74	17.63

See notes at end of table.

Table 19.
Average marginal effects of various characteristics on hourly wage for current job among spring 2002 high school sophomores who were employed in 2012 and the average predicted hourly wage for various groups of students—Continued

Characteristics	Average marginal effect[1]	Average predicted hourly wage ($)[2]
Rigor of high school curriculum[6]		
Below-standard	-0.62	17.01
Standard	-0.59	17.03
Moderately rigorous	-0.46	17.17
Rigorous	*†*	*17.63*
Highest math course taken since grade 9		
No math, basic math, or pre-algebra	-2.45 *	15.99 *
Algebra I, geometry, or algebra II	-1.76 *	16.68 *
Trigonometry, statistics, or precalculus	-1.16 *	17.28 *
Calculus	*†*	*18.44*
Highest science course taken since grade 9		
No science or low-level science	-0.25	17.12
General biology	-0.28	17.09
Chemistry I or physics I	-0.40	16.97
Chemistry I and physics I	-0.25	17.12
Chemistry II, physics II, or advanced biology	*†*	*17.37*
Cumulative academic GPA		
0.00–1.99	-0.92 *	17.01 *
2.00–2.49	-1.16 *	16.76 *
2.50–2.99	-1.10 *	16.82 *
3.00–3.49	-0.87	17.06
3.50–4.00	*†*	*17.92*
Employment characteristics		
Current occupation		
Business/management occupations	-2.62 *	18.25 *
STEM occupations[7]	*†*	*20.87*
Health care occupations	0.01	20.88
PK–12 educators/social service professionals[8]	-5.91 *	14.96 *
Sales occupations	-4.86 *	16.01 *
Business support/administrative assistants	-5.71 *	15.16 *
Trade/technical professionals	-4.62 *	16.24 *
Other[9]	-3.50 *	17.36 *
Hours worked per week		
35 or more	2.50 *	17.49 *
1–34	*†*	*14.99*
Region of residence in 2012		
Northeast	-0.02	17.96
Midwest	-1.46 *	16.52 *
South	-1.44 *	16.54 *
West	*†*	*17.97*

See notes at end of table.

Table 19.
Average marginal effects of various characteristics on hourly wage for current job among spring 2002 high school sophomores who were employed in 2012 and the average predicted hourly wage for various groups of students—Continued

Characteristics	Average marginal effect[1]	Average predicted hourly wage ($)[2]
Marital status in 2012		
Single never married[10]	-2.55 *	16.17 *
Divorced/separated/widowed[10]	-1.98 *	16.74 *
Living with partner	-1.72 *	17.00 *
Married	*†*	*18.72*
Number of children had in 2012		
None	0.49	17.25
One or more [11]	*†*	*16.76*

† Not applicable for the comparison group.
* $p < .05$.
[1] Marginal effect measures the average change in hourly wage associated with a one unit change in an independent variable, after controlling for the covariation of the variables in the model.
[2] Average predicted hourly wage after controlling for the covariation of the variables in the model.
[3] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[4] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[5] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[6] A composite measure derived from credits earned in mathematics, biology, chemistry, physics, English, social studies, and foreign language reported on students' high school transcripts. See appendix A for detailed information about this variable.
[7] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.
[8] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.
[9] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.
[10] Not living with any partner.
[11] Includes biological and adopted children.
NOTE: F statistic for the least squares regression model is 34.47 with the degree of freedom of 386 ($p < .05$). The italicized category in each variable is the comparison group. Earnings that were reported in a format other than dollars per hour (e.g., dollars per week) were standardized to dollars per hour.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Consistent with the existing literature (Baum, Ma, and Payea 2013; Carnevale, Stephen, and Cheah 2011; Hout 2012; Kingston et al. 2003; Oreopoulos and Petronijevic 2013), educational attainment was an important factor in earnings after controlling for many factors in the model. Employed 2002 sophomores with a high school education or less earned about $15 per hour, less than the recipients of an undergraduate certificate or an associate's degree ($17), a bachelor's degree ($18), and a master's or higher degree ($21) did. Enrollment status also mattered: enrolled individuals earned about $16 per hour, compared with about $17 per hour among those who were not enrolled.

After controlling for many related factors in the multivariate model, one difference among racial/ethnic subgroups was significant: employed Asians had a higher hourly wage than did employed Whites ($19 vs. $17). Cohort members from low- and middle-SES families had lower hourly wages ($16 and $17, respectively) than did those from high-SES families ($18). Two factors, however, were not significant factors for hourly wages 10 years later: coming from single-parent families as high school students or learning a language other than English as the first language: those who lived in a single-parent home in 10th grade or whose first language was not English earned $17 per hour, as did their counterparts who lived in a two-parent home or whose first language was English.

Several high school academic characteristics—10th-grade academic risk, math coursetaking, and GPA—remained significant even after controlling for other factors in the multivariate analysis. Those who were at low academic risk as 10th-graders, earned a high academic GPA (e.g., 3.5 or higher), or took calculus in high school had higher hourly wages than did their counterparts who were at high academic risk, earned a lower GPA (e.g., 2.00–2.99), or took low-level math courses.

Although married individuals had a higher probability than others of being out of the labor force (table 18), if they were in the labor market, they tended to earn more than their unmarried peers. For example, employed individuals who were married in 2012 earned about $19 per hour, whereas those who were never married earned about $16 per hour. Being a parent was not a significant factor: both parents and their childless counterparts earned about $17 per hour in their 2012 job.

Summary

This report examined key aspects of the 2002 high school sophomores' lives in 2012, when most cohort members were 26 years old. By this time, the majority of the cohort members had completed high school (96 percent) and made the transition to postsecondary education (84 percent) (see tables 1 and 3). Many of those who had enrolled in postsecondary education had earned a postsecondary credential (62 percent), including 39 percent who had earned a bachelor's or higher degree (see figure 8). The majority of 2002 sophomores (93 percent) were in the workforce in 2012—69 percent were working full time, 13 percent were working part time, and 11 percent were unemployed but in the market looking for jobs (see figure 13). Fewer cohort members had taken on such adult roles as spouse and parent, however. By 2012, some 31 percent had married—28 percent were currently married—and 3 percent had subsequently divorced, separated, or become widowed (see figure 11), and one-third had become parents (see figure 12).

The achievement of these milestones varied among subgroups of the cohort. To better understand subgroup differences, this study employed multivariate techniques to disentangle related factors and estimate the unique association between various factors and each of three 2012 outcomes—educational attainment, employment status, and hourly wages for 2012 jobs. Key findings from the multivariate analyses are highlighted below.

- Females achieved higher educational attainment than males even after controlling for demographic and academic characteristics. Despite their higher educational achievement, females had lower labor force participation rates and lower earnings. Multivariate results indicated that females were more likely than males to be out of the labor force, unemployed, and working part time (see table 18). Employed females earned a lower hourly wage in their 2012 job than did employed males ($16 vs. $18) even under similar circumstances with respect to demographic and academic characteristics, educational attainment, occupational field, region, work intensity, enrollment status, and marital and parenthood status (see table 19).
- The multivariate analysis found no significant differences between students from various racial/ethnic subgroups and their White counterparts in terms of educational attainment in 2012 (see table 17). In other words, among students with similar socioeconomic and academic backgrounds, Blacks, Hispanics, and Asians in the 2002 sophomore cohort had a similar probability of attaining various

levels of education as of 2012 relative to their White peers. As for labor market outcomes, Blacks and Hispanics were less likely than Whites to be out of the labor force, and Blacks were more likely than Whites to be unemployed (see table 18), though White-Black and White-Hispanic gaps in hourly wages were not observed (see table 19). The pattern was different for Asians. Asians were more likely than Whites to be unemployed or out of the labor force (see table 18). Once employed, however, Asians earned higher hourly wages than did Whites (see table 19).

- The multivariate analysis indicated that students from low- and middle-SES families underperformed their peers from high-SES families in education (see table 17). Family SES was not a significant factor for employment status (see table 18), but it was for hourly wages (see table 19). Employed cohort members from high-SES families earned higher hourly wages in their 2012 job than did their counterparts from low- and middle-SES families even after controlling for educational attainment, occupational field, job intensity, region, and other characteristics including sex, race/ethnicity, first language learned, high school academic characteristics, and current enrollment, marital, and parenthood status.
- Sophomores' high school academic characteristics were associated with their later educational attainment after controlling for various factors in the multivariate analysis. For example, the probability of attaining a bachelor's or higher degree was higher for students who took calculus and advanced science courses in high school, who earned a high academic GPA (3.5 or higher), and who exhibited a low level of academic risk in 10th grade than for their counterparts who took no/low-level math and science courses, earned a low academic GPA (below 3.0), and exhibited a high level of academic risk (see table 17). Some of these high school characteristics continued to exhibit significant associations with later labor market outcomes, particularly hourly wages. For example, even after controlling for demographic backgrounds, job characteristics, highest educational attainment, and current status in postsecondary enrollment, marital, and parenthood, employed cohort members who took calculus or earned an academic GPA of 3.5 or higher in high school earned a higher hourly wage in their 2012 job than did their counterparts who took no/low-level math courses or earned an academic GPA below 3.0 (see table 19).
- Finally, higher educational attainment was associated with higher earnings after controlling for various factors. Specifically, the multivariate analysis indicated that even under similar circumstances with respect to demographic and academic backgrounds, job characteristics, current enrollment status, and marital and parenthood status, master's degree holders earned $6 more per hour in their 2012 job than did those with a high school education or less (see table 19).

References

Abel, J.R., Deitz, R., and Su, Y. (2014). Are Recent College Graduates Finding Good Jobs? *Current Issues in Economics and Finance, 20*(1): 1–8.

Allensworth, E.M., and Easton, J.Q. (2007). *What Matters for Staying On-Track and Graduating in Chicago Public Highs Schools: A Close Look at Course Grades, Failures, and Attendance in the Freshman Year*. Chicago: Consortium on Chicago School Research. Retrieved July 1, 2014, from https://ccsr.uchicago.edu/sites/default/files/publications/07%20What%20Matters%20Final.pdf.

Alonso-Villar, O., Del Río, C., and Gradín, C. (2012). The Extent of Occupational Segregation in the United States: Differences by Race, Ethnicity, and Gender. *Industrial Relations: A Journal of Economy and Society, 51*(2): 179–212.

American Council on Education. (2006). *Who Passed the GED Tests? 2004 Statistical Report*. Washington, DC: Author. Retrieved July 1, 2016, from http://www.gedtestingservice.com/educators/historical-testing-data.

Arnett, J.J. (2000). Emerging Adulthood: A Theory of Development From the Late Teens Through the Twenties. *American Psychologist, 55*(5): 469–480.

Atanda, R.T. (1999). *Do Gatekeeper Courses Expand Education Options* (NCES 1999-303). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Aud, S., Hussar, W., Johnson, F., Kena, G., Roth, E., Manning, E., Wang, X., and Zhang, J. (2012). *The Condition of Education 2012* (NCES 2012-045). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Aud, S., KewalRamani, A., and Frohlich, L. (2011). *America's Youth: Transitions to Adulthood* (NCES 2012-026). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Autor, D. (2011). *The Polarization of Job Opportunities in the U.S. Labor Market: Implications for Employment and Earnings*. Washington, DC: Center for Economic Progress. Retrieved July 1, 2014, from http://economics.mit.edu/files/5554.

Avery C., and Turner, S.E. (2012). Student Loans: Do College Students Borrow Too Much—or Not Enough? *Journal of Economic Perspectives*, *26*(1): 165–192.

Balfanz, R., Bridgeland, J.M., Fox, J.H., DePaoli, J.L., Ingram, E.S., and Maushard, M. (2014). *Building a Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic*. Washington, DC: Civic Enterprises. Retrieved July 1, 2014, from http://gradnation.org/sites/default/files/17548_BGN_Report_FinalFULL_5.2.14.pdf.

Barrow, L., Brock, T., and Rouse, C.E. (2013). Postsecondary Education in the United States: Introducing the Issue. *The Future of Children*, *23*(1): 3–16.

Baum, S., Ma, J., and Payea, K. (2013). *Education Pays 2013: The Benefits of Higher Education for Individuals and Society*. New York: College Board. Retrieved July 1, 2014, from http://trends.collegeboard.org/sites/default/files/education-pays-2013-full-report.pdf.

Bell, D.N.F., and Blanchflower, D.G. (2011). Young People and the Great Recession. *Oxford Review of Economic Policy, 27*(2): 241–267.

Berlin, G., Furstenberg, F.F., and Waters, M.C. (2010). Introducing the Issue. *The Future of Children*, *20*(1): 3–18.

Blau, F.D., Brummund, P., and Liu, A.Y.H. (2013). Trends in Occupational Segregation by Gender 1970–2009: Adjusting for the Impact of Changes in the Occupational Coding System. *Demography, 50*(2): 471–492.

Blossfeld, H., Klijzing, E., Mills, M., and Kurz, K. (2005). *Globalization, Uncertainty, and Youth in Society: The Losers in a Globalizing World*. New York: Routledge.

Boden, J.M., Fergusson, D.M., and Horwood, L.J. (2008). Early Motherhood and Subsequent Life Outcomes. *Journal of Child Psychology and Psychiatry, 49*(2): 151–160.

Borooah, V.K. (2001). *Logit and Probit: Ordered and Multinomial Models* (Sage University Papers Series on Quantitative Applications in the Social Sciences 07-138). Thousand Oaks, CA: Sage.

Bozick, R., and Ingels, S.J. (2008). *Mathematics Coursetaking and Achievement at the End of High School: Evidence from the Education Longitudinal Study of 2002* (ELS:2002) (NCES 2008-319). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Bozick, R., and Lauff, E. (2007). *Education Longitudinal Study of 2002 (ELS:2002): A First Look at the Initial Postsecondary Experiences of the Sophomore Class of 2002* (NCES 2008-308). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Budig, M.J., Boeckmann, I., and Misra, J. (2011). Cross-National Patterns in Individual and Household Employment and Work Hours by Gender and Parenthood. *Research in the Sociology of Work*, *22*(1): 169–207.

Brock, T. (2010). Young Adults and Higher Education: Barriers and Breakthroughs to Success. *The Future of Children, 20*(1): 109–132.

Bureau of Labor Statistics. (2014). *How the Government Measures Unemployment*. Washington, D.C.: Current Population Survey (CPS) Technical Documentation. Retrieved September 1, 2014, from http://www.bls.gov/cps/cps_htgm.pdf.

Carnevale, A.P., Smith, N., and Strohl, J. (2010). *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. Washington, DC: Georgetown University, Center on Education and the Workforce. Retrieved July 1, 2014, from http://files.eric.ed.gov/fulltext/ED524310.pdf.

Carnevale, A.P., Stephen J.R, and Cheah, B. (2011). *The College Payoff: Education, Occupations, Lifetime Earnings*. Georgetown University, Center on Education and the Workforce. Retrieved July 1, 2014, from http://www2.ed.gov/policy/highered/reg/hearulemaking/2011/collegepayoff.pdf.

Cheremukhin, A. (2014). Middle-Skill Jobs Lost in U.S. Labor Market Polarization. *Economic Letter*, *9*(5): 1–4.

Cherlin, A.J. (2005). American Marriage in the Early Twenty-First Century. *The Future of Children*, *15*(2): 33–55.

Child Trends Databank. (2013). *Fertility and Birth Rates*. Bethesda, MD: Author. Retrieved July 1, 2014, from http://www.childtrends.org/?indicators=fertility-and-birth-rates.

Cohen, J., and Cohen, P. (1983). *Applied Multiple Regression/Correlation Analysis for the Behavioral Science*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Copen, C.E., Daniels, K., Vespa, J., and Mosher, W.D. (2012). *First Marriages in the United States: Data From the 2006–10 National Survey of Family Growth.* Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Retrieved July 1, 2014, from http://www.cdc.gov/nchs/data/nhsr/nhsr049.pdf.

Dalton, B., Ingels, S.J., Downing, J., and Bozick, R. (2007). *Advanced Mathematics and Science Coursetaking in the Spring High School Senior Classes of 1982, 1992, and 2004* (NCES 2007-312). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Danziger, S., and Rouse, C.E. (2009). *The Price of Independence: The Economics of Early Adulthood.* New York: Russell Sage Foundation.

DeNavas-Walt, C., Proctor, B.D., and Smith, J.C. (2013). *Income, Poverty, and Health Insurance Coverage in the United States: 2012* (Current Population Reports P60-245). Washington, DC: U.S. Census Bureau.

Dynarski, S., and Scott-Clayton, J. (2013). Financial Aid Policy: Lessons from Research. *The Future of Children*, *23*(1): 67–92.

Elsby, M.W.L., Hobijin, B., and Sahin, A. (2010). *The Labor Market in the Great Recession* (Brookings Papers on Economic Activity). Washington, DC: Brookings Institution. Retrieved August 1, 2014, from http://www.nber.org/papers/w15979.pdf.

Farber, H.S. (2011). *Job Loss in the Great Recession: Historical Perspective From the Displaced Workers Survey, 1984–2010* (NBER Working Paper No. 17040). Cambridge, MA: National Bureau of Economic Research. Retrieved May 1, 2014, from http://www.nber.org/papers/w17040.

Finn, J.D. (1989). Withdrawing From School. *Review of Educational Research, 59*(2): 117–142.

Finn, J.D. (2006). *The Adult Lives of At-Risk Students: The Roles of Attainment and Engagement in High School* (NCES 2006-328). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Fry, R. (2016). *For First Time in Modern Era, Living With Parents Edges Out Other Living Arrangements for 18- to 34-Year-Olds*. Washington, D.C.: Pew Research Center. Retrieved April 1, 2017, from http://www.pewsocialtrends.org/files/2016/05/2016-05-24_living-arrangemnet-final.pdf.

Furstenberg, F.F. (2010). On a New Schedule: Transitions to Adulthood and Family Change. *The Future of Children*, *20*(1): 67–88.

Gabriel, P.E., and Schmitz, S. (2007). Gender Differences in Occupational Distributions Among Workers. *Monthly Labor Review, 130*(6): 19–24.

Godofsky, J., Zukin, C., and Van Horn, C. (2011). *Unfulfilled Expectations: Recent College Graduates Struggle in a Troubled Economy*. New Brunswick, NJ: Edward J. Bloustein School of Planning and Public Policy, Rutgers University.

Goldrick-Rab, S., and Han, S.W. (2011). Accounting for Socioeconomic Differences in Delaying the Transition to College. *The Review of Higher Education*, *34*(3): 423–445.

Goldstein, J.R., and Kenney, C.T. (2001). Marriage Delayed or Marriage Forgone? New Cohort Forecasts of First Marriage for U.S. Women. *American Sociological Review, 66*(4): 506–519.

Heckman, J.J., and LaFontaine, P.A. (2010). The American High School Graduation Rate: Trends and Levels. *The Review of Economics and Statistics*, *92*(2): 244–262.

Holmes, A.K., Rauch, R.K., and Cozza, S.J. (2013). When a Parent Is Injured or Killed in Combat. *The Future of Children*, *23*(2): 143–62.

Horn, L., Cataldi, E.F., and Sikora, A. (2005). *Waiting to Attend College: Undergraduates Who Delay Their Postsecondary Enrollment* (NCES 2005-152). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Horn, L., and Paslov, J. (2014). *Trends in Student Financing of Undergraduate Education: Selected Years, 1995–96 to 2011–12* (NCES 2014-013). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Hout, M. (2012). Social and Economic Returns to College Education in the United States. *The Annual Review of Sociology*, *38*: 379–400.

Howe, N., and Strauss, W. (2007). *Millennials Go to College: Strategies for a New Generation on Campus.* Great Falls, VA: LifeCourse Associates.

Hoynes, H.W., Miller, D.L., and Schaller, J. (2012). *Who Suffers During Recessions?* (NBER Working Paper No. 17951). Cambridge, MA: National Bureau of Economic Research. Retrieved May 1, 2014, from http://www.nber.org/papers/w17951.pdf.

Hull, J. (2009). *Better Late Than Never? Examining Late High School Graduates.* Alexandria, VA: Center for Public Education. Retrieved July 1, 2014, from http://www.centerforpubliceducation.org/Main-Menu/Staffingstudents/Better-late-than-never-At-a-glance/Better-Late-than-Never-Examining-late-high-school-graduates-.html.

Ingels, S.J., Burns, L.J., Chen, X., Cataldi, E.F., and Charleston, S. (2005). *A Profile of the American High School Sophomore in 2002: Initial Results From the Base Year of the Education Longitudinal Study of 2002* (NCES 2005-338). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Ingels, S.J., Curtin, T.R., Kaufman, P., Alt, M.N., and Chen, X. (2002). *Coming of Age in the 1990s: The Eighth-Grade Class of 1988 12 Years Later* (NCES 2002-321). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Ingels, S.J., Glennie, E., Lauff, E., and Wirt, J.G. (2012). *Trends Among Young Adults Over Three Decades, 1974–2006* (NCES 2012-345). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Ingels, S.J., Pratt, D.J., Alexander, C.P., Jewell, D.M., Lauff, E., Mattox, T.L., and Wilson, D. (2014). *Education Longitudinal Study of 2002 Third Follow-Up Data File Documentation* (NCES 2014-364). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Ingels, S.J., Pratt, D.J., Rogers, J.E., Siegel, P.S., and Stutts, E.S. (2004). *Education Longitudinal Study of 2002: Base Year Data File User's Manual* (NCES 2004-405). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Kahn, L. (2010). The Long-Term Labor Market Consequences of Graduating From College in a Bad Economy. *Labour Economics*, *17*(2): 306–316.

Kalleberg, A.L. (2011). *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s to 2000s*. New York: Russell Sage Foundation.

Kaufman, P., and Bradbury, D. (1992). *Characteristics of At-Risk Students in NELS:88* (NCES 92-042). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Kelty, R., Kleykamp, M., and Segal, D.R. (2010). The Military and the Transition to Adulthood. *The Future of Children*, *20*(1): 181–208.

Kena, G., Hussar, W., McFarland, J., de Brey, C., Musu-Gillette, L., Wang, X., Zhang, J., Rathbun, A., Wilkinson-Flicker, S., Diliberti, M., Barmer, A., Bullock Mann, F., and Dunlop Velez, E. (2016). *The Condition of Education 2016* (NCES 2016-144). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Kienzl, G., and Kena, G. (2006). *Economic Outcomes of High School Completers and Noncompleters 8 Years Later* (NCES 2007-019). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Kim, Y.M. (2013). Diverging Top and Converging Bottom: Labour Flexibilization and Changes in Career Mobility in the USA. *Work, Employment & Society, 27*(5): 860–879.

Kingston, P.W., Hubbard, R., Brent, L., Schroeder, P., and Wilson, J. (2003). Why Education Matters. *Sociology of Education*, *76*(1): 53–70.

Koop, G. (2008). *Introduction to Econometrics*. New York: John Wiley & Sons.

Kudler, H., and Porter, R.I. (2013). Building Communities of Care for Military Children and Families. *The Future of Children*, *23*(2): 163–186.

Kuh, G.D., Kinzie, J., Buckley, J.A., Bridges, B.K., and Hayek, J.C. (2006). *What Matters to Student Success: A Review of the Literature.* Washington, DC: National Postsecondary Education Cooperative. Retrieved August 1, 2014, from http://nces.ed.gov/npec/pdf/kuh_team_report.pdf.

Lauff, E., and Ingels, S.J. (2014). *Education Longitudinal Study of 2002 (ELS:2002): A First Look at 2002 High School Sophomores 10 Years Later* (NCES 2014-363). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Lee, V.E., and Ready, D.D. (2009). U.S. High School Curriculum: Three Phases of Contemporary Research and Reform. *The Future of Children*, *19*(1): 135–156.

Liao, T.F. (1994). *Interpreting Probability Models: Logit, Probit, and Other Generalized Linear Models* (Sage University Papers Series on Quantitative Applications in the Social Sciences 07-101). Thousand Oaks, CA: Sage.

Livingston, G., and Cohn, D. (2010). *Childlessness Up Among All Women; Down Among Women with Advanced Degrees*. Washington, DC: Pew Research Center. Retrieved July 1, 2014, from http://www.pewsocialtrends.org/files/2010/11/758-childless.pdf.

Long, M.C., Conger, D., and Iatarola, P. (2012). Effects of High School Coursetaking on Secondary and Postsecondary Success. *American Educational Research Journal*, *49*(2): 285–322.

Mac Iver, M.A., and Messel, M. (2013). Early Warning Indicators of High School Outcomes. *Journal of Education for Students Placed at Risk*, *18*(1): 50–67.

Martin, J.A., Hamilton, B.E., Osterman, M.J.K., Curtin, S.C., and Matthews, T.J. (2015). Births: Final Data for 2013. *National Vital Statistics Reports*, *64*(1): 1–65.

Martin, S.P., Astone, N.M., and Peters, H.E. (2014). *Fewer Marriages, More Divergence: Marriage Projections for Millennials to Age 40*. Washington, DC: The Urban Institution. Retrieved July 1, 2014, from http://www.urban.org/UploadedPDF/413110-Fewer-Marriages-More-Divergence.pdf.

McCall, L., and Percheski, C. (2010). Income Inequality: New Trends and Research Directions. *Annual Review of Sociology, 36*(1): 329–347.

Melguizo, T., and Wolniak, G. (2012). The Earnings Benefits of Majoring in STEM Fields Among High Achieving Minority Students. *Research in Higher Education, 53*(4): 385–405.

Miller, A.R. (2011). The Effects of Motherhood on Timing of Career Path. *Journal of Population Economics, 24*(3): 1071–1100.

Minicozzi, A. (2005). The Short Term Effect of Educational Debt on Job Decisions. *Economics of Education Review*, *24*(4): 417–430.

Mouw, T., and Kalleberg, A.L. (2010). Occupations and the Structure of Wage Inequality in the United States, 1980s to 2000s. *American Sociological Review 75*(3): 402–431.

Nord, C., Roey, S., Perkins, R., Lyons, M., Lemanski, N., Brown, J., and Schuknecht, J. (2011). *The Nation's Report Card: America's High School Graduates* (NCES 2011-462). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Oreopoulos, P., and Petronijevic, U. (2013). Making College Worth It: A Review of the Returns to Higher Education. *The Future of Children*, *23*(1): 41–66.

Osterman, K.F. (2000). Students' Need for Belonging in the School Community. *Review of Educational Research, 70*(3): 323–367.

Pedulla, D.S. (2012). To Be Young and Unemployed. *New Labor Forum*, *21*(3): 26–36.

Pedulla, D.S. (2013). The Hidden Costs of Contingency: Employers' Use of Contingent Workers and Standard Employees' Outcomes. *Social Forces 92*(2): 691–722.

Pew Research Center. (2010a). *The Decline of Marriage and Rise of New Families*. Washington, DC: Author. Retrieved July 1, 2014, from http://www.pewsocialtrends.org/files/2010/11/pew-social-trends-2010-families.pdf.

Pew Research Center. (2010b). *Millennials: Confident, Connected, Open to Change*. Washington, DC: Author. Retrieved July 1, 2014, from http://www.pewsocialtrends.org/files/2010/10/millennials-confident-connected-open-to-change.pdf.

Pew Research Center. (2014a). *Millennials in Adulthood: Detached From Institutions, Networked With Friends*. Washington, DC: Author. Retrieved July 1, 2014, from http://www.pewsocialtrends.org/files/2014/03/2014-03-07_generations-report-version-for-web.pdf.

Pew Research Center. (2014b). *The Rising Cost of Not Going to College*. Washington, DC: Author. Retrieved July 1, 2014, from http://www.pewsocialtrends.org/files/2014/02/SDT-higher-ed-FINAL-02-11-2014.pdf.

Polachek, S.W., and Siebert, W.S. (1993). *The Economics of Earnings*. Cambridge, UK: Cambridge University Press.

Proulx, C.M., Helms, H.M., and Buehler, C. (2007). Marital Quality and Personal Well-Being: A Meta-Analysis. *Journal of Marriage and Family, 69*(3): 576–593.

Rainie, L., and Wellman, B. (2012). *Networked: The New Social Operating System*. Cambridge, MA: The MIT Press.

Reskin, B.F., and Bielby, D.D. (2005). A Sociological Perspective on Gender and Career Outcomes. *Journal of Economic Perspectives*, *19*(1): 71–86.

Robst, J. (2007). Education and Job Match: The Relatedness of College Major and Work. *Economics of Education Review, 26*(4): 397–407.

Roksa, J., and Arum, R. (2012). Life After College: The Challenging Transitions of the "Academically Adrift" Cohort. *Change: The Magazine of Higher Learning*, *44*(4): 8–14.

Ross, T., Kena, G., Rathbun, A., KewalRamani, A., Zhang, J., Kristapovich, P., and Manning, E. (2012). *Higher Education: Gaps in Access and Persistence Study* (NCES 2012-046). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Rothstein, J., and Rouse, C.E. (2011). Constrained After College: Student Loans and Early-Career Occupational Choices. *Journal of Public Economics*, *95*(1–2): 149–163.

Rouse, C.E., and Kemple, J.J. (2009). Introducing the Issue. *The Future of Children*, *19*(1): 3–16.

Sawhill, I.V. (2014). *Generation Unbound: Drifting Into Sex and Parenthood Without Marriage*. Washington, DC: Brookings Institution Press.

Seastrom, M., Chapman, C., Stillwell, R., McGrath, D., Peltola, P., Dinkes, R., and Xu, Z. (2006). *User's Guide to Computing High School Graduation Rates, Volume 1: Review of Current and Proposed Graduation Indicators* (NCES 2006-604). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Settersten, R.A., Furstenberg, F.F., and Rumbaut, R.G. (2005). *On the Frontier of Adulthood: Theory, Research, and Public Policy*. Chicago: University of Chicago Press.

Settersten, R.A., and Ray, B. (2010). What's Going On With Young People Today? The Long and Twisting Path to Adulthood. *The Future of Children*, *20*(1): 19–41.

Shapiro, D., Dundar, A., Yuan, X., Harrell, A., and Wakhungu, P.K. (2014). *Completing College: A National View of Student Attainment Rates–Fall 2008 Cohort* (Signature Report No. 8). Herndon, VA: National Student Clearinghouse Research Center. Retrieved November 1, 2014, from http://nscresearchcenter.org/wp-content/uploads/SignatureReport8.pdf.

Shierholz, H., Davis, A., and Kimball, W. (2014). *The Class of 2014: The Weak Economy Is Idling Too Many Young Graduates* (EPI Briefing Paper No. 377). Washington, DC: Economic Policy Institute. Retrieved August 1, 2014, from http://www.epi.org/publication/class-of-2014/.

Shierholz, H., Sabadish, N., and Wething, H. (2012). *The Class of 2012: Labor Market for Young Graduates Remains Grim* (EPI Briefing Paper No. 340). Washington, DC: Economic Policy Institute. Retrieved August 1, 2014, from http://www.epi.org/files/2012/bp340-labor-market-young-graduates.pdf.

Snyder, T.D., de Brey, C., and Dillow, S.A. (2016). *Digest of Education Statistics 2015* (NCES 2016-014). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Stetser, M., and Stillwell, R. (2014). *Public High School Four-Year On-Time Graduation Rates and Event Dropout Rates: School Years 2010–11 and 2011–12: First Look* (NCES 2014-391). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Stillwell, R., Sable, J., and Plotts, C. (2011). *Public School Graduates and Dropouts from the Common Core of Data: School Year 2008–09* (NCES 2011-312). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Taylor, P. (2011). *War and Sacrifice in the Post-9/11 Era*. Washington, DC: Pew Research Center. Retrieved January 15, 2016 from http://www.pewsocialtrends.org/files/2011/10/veterans-report.pdf.

Tyler, J.H., and Lofstrum, M. (2009). Finishing High School: Alternative Pathways and Dropout Recovery. *The Future of Children*, *19*(1): 77–103.

U.S. Department of Education. (2014). *2012 Revision of NCES Statistical Standards* (NCES 2014-097). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved May 1, 2014, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014097.

U.S. Department of Veterans Affairs. (2011). *The Post-9/11 GI-Bill*. Washington, DC: Author. Retrieved August 1, 2014, from http://www.benefits.va.gov/gibill/post911_gibill.asp.

Wang, W., and Taylor, P. (2011). *For Millennials, Parenthood Trumps Marriage*. Washington, DC: Pew Research Center. Retrieved July 1, 2014, from http://www.pewsocialtrends.org/files/2011/03/millennials-marriage.pdf.

Woo, J.J. (2013). *Degrees of Debt: Student Loan Repayment of Bachelor's Degree Recipients 1 Year After Graduating: 1994, 2001, and 2009* (NCES 2014-011). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Zhang, L. (2013). Effects of College Educational Debt on Graduate School Attendance and Early Career and Lifestyle Choices. *Education Economics*, *21*(2): 154–175.

Appendix A—Glossary

This glossary describes the variables used in this study. These variables were either taken directly from the Education Longitudinal Study of 2002 (ELS:2002) restricted-use data file (http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014362) or derived from variables in the restricted data files. In the glossary below, the items are listed in alphabetical order by the variable label. The name of each variable appears to the right of the variable label.

Glossary Index

Label	Name
Rigor of high school curriculum	HSCURR
School disengagement composite in 10th grade	ENGLEVEL
Science coursetaking pipeline	F1RSCPIP
Sector of high school in 10th grade	BYSCTRL
Selectivity of first-attended postsecondary institution	F3PS1SLC
Single-parent indicator of student in 2012	F3SINGLEPAR
Sophomore cohort member in 2001–02 school year	G10COHRT
Standardized hourly wage for current/most recent job	F3HOURWAGE
Student's race/ethnicity	F1RACE_R
Student's sex	F1SEX
Student's socioeconomic status in 2012	F3SESQU
Total amount taken out in student loans	F3STLOANAMT
Whether current/most recent job requires a bachelor's degree	F3B30B
Whether current/most recent job requires a graduate degree	F3B30A
Whether current/most recent job requires an associate's degree	F3B30C
Whether current/most recent job requires an undergraduate certificate	F3B30D
Whether English is student's native language	F1STLANG
Whether student ever took out a federal loan for postsecondary education	FEDEVER
Whether student ever took out a student loan for postsecondary education	F3STLOANEVR
Whether student has ever been in the military	EVERMIL
Whether student held a job for pay since January 2006	F3B09
Whether student owned a house, rented, or had some other living arrangement in 2012	F3D30
Whether student received public assistance in 2011	F3D24

POWERSTATS VARIABLE

Academic risk composite in 10th grade **ACALEVEL**

This variable was derived from students' 10th-grade mathematics test scores (BYTXMQU), 10th-grade reading test scores (BYTXRQU), 9th-grade GPAs (F1RGP9P), 10th-grade GPAs (F1RGP0P), and the number of grades repeated in grades K–10 (BYGRDRPT). Students were considered to be at high academic risk if at least four of the following five conditions were met—10th-grade mathematics test score in the lowest quarter of the score distribution, 10th-grade reading test score in the lowest quarter of the score distribution, 9th-grade GPA of 2.50 or lower, 10th-grade GPA of 2.50 or lower, and repetition of at least one grade before grade 10—*and* if the student met none of the low-risk conditions described below.

Students were considered to be at low academic risk if at least four of the following five conditions were applied for them—10th-grade mathematics test score in the highest quarter of the score distribution, 10th-grade reading test score in the highest quarter of the score distribution, 9th-grade GPA above 3.50, 10th-grade GPA above 3.50, and no grade repetition in grades K–10—*and* the student has none of the high-risk situations described above.

Students who met neither sets of criteria above were considered to be at moderate academic risk.

Age when completing the first bachelor's degree **BA1AGE**

This variable was derived based on students' birthdate (BYDOB_P), the first postsecondary attendance date (F3PS1START), and the total elapsed months between postsecondary entry and the first bachelor's degree (F3PS2BA).

Cumulative federal loan amount for undergraduate and graduate education **F3FEDCUM3**

This variable was derived from the National Student Loan Data System (NSLDS) and indicates the cumulative federal loan amount the student borrowed for undergraduate and graduate education. It excludes Direct PLUS Loans to parents of undergraduate students (which are only available to the parents of dependent undergraduates).

Educational expectations in 10th grade **BYSTEXP**

This variable indicates the highest educational attainment that students thought they would achieve when they were asked about their educational expectations in 10th grade. The eight response options are 1) Less than high school graduation; 2) High school graduation or GED only; 3) Attend or complete a 2-year school course in a community college or vocational school; 4) Attend college, but not complete a 4-year degree; 5) Graduate from college; 6) Obtain a master's degree or equivalent; 7) Obtain a Ph.D., M.D, or other advanced degree; and 8) Do not know. For this report, this variable was recoded into the following categories:

Do not know (BYSTEXP=8)
High school diploma or less (BYSTEXP=1 or 2)
Some college (BYSTEXP=3 or 4)
Bachelor's or higher degree (BYSTEXP=5, 6, or 7)

Effects of student loan debt: Had to work at more than one job at the same time **F3A22C**

This dummy variable (yes or no) comes directly from the third follow-up interview, in which respondents who indicated having ever taken out a student loan were asked whether they had to work at more than one job at the same time because of their student loan debt.

POWERSTATS VARIABLE

Effects of student loan debt: Had to work more hours than desired **F3A22D**

This dummy variable (yes or no) comes directly from the third follow-up interview, in which respondents who indicated having ever taken out a student loan were asked whether they had to work more hours than desired because of their student loan debt.

Effects of student loan debt: Took a job outside field of study or training **F3A22A**

This dummy variable (yes or no) comes directly from the third follow-up interview, in which respondents who indicated having ever taken out a student loan were asked whether they took a job outside their field of study or training because of their student loan debt.

Effects of student loan debt: Took a less desirable job **F3A22B**

This dummy variable (yes or no) comes directly from the third follow-up interview, in which respondents who indicated having ever taken out a student loan were asked whether they took a less desirable job because of their student loan debt.

Employment status in 2012 **F3EMPSTAT**

This variable characterizes students' employment status at the time of the third follow-up interview in terms of the number and type (full-time vs. part-time) of job(s) they had. If a student was working in multiple jobs, this variable also indicates the number of hours worked across all their jobs. If a student was not working for pay, this variable distinguishes between those looking for work (i.e., unemployed) and those not looking for work (i.e., out of the labor force). The variable was recoded into the following categories:

Worked 35 or more hours per week
Worked 1–34 hours per week
Unemployed
Out of the labor force

Ever attended a postsecondary institution **F3EVRATT**

This dummy variable (yes or no) indicates whether a student has ever attended a postsecondary institution.

Ever unemployed since January 2009 **F3C07**

This dummy variable (yes or no) is drawn directly from the third follow-up interview, in which respondents were asked whether they have ever been unemployed for a period of 1 month or more since January 2009.

Family's composition in 10th grade **BYFCOMP**

This variable is drawn from the base-year parent questionnaire and indicates students' family composition when they were in 10th grade. This variable has the following categories: 1) mother and father; 2) mother and guardian; 3) father and guardian; 4) two guardians; 5) mother only; 6) father only; 7) female guardian only; 8) male guardian only; and 9) lives with student less than half time. For this report, these nine categories were further collapsed into the following two categories to identify whether students lived in a single-parent household when they were in 10th grade.

Lived in a two-parent household (BYFCOMP = 1, 2, 3, 4, or 9)
Lived in a single-parent household (BYFCOMP = 5, 6, 7, or 8)

POWERSTATS VARIABLE

Family socioeconomic status **BYSES1QU**

This variable describes students' family socioeconomic status (SES) when they were in 10th grade. It was constructed based on five equally weighted, standardized components: father's/guardian's education (BYFATHED), mother's/guardian's education (BYMOTHED), family income (BYINCOME), father's/guardian's occupation (BYOCCUF), and mother's/guardian's occupation (BYOCCUM). For this report, the variable was recoded into the following categories:

Lowest quarter of the SES distribution
Middle two quarters
Highest quarter

Grade point average (GPA) for all academic courses **F1RAGP**

This variable was constructed from high school transcripts and indicates the student's GPA for all academic courses taken since grade 9. Academic subjects include mathematics, science, English, social studies, fine arts, and foreign language. The variable was recoded into the following categories:

0.00–1.99
2.00–2.49
2.50–2.99
3.00–3.49
3.50–4.00

High school completion date **F3HSCPDR**

This variable draws on information collected from the first follow-up early graduate questionnaire, the first follow-up dropout questionnaire, the second follow-up student questionnaire, the third follow-up student questionnaire, and high school transcripts so as to indicate each student's high school completion date. This variable was recoded into the following categories:

Before 2004
During 2004
After 2004

High school completion status **F3HSSTAT**

This variable indicates students' high school completion status at the time of the third follow-up survey and has the following categories: 1) received high school diploma (fall 2003—summer 2004 graduate); 2) received high school diploma (post-summer 2004 graduate); 3) received high school diploma (pre-fall 2003 graduate); 4) received high school diploma (graduation date unknown); 5) received certificate of attendance; 6) received GED or other high school equivalency; 7) no high school credential, currently working toward GED/equivalency; 8) no high school credential, not currently working toward GED/equivalency; 9) no high school credential, unknown if currently working toward GED/equivalency; and 10) unknown. For this report, this variable was recoded into the following categories:

Received a high school diploma (F3HSSTAT=1, 2, 3, or 4)
Received a GED or other equivalency (F3HSSTAT=5 or 6)
Received no high school credential (F3HSSTAT=7, 8, or 9)

POWERSTATS VARIABLE

Highest level of educational attainment **F3ATTAINMENT**

This variable indicates students' highest level of education at the time of the third follow-up interview and has the following categories: 1) no high school credential and no postsecondary attendance; 2) high school credential, no postsecondary attendance; 3) some postsecondary attendance, no postsecondary credential; 4) undergraduate certificate; 5) Associate's degree; 6) Bachelor's degree; 7) Post-baccalaureate certificate; 8) Master's degree; 9) post-Master's certificate; and 10) doctoral degree. For this report, "bachelor's degree" and "post-baccalaureate certificate" were collapsed into "bachelor's degree," and the last three categories were collapsed into "master's or higher degree."

Level and control of first-attended postsecondary institution **F3PS1SEC**

This variable indicates the level and control of students' first-attended postsecondary institution and was recoded into the following categories in this report:

Public 4-year
Private nonprofit 4-year
Public 2-year
For-profit (of all levels)
Other

Living arrangement in 2012 **F3LIVARR**

This variable indicates whether a student was living by him/herself or with parents; a spouse or partner; children; siblings; friends or roommates; or whether the student had some other living arrangement.

Marital status as of F3 **F3MARRSTATUS**

This variable indicates students' marital status at the time of the third follow-up survey. If not married, students were also asked whether they were currently living with a significant other in a marriage-like relationship. The variable has the following categories: 1) married; 2) never married, currently living with partner; 3) never married, not currently living with partner; 4) divorced, currently living with partner; 5) divorced, not currently living with partner; 6) separated, currently living with partner; 7) separated, not currently living with partner; 8) widowed, currently living with partner; and 9) widowed, not currently living with partner. For this report, the variable was recoded into the following categories:

Single, never married (F3MARRSTATUS=3)
Married (F3MARRSTATUS=1)
Divorced/separated/widowed (F3MARRSTATUS=5, 7, or 9)
Living with partner (F3MARRSTATUS=2, 4, 6, or 8)

Math coursetaking pipeline **F1RMAPIP**

This variable indicates the highest level of mathematics for which students received nonzero credit while in high school and has the following categories: 1) No mathematics; 2) Nonacademic mathematics (basic mathematics, consumer mathematics); 3) Low academic mathematics (pre-algebra); 4) Middle academic mathematics I (algebra I and geometry); 5) Middle academic mathematics II (algebra II); 6) Advanced mathematics I (trigonometry, analytical geometry, statistics); 7) Advanced mathematics II (precalculus); and 8) Advanced mathematics III (calculus). For this report, the eight levels of this math pipeline variable were further collapsed into the following categories:

Math coursetaking pipeline—continued **F1RMAPIP**

No math, basic mathematics, or pre-algebra (F1RMAPIP=1, 2, or 3)
Algebra I, geometry, or algebra II (F1RMAPIP= 4 or 5)
Trigonometry, statistics, or precalculus (F1RMAPIP=6 or 7)
Calculus (F1RMAPIP=8)

This variable was not calculated for students who did not have a high school transcript. In addition, the nonmissing F1RMAPIP values were converted to missing for those who had only partial high school transcript information. Students were considered to have a partial high school transcript record when all three of the following conditions were met: 1) the student in question was a high school diploma recipient, as indicated by F3HSSTAT; 2) the student completely lacks high school transcript information for either 9th grade (F1RTR09=0), 10th grade (F1RTR10=0), 11th grade (F1RTR11=0), and/or 12th grade (F1RTR12=0); and (3) F1RMAPIP indicates something other than "advanced mathematics III (calculus)."

Number of biological/adopted children in 2012 **F3NUMCHILD**

This variable provides a sum of the number of biological children born to the respondent as of the third follow-up survey (F3D07) and the number of children adopted by the respondent as of the third follow-up survey (F3D11). It was recoded into the following two categories:

None
One or more

Number of months between high school exit and postsecondary entry **F3HS2PS1**

This variable indicates the number of months between high school credential receipt date (F3HSCPDR) and the date of first postsecondary attendance (F3PS1START). The variable was recoded into the following categories:

3 months
4–12 months
13 or more months

Number of months between postsecondary entry and the first bachelor's degree **F3PS2BA**

This variable indicates the number of months between the date of first postsecondary attendance (F3PS1START) and the receipt date of the first bachelor's degree. If a student reported receipt of multiple bachelor's degrees, then the earliest bachelor's degree receipt date was used in the calculation of this variable. This variable was recoded into the following categories:

48 or fewer months
49–60 months
61–72 months
73 or more months

Number of months unemployed since January 2009 **F3C08**

This variable is drawn directly from the third follow-up interview, in which respondents were asked about the total number of months they have been unemployed since January 2009.

POWERSTATS VARIABLE

Number of times unemployed since January 2009 **F3C09**

This variable is drawn directly from the third follow-up interview, in which respondents were asked about the total number of times they have been unemployed for a period of 1 or more month since January 2009. In this report, this variable was used to describe the number of unemployment spells. An unemployment spell is defined as a period of unemployment lasting at least 1 month. This variable was recoded into the following categories:

One spell
Two spells
Three or more spells

Occupation for current/most recent job **F3ONET6CURR**

This variable stores the 2010 Standard Occupational Classification (SOC) code associated with the respondent's current or most recent job as of the third follow-up. The variable is a 6-digit code with the first 2 digits indicating a general category, the 3rd digit indicating a mid-level category, and the last 3 digits a specific category. For this report, this variable was recoded into the following eight occupational categories. For more information on the 2010 SOC, see http://www.bls.gov/soc/.

Business/management occupations
STEM occupations
PK–12 educators/social service professionals
Health care occupations
Sales occupations
Business support/administrative assistants
Trade/technical professionals
Other

Panel weight for the base-year and the third follow-up (2002 and 2012) **F3BYPNLWT**

This is a panel weight for all sample members who completed a questionnaire in the base-year and the third follow-up surveys. This weight variable was used for all analyses of this report.

Parent's highest level of education **F1PARED**

This variable indicates the highest level of education completed by the student's mother or father as of the first follow-up survey and has eight levels: 1) Did not finish high school; 2) Graduated from high school or GED; 3) Attended 2-year school, no degree; 4) Graduated from 2-year school; 5) Attended college, no 4-year degree; 6) Graduated from college; 7) Completed master's degree or equivalent; and 8) Completed Ph.D., M.D., or other advanced degree. For this report, this variable was recoded into the following categories:

High school or less (F1PARED=1 or 2)
Some postsecondary education (F1PARED=3, 4, or 5)
Bachelor's or higher degree (F1PARED=6, 7, or 8)

Postsecondary enrollment status in 2012 **F3EDSTAT**

This variable indicates students' postsecondary enrollment status at the time of the third follow-up survey and has the following categories: 1) currently taking courses at a 4-year school; 2) currently taking courses at a 2-year school; 3) currently taking courses at a less-than-2-year school; 4) currently taking courses, institutional level unknown; 5) not currently enrolled, but has previous postsecondary attendance; and 6) having no postsecondary attendance. For this report, the variable was recoded into the following categories:

Enrolled (F3EDSTAT=1, 2, 3, or 4)
Not enrolled (F3EDSTAT=5 or 6)

POWERSTATS VARIABLE

Region of student's residence in 2012 **F3REGION**

This variable indicates the geographic region of student's residence at the time of the third follow-up survey. The variable has the following categories:

Northeast	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
Midwest	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin
South	Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia
West	Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, Wyoming

Relationship between current/most recent job and major field of study **F3B31**

This variable comes directly from the third follow-up questionnaire, in which respondents who had worked for pay since January 2006 and had ever attended a postsecondary institution were asked how closely related their current/most recent job was to their major field of study when they were last enrolled in college. The variable has the following categories:

Closely related
Somewhat related
Not related

Rigor of high school curriculum **HSCURR**

This variable indicates the rigor of the student's curriculum in high school and was constructed using credits (Carnegie units) earned in algebra I (F1RAL1_C), algebra II (F1RAL2_C), biology (F1RBIO_C), calculus (F1RCAL_C), chemistry (F1RCHE_C), English (F1RENG_C), geometry (F1RGEO_C), mathematics (F1RMAT_C), non-English language (F1RNON_C), physics (F1RPHY_C), precalculus (F1RPRE_C), science (F1RSCI_C), social studies (F1RSOC_C). This variable was constructed based on the following four curriculum levels developed for the NAEP High School Transcript Studies (Nord et al. 2011):

Below standard	Curriculum lacks one or more requirements defined for the standard curriculum below.
Standard	Curriculum consists of four credits in English and three credits in each of social studies, mathematics, and science.
Moderately rigorous	Standard curriculum plus three additional requirements: mathematics credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and one credit must be earned in foreign language courses.
Rigorous	Moderately rigorous curriculum plus three additional requirements: four credits in mathematics must be earned, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and three credits must be earned in foreign language courses.

POWERSTATS VARIABLE

Rigor of high school curriculum—continued **HSCURR**

This variable was not calculated for students who did not have a high school transcript. In addition, the nonmissing HSCURR values were converted to missing for those who had only partial high school transcript information. Students were considered to have a partial high school transcript record when all three of the following conditions were met: 1) the student in question was a high school diploma recipient, as indicated by F3HSSTAT; 2) the student completely lacks high school transcript information for either 9th grade (F1RTR09=0), 10th grade (F1RTR10=0), 11th grade (F1RTR11=0), and/or 12th grade (F1RTR12=0); and (3) HSCURR indicates something other than "rigorous."

School disengagement composite in 10th grade **ENGLEVEL**

This variable was derived through principal factor analysis (weighted by F3BYPNLWT) using students' reports on the frequencies of being late for school (BYS24A), cutting/skipping classes (BYS24B), being absent from school (BYS24C), getting in trouble in school (BYS24D), being put on in-school suspension (BYS34E), being suspended/put on probation (BYS24F), and being transferred for disciplinary reasons (BYS24G) during the first term of their sophomore year. Response categories include "never," "1–2 times," "3–6 times," "7–9 times," and "10 or more times." Only one factor was extracted from the factor analysis of these seven input variables. Cases with a full set of nonmissing input responses were assigned a scale value, and the coefficient of reliability (alpha) for the scale is 0.71. Students were then divided into quarters based on the scale values: those in the highest disengagement quarter are considered to have "high-level school disengagement;" those in the middle two disengagement quarters are considered to have "moderate-level school disengagement;" and those in the lowest disengagement quarter are considered to have "low-level school disengagement."

Science coursetaking pipeline **F1RSCPIP**

This variable indicates the highest level of science for which the student received nonzero credit while in high school and has the following categories: 1) No science; 2) Primary physical science; 3) Secondary physical science/basic biology; 4) General biology; 5) Chemistry I or physics I; 6) Chemistry I and physics I; 7) Chemistry II or physics II or advanced biology; and 8) Chemistry and physics, plus level 7. For this report, the eight levels of this variable were further collapsed into the following categories:

No science or low-level science (F1RSCPIP=1, 2, or 3)
General biology (F1RSCPIP=4)
Chemistry I or physics I (F1RSCPIP=5)
Chemistry I and physics I (F1RSCPIP=6)
Chemistry II or physics II or advanced biology (F1RSCPIP=7 or 8).

This variable was not calculated for students who did not have a high school transcript. In addition, the nonmissing F1RSCPIP values were converted to missing for those who had only partial high school transcript information. A student was considered to have a partial high school transcript record when all three of the following conditions were met: 1) the student in question is a high school diploma recipient, as indicated by F3HSSTAT; 2) the student completely lacks high school transcript information for either 9th grade (F1RTR09=0), 10th grade (F1RTR10=0), 11th grade (F1RTR11=0), and/or 12th grade (F1RTR12=0); and 3) F1RSCPIP indicates some coursework other than "Chemistry II or physics II or advanced biology" or "Chemistry and physics, plus level 7."

Sector of high school in 10th grade **BYSCTRL**

This variable indicates the type of high school students attended at the time of the base-year interview and was recoded into the following categories:

Public
Private

POWERSTATS VARIABLE

Selectivity of first-attended postsecondary institution **F3PS1SLC**

This variable indicates the selectivity of the first-attended postsecondary institution. Selectivity was defined only for 4-year institutions, while all less-than-4-year institutions were lumped together as one group. The variable has the following categories:

Highly selective 4-year institutions	Institutions whose first-year students' entrance test scores place them in the top fifth of baccalaureate institutions
Moderately selective 4-year institutions	Institutions whose first-year students' entrance test scores place them in the middle two-fifths of baccalaureate institutions
Inclusive 4-year institutions	Institutions whose first-year students entrance test scores indicated that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement
Unclassified selectivity	4-year institutions that did not have student test score data
Less-than-4-year institutions	All other institutions

Single-parent indicator of student in 2012 **F3SINGLEPAR**

This variable identifies the third follow-up respondents as single parents if they indicated that 1) they were not currently married and not currently living with a significant other in a marriage-like relationship; 2) they had a biological child or have adopted a child; and 3) there is one or more children currently living in their household. This variable has the following categories:

Single parent
Not a single parent

Sophomore cohort member in 2001–02 school year **G10COHRT**

This cohort flag identifies spring 2002 10th-graders. For each figure/table included in this report, this variable was used in concert with F3BYPNLWT (the third follow-up to base-year panel/cross-round weight) to generate nationally representative estimates of spring 2002 10th-graders as of the third follow-up survey in 2012.

Standardized hourly wage for current/most recent job **F3HOURWAGE**

This variable indicates respondents' earnings at their current/most recent job, standardized to dollars per hour. Respondents reported earnings at their current/most recent job in different ways (i.e., per hour, per day, per week, every 2 weeks, twice per month, per month, or per year). By using the number of hours respondents reported working per week, all earning responses were converted to a dollars-per-hour value. This variable was used both as a continuous variable and a categorical variable. For the categorical version, the variable was recoded into the following categories:

Lowest quarter of the hourly wage distribution
Middle two quarters
Highest quarter

POWERSTATS VARIABLE

Student's race/ethnicity **F1RACE_R**

This variable includes student's race/ethnicity and has eight categories: 1) American Indian/Alaska Native, non-Hispanic; 2) Asian, non-Hispanic; 3) Black or African American, non-Hispanic; 4) Hispanic, no race specified; 5) Hispanic, race specified; 6) More than one race, non-Hispanic; 7) Native Hawaiian/Pacific Islander, non-Hispanic; and 8) White, non-Hispanic. For this report, the variable was recoded into the following categories:

White (F1RACE_R=8)
Black (F1RACE_R=3)
Hispanic (F1RACE_R=4 or 5)
Asian (F1RACE_R=2)
Other (F1RACE_R=1, 6, or 7)

Student's sex **F1SEX**

This variable indicates the sex of a student (male or female).

Student's socioeconomic status in 2012 **F3SESQU**

This variable is a weighted quartile coding of the composite variable for the student's socioeconomic status (SES) (F3SES); F3SES is the average of three variables: the student's 2011 earning from employment, the prestige score associated with the student's current/most recent job, and educational attainment. Each variable is standardized to a mean of 0 and a standard deviation of 1 prior to averaging. Because this variable does not account for the income, occupation, and education of the student's spouse/partner, it reflects the student's individual SES (as opposed to his or her household economic status). The variable was recoded into the following categories:

Lowest quarter of the SES distribution
Middle two quarters
Highest quarter

Total amount taken out in student loans **F3STLOANAMT**

This variable indicates the total amount of loans that students reported taking out to pay for their postsecondary education (any level).

Whether current/most recent job requires a bachelor's degree **F3B30B**

This dummy variable (yes or no) comes directly from the third follow-up questionnaire, in which respondents were asked whether their current/most recent job required a bachelor's degree.

Whether current/most recent job requires a graduate degree **F3B30A**

This dummy variable (yes or no) comes directly from the third follow-up questionnaire, in which respondents were asked whether their current/most recent job required a graduate degree.

Whether current/most recent job requires an associate's degree **F3B30C**

This dummy variable (yes or no) comes directly from the third follow-up questionnaire, in which respondents were asked whether their current/most recent job required an associate's degree.

Whether current/most recent job requires an undergraduate certificate **F3B30D**

This dummy variable (yes or no) comes directly from the third follow-up questionnaire, in which respondents were asked whether their current/most recent job required an undergraduate certificate.

POWERSTATS VARIABLE

Whether English is student's native language **F1STLANG**

This variable classifies the language the student first learned to speak as either English or non-English.

Whether student ever took out a federal loan to pay for postsecondary education **FEDEVER**

This dummy variable (yes or no) was derived by using two NSLDS-based variables: loan/Pell Grant data availability status (F3NSLDSSTAT) and cumulative federal loan amount for undergraduate and graduate education (F3FEDCUM3). Students are assumed to have taken out a federal loan if there is a positive value of the federal loan amount or if there is an indication that students have associated records in the NSLDS loan data file.

Whether student ever took out a student loan to pay for postsecondary education **F3STLOANEVR**

This dummy variable (yes or no) comes directly from the third follow-up interview, in which respondents were asked whether they have ever taken out a student loan to pay for their postsecondary education.

Whether student has ever been in the military **EVERMIL**

This dummy variable (yes or no) indicates whether students have ever served in the military before. The variable was derived from three variables related to military service: 1) F3A01H from the third follow-up interview, in which respondents were asked a series of questions about their current activities at the time of the interview, including whether they were currently serving in the armed forces or military; 2) F3A03H from the third follow-up interview, in which respondents were asked a series of questions about their June 2012 activities, including whether they were serving in the armed forces or military; and 3) F3B01 from the third follow-up interview, in which respondents who had not already indicated they were currently in the military were asked whether they have ever been in the military.

Whether student held a job for pay since January 2006 **F3B09**

This dummy variable (yes or no) comes directly from the third follow-up interview, in which respondents were asked whether they have ever held a job for pay since January 2006.

Whether student owned a house, rented, or had some other living arrangement in 2012 **F3D30**

This variable comes directly from the third follow-up questionnaire, in which respondents were asked whether they paid a mortgage toward or owned a house, paid rent, or had some other living arrangement in 2012.

Whether student received public assistance in 2011 **F3D24**

This dummy variable (yes or no) comes directly from the third follow-up interview, in which respondents were asked whether they or their spouse/partner received any of the following benefits in 2011: Supplemental Security Income (SSI); SNAP (the Food Stamp Program); TANF (the Temporary Assistance for Needy Families Program); the Free and Reduced-Price School Lunch Program; or WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children).

This page intentionally left blank

Appendix B—Technical Notes and Methodology

Data Sources

The analysis presented in this report is based on data from the Education Longitudinal Study of 2002 (ELS:2002). ELS:2002 is the fourth in a series of NCES secondary school longitudinal studies that began in 1972. The three predecessor studies to ELS:2002 are the National Longitudinal Study of the High School Class of 1972 (NLS-72); High School and Beyond (HS&B); and the National Education Longitudinal Study of 1988 (NELS:88). A fifth study, a successor to ELS:2002, is the High School Longitudinal Study of 2009 (HSLS:09). All of these studies monitor the transition of national samples of young people from their high school years to postsecondary statuses, including further education, participation in the work force, and the assumption of other adult roles. ELS:2002 tracks these critical transitions for two analysis cohorts: 2002 high school sophomores and 2004 high school seniors.

Covering the high school years, ELS:2002 is an integrated multilevel survey involving multiple respondent populations. Base-year surveys were administered in 2002, including separate questionnaires for students, their parents, their teachers, school administrators, and librarians. The base-year data collection also included student assessments in math and reading, as well as a facilities checklist. The first follow-up was conducted in 2004, when base-year students were surveyed regardless of whether they were still in their base-year school, had transferred to a new school, or were out of school. High school-based data collections concluded in 2005, when high school transcripts were requested (from schools) and processed for each sample member, regardless of the sample member's high school completion status.

In addition to the aforementioned high school survey components, follow-up surveys were also administered during the sample members' postsecondary years: the second follow-up was conducted in 2006 (approximately 2 years after the sample's modal high school graduation date), and the third follow-up was conducted in 2012 (when the majority of the sample was approximately 26 years old). Additional information about cohort members was also collected from extant data sources such as the American Council on Education (GED data), the U.S. Department of Education Central Processing System (financial aid data), and SAT/ACT (postsecondary entrance exam scores). Finally, postsecondary transcripts were collected during 2013–14.

Response Rates and Bias Analysis

Base-Year School and Student Questionnaire Response Rates

Of the 1,221 eligible contacted schools, 752 participated in the survey, for an overall weighted school participation rate of 68 percent. These participating schools are nationally representative of public and private high schools in the United States in 2002. Of 17,591 selected eligible students, 15,362 participated, for a weighted student response rate of 87 percent. All the weighted response rates cited here are calculated using the base weight appropriate for a given survey[32] (Ingels et al. 2004). A nonresponse bias analysis was performed, which confirmed that any identified biases associated with nonresponse were small and that the data could be used with confidence. For further information on the base-year data collection results, see the *ELS:2002 Base-Year Data File User's Manual* (Ingels et al. 2004).

Third Follow-Up Response Rates

ELS:2002 third follow-up interviews were administered between July 4, 2012, and February 3, 2013. A total of 15,724 were deemed to be in scope for the study after removing 452 ineligible members who were deceased (127), incarcerated (69), institutionalized (2), out of the country (230), out of scope (4), or physically/mentally incapable for the survey (20). A total of 13,250 individuals (of 15,724 eligible) responded to the third follow-up interview in 2012, for a weighted response rate of 84 percent. This weighted response rate was calculated using the first follow-up base weight adjusted for unknown eligibility and scope (Ingels et al. 2014). For further information on third follow-up data collection results, see the *ELS:2002 Base-Year to Third Follow-up Data File Documentation (DFD)* (Ingels et al. 2014).

Item Response Rates and Bias Analysis

NCES Statistical Standard 4-4-1 states that "[a]ny survey stage of data collection with a unit or item response rate less than 85 percent must be evaluated for the potential magnitude of nonresponse bias before the data or any analysis using the data may be released" (U.S. Department of Education 2014). Table B-1 displays the item-level response rates for all variables used in this report, and all of them have an item-level response rate above 85 percent, except for the following five variables:

- F3A22C—Effects of student loan debt: Had to work at more than one job at the same time;
- F3A22D—Effects of student loan debt: Had to work more hours than desired;

[32] The base weight, also referred to as the design weight, is the inverse of the probability of selection; it reflects the selection probability but has not been adjusted for nonresponse (Ingels et al. 2004).

- F3A22A—Effects of student loan debt: Took a job outside field of study or training;
- F3A22B—Effects of student loan debt: Took a less desirable job;
- F3C09—Number of times unemployed since January 2009.

Item nonresponse bias analysis was conducted to determine if bias was present depending on response status (item respondents versus item nonrespondents) to these five variables as required by NCES standards 4-4-1 and 4-4-3. A summary of item nonresponse bias analysis results for these five variables appears in table B-2.

The degree of nonresponse error or bias is a function of two factors: the nonresponse rate and how much the respondents and nonrespondents differ on survey variables of interest. For example, in the case of item nonresponse on F3C09 (the number of times unemployed since January 2009), a comparison of the characteristics of the respondents and nonrespondents can be assessed to gauge whether there are any systematic differences between the two groups. The general mathematical formulation to estimate bias for a sample mean is:

$$B\left(\bar{y}_r\right) = \bar{y}_r - \bar{y}_t = \left(\frac{n_m}{n_t}\right)\left(\bar{y}_r - \bar{y}_m\right)$$

Where:

$\bar{y}_t$ = the weighted mean based on all sample cases;

$\bar{y}_r$ = the weighted mean based only on respondent cases;

$\bar{y}_m$ = the weighted mean based only on nonrespondent cases;

n_t = the weighted number of cases in the sample (i.e., $n_t = n_r + n_m$);

n_m = the weighted number of nonrespondent cases;

n_r = the weighted number of respondent cases.

$\bar{y}_r$ is approximately unbiased if either the proportion of nonrespondents (n_m/n) is small or the nonrespondent mean, $\bar{y}_m$, is close to the respondent mean, $\bar{y}_r$.

The relative bias provides a measure of the magnitude of the bias. The mathematical formulation to estimate relative bias for a sample mean is:

$$\text{Rel } B\left(\bar{y}_r\right) = \frac{B\left(\bar{y}_r\right)}{\bar{y}_r}$$

In general, a bias ratio of 10 percent or less has negligible effect on significance tests. For more information on item nonresponse bias analysis, see *NCES Statistical Standards* (http://nces.ed.gov/statprog/) or *Education Longitudinal Study of 2002 Third Follow-up Data File Documentation* (http://nces.ed.gov/pubs2014/2014364.pdf).

Table B-1.
Item response and nonresponse rates for variables used in this study

Variable	Description	Item response rate[1]	Item non-response rate[1]
ACALEVEL[2]	Academic risk composite in 10th grade	100.0	0.0
BA1AGE[2]	Age when completing the first bachelor's degree	90.5	9.5
F3FEDCUM3	Cumulative federal loan amount for undergraduate and graduate education	100.0	0.0
BYSTEXP	Educational expectations in 10th grade	100.0	0.0
F3A22C	Effects of student loan debt: Had to work at more than one job at the same time	84.5	15.5
F3A22D	Effects of student loan debt: Had to work more hours than desired	84.7	15.3
F3A22A	Effects of student loan debt: Took a job outside field of study or training	84.7	15.3
F3A22B	Effects of student loan debt: Took a less desirable job	84.5	15.5
F3EMPSTAT	Employment status in 2012	100.0	0.0
F3EVRATT	Ever attended a postsecondary institution	100.0	0.0
F3C07	Ever unemployed since January 2009	98.7	1.3
BYFCOMP	Family composition in 10th grade	100.0	0.0
BYSES1QU	Family SES in 10th grade	100.0	0.0
F1RAGP	Grade point average (GPA) for all academic courses	99.9	0.1
F3HSCPDR	High school completion date	99.8	0.2
F3HSSTAT	High school completion status (SES)	100.0	0.0
F3ATTAINMENT	Highest level of educational attainment in 2012	100.0	0.0
F3PS1SEC	Level and control of first-attended postsecondary institution	97.9	2.1
F3LIVARR	Living arrangement in 2012	88.2	11.9
F3MARRSTATUS	Marital status in 2012	98.9	1.1
F1RMAPIP[3]	Mathematics coursetaking pipeline	92.9	7.1
F3NUMCHILD	Number of biological/adopted children in 2012	88.9	11.1
F3B12	Number of employers since January 2006	89.4	10.6
F3HS2PS1	Number of months between high school exit and postsecondary entry	94.5	5.5
F3PS2BA	Number of months between postsecondary entry and first bachelor's degree	100.0	0.0
F3C08	Number of months unemployed since January 2009	95.4	4.6
F3C09	Number of times unemployed since January 2009	83.1	16.9
F3ONET6CURR	Occupation for current/most recent job	98.9	1.1
F1PARED	Parent's highest level of education	100.0	0.0
F3EDSTAT	Postsecondary enrollment status in 2012	100.0	0.0
F3REGION	Region of student's residence in 2012	98.9	1.1
F3B31	Relationship between current/most recent job and major field of study	90.1	9.9
HSCURR[2,3]	Rigor of high school curriculum	92.6	7.4
ENGLEVEL[2]	School disengagement composite in 10th grade	92.1	7.9
F1RSCPIP[3]	Science coursetaking pipeline	93.4	6.6
BYSCTRL	Sector of high school in 10th grade	100.0	0.0
F3PS1SLC	Selectivity of first-attended postsecondary institution	98.1	1.9
F3SINGLEPAR	Single-parent indicator of student in 2012	94.6	5.4
G10COHRT	Sophomore cohort member in 2001–02 school year	100.0	0.0
F3HOURWAGE	Standardized hourly wage for current/most recent job	93.6	6.4
F1SEX	Student's sex	100.0	0.0
F3SESQU	Student's socioeconomic status (SES) in 2012	100.0	0.0
F1RACE_R	Student's race/ethnicity	100.0	0.0
F3STLOANAMT	Total amount borrowed in student loans	100.0	0.0
F3B30B	Whether current/most recent job requires a bachelor's degree	87.4	12.6
F3B30A	Whether current/most recent job requires a graduate degree	85.7	14.3
F3B30C	Whether current/most recent job requires an associate's degree	85.2	14.8
F3B30D	Whether current/most recent job requires an undergraduate certificate	85.8	14.2
F1STLANG	Whether English is student's native language	100.0	0.0
FEDEVER[2]	Whether student ever took out a federal loan for postsecondary education	100.0	0.0
F3STLOANEVR	Whether student ever took out a student loan for postsecondary education	100.0	0.0
EVERMIL[2]	Whether student has ever been in the military	90.3	9.7
F3B09	Whether student held a job for pay since January 2006	100.0	0.0
F3D30	Whether student owned a house, rented, or had some other living arrangement in 2012	85.7	14.4
F3D24	Whether student received public assistance in 2011	88.7	11.3

See notes at end of table.

Table B-1.
Item response and nonresponse rates for variables used in this study—Continued

[1] "Item response rate" refers to the percentage of nonmissing values for a given variable, and "item nonresponse rate" refers to the percentage of missing values for a given variable. Values indicating "legitimate" skip have been excluded from both the numerator and the denominator when calculating these rates.
[2] This variable was derived specifically for this report and does not exist on the ELS:2002 restricted-use data file; as such, the associated item response rates were calculated relative to the analysis sample for this report (as opposed to relative to the entire ELS:2002 sample).
[3] As it appears on the ELS:2002 restricted-use data file, this transcript-based variable contains no missing values for high school transcript respondents. However, for the purposes of this report, nonmissing values were identified and excluded if associated with an ELS:2002 sample member for whom an incomplete transcript record was obtained (see detailed information in the glossary in appendix A of this report). The item response and nonresponse rates shown above for this variable reflect the level of missingness for that variable as it was used in this report.
NOTE: Except where otherwise noted, the response rates shown in this table were calculated relative to the entire ELS:2002 sample using the following weights: rates for base-year variables (i.e., ACALEVEL, ENGLEVEL, and all variables using the BYxxxx naming convention) are calculated using the base-year student weight (BYSTUWT); rates for first follow-up variables (i.e., variables using the F1xxxx naming convention) are calculated using the first follow cross-sectional weight (F1QWT); rates for high school transcript variables (i.e., HSCURR and all variables using the F1Rxxxx naming convention) are calculated using the high school transcript cross-sectional weight (F1TRSCWT); and rates for third follow-up variables (i.e., BA1AGE, EVERMIL, FEDEVER, and all variables using the F3xxxx naming convention) are calculated using the third follow-up questionnaire respondent weight (F3QWT).
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table B-2.
Summary of bias analysis for five variables used in this study

Variable name	Median relative bias across characteristics in ELS:2002	Percentage of characteristics in ELS:2002 with significant bias	Characteristic with greatest significant bias
FA22A	2.51	54.55	Student's race/ethnicity is White, non-Hispanic
FA22B	2.51	54.55	Student's race/ethnicity is White, non-Hispanic
FA22C	2.51	63.64	Student's race/ethnicity is White, non-Hispanic
FA22D	2.51	54.55	Student's race/ethnicity is White, non-Hispanic
F3C09	1.36	14.29	Student's race/ethnicity is White, non-Hispanic

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Weighting

All estimates in this report were weighted to compensate for unequal probability of selection into the survey sample and to adjust for nonresponse. The weight variable used for analysis of the ELS:2002 data in this report was F3BYPNLWT, a third follow-up panel weight for all sample members who completed a questionnaire in the base-year and the third follow-up surveys.

Statistical Procedures

Differences Between Two Estimates

The descriptive comparisons of two estimates (e.g., means and proportions) were tested using Student's *t* statistic. Differences between estimates were tested against the probability of a Type I error[33] or significance level. The statistical significance of each comparison was determined by calculating the Student's *t* value for the difference between each pair of estimates and comparing the *t* value with published tables of significance levels for two-tailed hypothesis testing. Student's *t* values were computed to test differences between independent estimates using the following formula:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}}$$

There are some hazards in reporting statistical tests for each comparison. First, comparisons based on large *t* statistics may appear to merit special attention. This can be misleading because the magnitude of the *t* statistic is related not only to the observed differences in estimates but also to the number of respondents in the specific categories used for comparison. Hence, a small difference compared across a large number of respondents would produce a large (and thus possibly statistically significant) *t* statistic.

A second hazard in reporting statistical tests is the possibility that one can report a "false positive" or Type I error. Statistical tests are designed to limit the risk of this type of error using a value denoted by alpha. The alpha level of .05 was selected for findings in this report and ensures that a difference of a certain magnitude or larger would be produced when there was no actual difference between the quantities in the underlying population no more than 1 time out of 20. When analysts test hypotheses that show alpha values at the .05 level or smaller, they reject the null hypothesis that there is no difference between the two estimates. Failing to reject a null hypothesis (i.e., failing to detect a difference), however, does not imply the values are the same or equivalent.

Multinomial Probit Regression

Two sets of multivariate analyses in this study were addressed via multinomial probit (MNP) regression. MNP is used because the outcome of interest has three or more discrete categories (e.g., the highest educational attainment containing multiple

[33] A Type I error occurs when one concludes that a difference observed in a sample reflects a true difference in the population from which the sample was drawn, when no such difference is present.

categories describing each level of education that students had attained as of 2012). MNP is one of the most common statistical techniques used to predict the probability of an event that would occur or the probability of a respondent choosing a certain outcome out of several mutually exclusive alternatives[34] (Borooah 2001; Koop 2008). Assuming that each individual faces a set of outcomes, an MNP model formulation may be written as follows:

$$y_{ij}^{*} = x_i' \beta_j + \varepsilon_{ij}$$

where i (=1, 2, …, N) represents an individual; j (=1, 2, …, M) represents one of M different outcomes of the dependent variable y_i; x_i' is a vector of independent variables that may be associated with or influence an individual's outcome or choice; and the error term, ε_{ij}'s, are assumed to follow a multivariate normal distribution.

Each individual is assumed to consider the full set of offered alternatives and choose the alternative with the highest utility for him-/herself. That is, an individual i chooses the outcome j if the outcome y_{ij}^{*} is the highest for j:

$$y_i = \begin{cases} j \text{ if } y_{ij}^{*} = \max(y_{i1}^{*}, y_{i2}^{*}, ..., y_{iM}^{*}) \\ 0 \text{ otherwise.} \end{cases}$$

The probability of an individual i choosing outcome j is conditional on or a function of the set of independent variables, x_i':

$$p(y_i = j \mid x_i') = F_j(x_i', \varepsilon_i) \text{ (j = 1,…, M, i = 1,…, N)}$$

where for a probit analysis, F represents a cumulative probability function based on the normal distribution. Only M−1 of the probabilities can be freely specified because the probability for all alternatives sum to one (i.e., $p(y_i = 1) + p(y_i = 2) + \ldots + p(y_i = M) = 1$).

The parameters of MNP models are generally not directly interpretable. Instead, researchers often rely on marginal effects (ME) to interpret MNP results (Liao 1994). An ME for an independent variable measures the change in the probability that alternative j is the outcome when the independent variable changes by one unit. For a categorical variable, the ME measures the change in the probability of the outcome

[34] This report uses a probit rather than a logit model because probit models do not require an assumption of independence of irrelevant alternatives (IIA). IIA implies that the preferences between alternatives A and B depend only on the individual preferences between A and B. In other words, if A is preferred to B out of the choice set {A, B}, then introducing a third alternative C, and thus expanding the choice set to {A, B, C}, must not change the preferences between A and B (i.e., A is still preferred to B after including C). An MNP model relaxes this requirement and allows more flexibility for considering outcomes in the analysis.

that would occur if this categorical variable changes from 0 (reference category) to 1 (category of interest), holding all other independent variables constant. For a continuous independent variable, the ME measures the instantaneous rate of change, which typically depends on the position or value of the continuous variable. In this case, the use of the average ME, which is the mean value of MEs corresponding to all values of this continuous independent variable, is recommended. For this report, average marginal effects (AME) were used. AME is derived by first calculating marginal effect (ME) for each individual with their observed levels of covariates in a regression, and then averaging these individual MEs across all sample members.

Ordinary Least Square Regression

This study also used ordinary least square (OLS) regression to examine the net association between each independent variable included in the model and hourly wage for students' 2012 job. OLS was used because this outcome is a continuous variable. In general, OLS is a statistical method that attempts to find a linear function that most closely approximates the observed data by minimizing the sum of the squares of the deviations between observed and expected values. In other words, this method tries to find a "best-fit" line through a set of observed data points by minimizing the sum of the squared differences between the observed data values and the predicted data values based on the linear approximation. An OLS model may be written as follows:

$$y = \beta_0 + x_1\beta_1 + x_2\beta_2 + \ldots + x_n\beta_n + \varepsilon$$

where y represents an outcome variable of interest; x_i is the i^{th} independent or predicted variable (i=1, 2, …, n) included in the model; the intercept, β_0, represents the estimated value of y when all values of the independent variables (x_1, x_2, …, x_n) are zero; the regression coefficient, β_i, indicates the average change in the predicted value of y that is associated with a one-unit change in x_i while keeping all other independent variables constant in the model; and the error term, ε, which is assumed to follow a normal distribution, be statistically independent (i.e., uncorrelated among cases), and have both a homogeneous variance and an expected value of zero (Cohen and Cohen 1983). The variable x_i is said to have a significant association with the outcome y if β_i is tested to be statistically significant from zero. More information on OLS can be found in *Applied Multiple Regression/Correlation Analysis for the Behavioral Science* (Cohen and Cohen 1983).

Appendix C—Appendix Tables

Table C-1.

U.S. postsecondary enrollment, bachelor's degree attainment, and unemployment rates among young adults in selected age groups: 1980–2012

Year	Postsecondary enrollment rate of persons 18 to 24 years old	Bachelor's degree attainment rate of persons 25 years or older	Unemployment rate of persons 16 years old or over
1980	25.7	17.0	7.1
1985	27.8	19.4	7.2
1990	32.0	21.3	5.6
1995	34.3	23.0	5.6
2000	35.5	25.6	4.0
2005	38.9	27.7	5.1
2006	37.3	28.0	4.6
2007	38.8	28.7	4.6
2008	39.6	29.4	5.8
2009	41.3	29.5	9.3
2010	41.2	29.9	9.6
2011	42.0	30.4	8.9
2012	41.0	30.9	8.1

NOTE: The postsecondary enrollment rate is the percentage of 18- to 24-year-olds who are enrolled in all U.S. degree-granting institutions. The bachelor's degree attainment rate is the percentage of persons 25 years and older who hold a bachelor's degree. The unemployment rate is the percentage of persons 16 years and older in the labor force who are jobless, looking for a job, and available for work; the labor force consists of people who are employed or seeking employment.
SOURCE: Postsecondary enrollment rates and bachelor's degree attainment rates are from Snyder, T.D., de Brey, C., and Dillow, S.A. (2016). *Digest of Education Statistics 2015* (NCES 2016-014). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Unemployment rates are from the Bureau of Labor Statistics tabulation, https://data.bls.gov/timeseries/LNU04000000?years_option=all_years&periods_option=specific_periods&periods=Annual+Data.

Table C-2a.
Percentage distribution of spring 2002 high school sophomores' high school completion status, by selected characteristics: 2012

Selected characteristics	High school diploma	GED, certificate of attendance, or other equivalency[1]	No high school credential
Total	**89.3**	**6.6**	**4.2**
Demographic characteristics			
Sex			
Male	87.5	7.9	4.6
Female	91.0	5.3	3.7
Race/ethnicity[2]			
White	92.4	5.2	2.4
Black	83.9	9.4	6.7
Hispanic	82.4	8.6	9.0
Asian	94.1	3.8	2.1
Other	84.7	10.1	5.1
Highest education of parents			
High school diploma or less	82.4	9.2	8.4
Some college	89.7	7.0	3.3
Bachelor's or higher degree	93.9	4.2	1.9
Family SES in 10th grade			
Lowest quarter	80.7	9.9	9.4
Middle two quarters	90.6	6.2	3.1
Highest quarter	96.4	2.8	0.8
Family type in 10th grade			
Two-parent family	90.9	5.6	3.5
Single-parent family	84.9	8.9	6.2
Language student first learned to speak			
English	90.0	6.5	3.6
Non-English	84.9	7.1	8.0
High school characteristics			
Student's educational expectations in 10th grade			
Do not know yet	84.5	7.6	7.9
High school diploma or less	64.3	19.9	15.8
Some college	81.2	11.1	7.7
Bachelor's or higher degree	94.3	3.9	1.8
Academic risk in 10th grade[3]			
Low	99.2	0.6 !	‡
Moderate	91.0	6.2	2.8
High	70.3	14.5	15.2
School disengagement in 10th grade[4]			
Low	96.8	1.6	1.6
Moderate	93.4	4.3	2.3
High	77.3	13.9	8.8
School control in 10th grade			
Public	88.6	6.9	4.5
Private	97.6	2.1	0.3 !

See notes at end of table.

Table C-2a.
Percentage distribution of spring 2002 high school sophomores' high school completion status, by selected characteristics: 2012—Continued

Selected characteristics	High school diploma	GED, certificate of attendance, or other equivalency[1]	No high school credential
Rigor of high school curriculum[5,6]			
Below-standard	79.5	12.1	8.3
Standard	98.4	1.3 !	‡
Moderately rigorous	99.7	‡	‡
Rigorous	99.9	‡	#
Highest math course taken since grade 9[6]			
No math, basic math, or pre-algebra	55.8	23.3	20.8
Algebra I, geometry, or algebra II	86.8	8.4	4.8
Trigonometry, statistics, or precalculus	98.7	0.8	0.5 !
Calculus	99.7	‡	#
Highest science course taken since grade 9[6]			
No science or low-level science	59.1	22.3	18.5
General biology	82.6	10.8	6.6
Chemistry I or physics I	96.7	2.2	1.1
Chemistry I and physics I	99.0	0.7 !	‡
Chemistry II, physics II, or advanced biology	98.8	0.9	‡
Cumulative academic GPA			
0.00–1.99	72.0	16.1	11.9
2.00–2.49	93.3	4.4	2.3
2.50–2.99	98.3	1.3	0.4 !
3.00–3.49	98.6	1.2	‡
3.50–4.00	99.7	‡	‡

Rounds to zero.

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

‡ Reporting standards not met.

[1] A General Educational Development certificate (GED) is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[6] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-2b.

Standard errors for table C-2a: Percentage distribution of spring 2002 high school sophomores' high school completion status, by selected characteristics: 2012

Selected characteristics	High school diploma	GED, certificate of attendance, or other equivalency	No high school credential
Total	**0.45**	**0.30**	**0.29**
Demographic characteristics			
Sex			
Male	0.54	0.41	0.36
Female	0.54	0.40	0.34
Race/ethnicity			
White	0.45	0.34	0.25
Black	1.25	0.96	0.85
Hispanic	1.21	0.85	0.97
Asian	0.81	0.69	0.51
Other	1.61	1.41	1.01
Highest education of parents			
High school diploma or less	0.92	0.62	0.66
Some college	0.61	0.54	0.36
Bachelor's or higher degree	0.45	0.37	0.25
Family SES in 10th grade			
Lowest quarter	0.96	0.68	0.75
Middle two quarters	0.51	0.43	0.32
Highest quarter	0.42	0.38	0.21
Family type in 10th grade			
Two-parent family	0.43	0.30	0.31
Single-parent family	0.92	0.63	0.63
Language student first learned to speak			
English	0.44	0.32	0.26
Non-English	1.15	0.85	1.02
High school characteristics			
Student's educational expectations in 10th grade			
Do not know yet	1.45	1.07	1.13
High school diploma or less	1.95	1.66	1.69
Some college	1.53	1.10	1.04
Bachelor's or higher degree	0.34	0.26	0.21
Academic risk in 10th grade			
Low	0.27	0.24	†
Moderate	0.43	0.33	0.26
High	1.57	1.17	1.24
School disengagement in 10th grade			
Low	0.51	0.37	0.35
Moderate	0.43	0.35	0.26
High	1.13	0.80	0.82
School control in 10th grade			
Public	0.48	0.33	0.32
Private	0.43	0.44	0.13
Rigor of high school curriculum			
Below-standard	0.96	0.65	0.64
Standard	0.37	0.32	0.17
Moderately rigorous	0.13	0.09	0.09
Rigorous	0.13	0.13	†

See notes at end of table.

Table C-2b.
Standard errors for table C-2a: Percentage distribution of spring 2002 high school sophomores' high school completion status, by selected characteristics: 2012—Continued

Selected characteristics	High school diploma	GED, certificate of attendance, or other equivalency	No high school credential
Highest math course taken since grade 9			
No math, basic math, or pre-algebra	2.35	1.66	1.80
Algebra I, geometry, or algebra II	0.79	0.60	0.47
Trigonometry, statistics, or precalculus	0.27	0.21	0.17
Calculus	0.15	†	†
Highest science course taken since grade 9			
No science or low-level science	2.41	1.96	1.67
General biology	1.11	0.80	0.66
Chemistry I or physics I	0.44	0.33	0.26
Chemistry I and physics I	0.28	0.22	†
Chemistry II, physics II, or advanced biology	0.31	0.24	†
Cumulative academic GPA			
0.00–1.99	1.25	0.92	0.93
2.00–2.49	0.72	0.54	0.40
2.50–2.99	0.34	0.29	0.16
3.00–3.49	0.33	0.29	†
3.50–4.00	0.15	†	†

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-3a.

Among spring 2002 high school sophomores who received a high school credential, percentage distribution of their high school completion year, by selected characteristics: 2012

Selected characteristics	Before 2004	During 2004	After 2004
Total	**5.4**	**87.8**	**6.8**
Demographic characteristics			
Sex			
Male	5.7	85.9	8.3
Female	5.1	89.5	5.3
Race/ethnicity[1]			
White	3.9	91.6	4.4
Black	9.8	80.3	9.9
Hispanic	7.2	80.2	12.6
Asian	3.9	90.9	5.2
Other	7.4	82.0	10.6
Highest education of parents			
High school diploma or less	7.6	81.6	10.8
Some college	5.5	87.1	7.4
Bachelor's or higher degree	3.8	92.6	3.6
Family SES in 10th grade			
Lowest quarter	7.6	80.4	12.0
Middle two quarters	5.4	88.9	5.7
Highest quarter	2.9	94.7	2.4
Family type in 10th grade			
Two-parent family	4.9	89.6	5.5
Single-parent family	6.5	83.9	9.6
Language student first learned to speak			
English	5.2	88.9	5.9
Non-English	6.7	80.6	12.8
High school characteristics			
Student's educational expectations in 10th grade			
Do not know yet	5.5	85.3	9.1
High school diploma or less	11.5	68.4	20.2
Some college	8.4	81.0	10.6
Bachelor's or higher degree	4.2	91.7	4.1
Academic risk in 10th grade[2]			
Low	2.2	97.2	0.6 !
Moderate	5.2	88.9	5.9
High	10.3	70.0	19.6
School disengagement in 10th grade[3]			
Low	3.1	94.7	2.2
Moderate	4.2	91.4	4.3
High	8.5	77.9	13.7
School control in 10th grade			
Public	5.7	87.0	7.3
Private	2.1	96.3	1.6
Rigor of high school curriculum[4,5]			
Below-standard	5.4	84.4	10.1
Standard	2.3	96.3	1.5
Moderately rigorous	1.3	98.5	0.2 !
Rigorous	‡	99.6	‡

See notes at end of table.

Table C-3a.
Among spring 2002 high school sophomores who received a high school credential, percentage distribution of their high school completion year, by selected characteristics: 2012—Continued

Selected characteristics	Before 2004	During 2004	After 2004
Highest math course taken since grade 9[5]			
No math, basic math, or pre-algebra	8.4	72.6	19.0
Algebra I, geometry, or algebra II	4.7	87.9	7.4
Trigonometry, statistics, or precalculus	1.3	97.8	0.9
Calculus	0.9 !	98.8	‡
Highest science course taken since grade 9[5]			
No science or low-level science	8.5	74.3	17.2
General biology	5.5	84.9	9.7
Chemistry I or physics I	2.2	95.5	2.3
Chemistry I and physics I	1.1 !	98.5	0.5 !
Chemistry II, physics II, or advanced biology	2.1	96.7	1.1
Cumulative academic GPA			
0.00–1.99	10.0	71.1	18.9
2.00–2.49	5.0	90.7	4.2
2.50–2.99	3.2	95.5	1.3
3.00–3.49	2.8	96.6	0.6 !
3.50–4.00	2.0	97.4	0.6 !
High school credential type			
High school diploma	4.5	91.8	3.7
GED, certificate of attendance, or other equivalency	18.1	32.4	49.5

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

‡ Reporting standards not met.

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[2] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[3] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[4] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[5] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-3b.

Standard errors for table C-3a: Among spring 2002 high school sophomores who received a high school credential, percentage distribution of their high school completion year, by selected characteristics: 2012

Selected characteristics	Before 2004	During 2004	After 2004
Total	**0.30**	**0.47**	**0.35**
Demographic characteristics			
Sex			
Male	0.42	0.67	0.51
Female	0.38	0.57	0.42
Race/ethnicity			
White	0.31	0.48	0.34
Black	1.02	1.53	1.17
Hispanic	0.85	1.30	1.19
Asian	0.75	1.09	0.86
Other	1.22	1.93	1.52
Highest education of parents			
High school diploma or less	0.62	0.94	0.79
Some college	0.47	0.71	0.55
Bachelor's or higher degree	0.36	0.47	0.33
Family SES in 10th grade			
Lowest quarter	0.73	1.05	0.84
Middle two quarters	0.43	0.59	0.41
Highest quarter	0.38	0.52	0.37
Family type in 10th grade			
Two-parent family	0.34	0.49	0.32
Single-parent family	0.65	0.95	0.78
Language student first learned to speak			
English	0.31	0.49	0.36
Non-English	0.92	1.46	1.28
High school characteristics			
Student's educational expectations in 10th grade			
Do not know yet	0.90	1.52	1.22
High school diploma or less	1.40	2.12	1.89
Some college	1.20	1.46	1.12
Bachelor's or higher degree	0.30	0.41	0.28
Academic risk in 10th grade			
Low	0.43	0.56	0.27
Moderate	0.32	0.51	0.37
High	1.06	1.58	1.42
School disengagement in 10th grade			
Low	0.53	0.71	0.42
Moderate	0.30	0.47	0.36
High	0.69	1.15	0.98
School control in 10th grade			
Public	0.32	0.51	0.39
Private	0.43	0.65	0.36
Rigor of high school curriculum			
Below-standard	0.44	0.77	0.67
Standard	0.56	0.66	0.36
Moderately rigorous	0.29	0.29	0.12
Rigorous	†	0.30	†

See notes at end of table.

Table C-3b.
Standard errors for table C-3a: Among spring 2002 high school sophomores who received a high school credential, percentage distribution of their high school completion year, by selected characteristics: 2012—Continued

Selected characteristics	Before 2004	During 2004	After 2004
Highest math course taken since grade 9			
No math, basic math, or pre-algebra	1.36	2.16	2.07
Algebra I, geometry, or algebra II	0.40	0.70	0.54
Trigonometry, statistics, or precalculus	0.24	0.36	0.26
Calculus	0.29	0.39	†
Highest science course taken since grade 9			
No science or low-level science	1.36	2.53	2.11
General biology	0.59	0.96	0.83
Chemistry I or physics I	0.33	0.49	0.38
Chemistry I and physics I	0.44	0.54	0.23
Chemistry II, physics II, or advanced biology	0.45	0.51	0.30
Cumulative academic GPA			
0.00–1.99	0.88	1.28	1.07
2.00–2.49	0.59	0.85	0.60
2.50–2.99	0.47	0.53	0.28
3.00–3.49	0.47	0.51	0.20
3.50–4.00	0.41	0.48	0.26
High school credential type			
High school diploma	0.30	0.40	0.25
GED, certificate of attendance, or other equivalency	1.52	2.15	2.25

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-4a.
Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage distribution of their postsecondary enrollment timing, by selected characteristics: 2012

Selected characteristics	Students who had enrolled in postsecondary education by 2012	Enrollment timing: Within 3 months following high school completion	Enrollment timing: 4–12 months following high school completion	Enrollment timing: 13 or more months following high school completion
Total	**84.0**	**68.4**	**13.3**	**18.3**
Demographic characteristics				
Sex				
Male	79.9	65.5	14.0	20.5
Female	87.9	70.9	12.7	16.4
Race/ethnicity[1]				
White	86.2	72.3	12.5	15.2
Black	81.5	59.2	15.7	25.2
Hispanic	78.3	57.5	15.9	26.6
Asian	92.2	81.4	10.0	8.6
Other	76.4	63.7	13.1	23.1
Highest education of parents				
High school diploma or less	72.0	57.5	15.5	27.0
Some college	84.0	63.3	15.1	21.6
Bachelor's or higher degree	92.7	78.3	10.8	10.9
Family SES in 10th grade				
Lowest quarter	71.0	54.9	15.8	29.3
Middle two quarters	84.9	66.4	14.2	19.4
Highest quarter	96.4	82.1	9.9	8.0
Family type in 10th grade				
Two-parent family	85.3	70.7	12.9	16.5
Single-parent family	80.1	61.6	14.6	23.7
Language student first learned to speak				
English	84.4	68.9	13.1	18.0
Non-English	81.3	65.1	14.6	20.4
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	73.4	54.1	13.6	32.3
High school diploma or less	51.1	35.5	17.6	46.9
Some college	71.1	48.4	18.4	33.2
Bachelor's or higher degree	91.4	74.1	12.5	13.4
Academic risk in 10th grade[2]				
Low	98.5	88.6	8.5	3.0
Moderate	85.8	67.6	13.6	18.8
High	59.9	37.3	20.2	42.5
School disengagement in 10th grade[3]				
Low	90.2	79.7	10.6	9.7
Moderate	87.6	70.4	13.5	16.1
High	73.8	53.6	15.3	31.1

See notes at end of table.

Table C-4a.
Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage distribution of their postsecondary enrollment timing, by selected characteristics: 2012—Continued

Selected characteristics	Students who had enrolled in postsecondary education by 2012	Enrollment timing		
		Within 3 months following high school completion	4–12 months following high school completion	13 or more months following high school completion
School control in 10th grade				
Public	82.9	67.1	13.4	19.5
Private	97.0	81.2	12.1	6.7
Rigor of high school curriculum[4,5]				
Below-standard	76.0	58.9	15.4	25.6
Standard	87.0	70.0	13.2	16.8
Moderately rigorous	96.3	80.8	10.5	8.7
Rigorous	99.9	90.1	8.5	1.4 !
Highest math course taken since grade 9[5]				
No math, basic math, or pre-algebra	49.6	37.9	14.2	47.9
Algebra I, geometry, or algebra II	80.2	57.9	16.0	26.1
Trigonometry, statistics, or precalculus	95.8	81.0	10.9	8.2
Calculus	99.0	89.4	8.6	2.1
Highest science course taken since grade 9[5]				
No science or low-level science	54.9	38.8	18.6	42.6
General biology	75.7	54.4	16.2	29.4
Chemistry I or physics I	91.2	73.5	12.4	14.0
Chemistry I and physics I	97.9	82.2	10.5	7.3
Chemistry II, physics II, or advanced biology	96.1	83.8	10.0	6.2
Cumulative academic GPA				
0.00–1.99	65.7	42.4	18.1	39.5
2.00–2.49	83.2	58.0	15.4	26.6
2.50–2.99	91.1	72.4	13.9	13.7
3.00–3.49	95.1	83.1	9.5	7.4
3.50–4.00	98.7	88.6	8.8	2.6
High school credential type				
High school diploma	88.3	70.5	12.9	16.6
GED, certificate of attendance, or other equivalency[6]	65.6	25.7	21.2	53.1
High school completion year				
Before 2004	80.2	36.6	26.0	37.3
In 2004	89.3	71.8	12.3	15.9
After 2004	60.6	32.6	20.0	47.4

See notes at end of table.

Table C-4a.
Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage distribution of their postsecondary enrollment timing, by selected characteristics: 2012—Continued

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[2] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[3] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[4] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[5] Excludes about 15 percent of students with no or partial transcript information.

[6] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-4b.

Standard errors for table C-4a: Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage distribution of their postsecondary enrollment timing, by selected characteristics: 2012

Selected characteristics	Students who had enrolled in postsecondary education by 2012	Enrollment timing: Within 3 months following high school completion	Enrollment timing: 4–12 months following high school completion	Enrollment timing: 13 or more months following high school completion
Total	**0.54**	**0.76**	**0.59**	**0.55**
Demographic characteristics				
Sex				
Male	0.74	0.97	0.80	0.78
Female	0.63	0.92	0.72	0.66
Race/ethnicity				
White	0.57	0.93	0.73	0.65
Black	1.35	1.80	1.41	1.58
Hispanic	1.40	1.80	1.43	1.49
Asian	1.10	1.55	1.11	1.10
Other	1.94	2.99	1.85	2.73
Highest education of parents				
High school diploma or less	0.99	1.37	1.04	1.19
Some college	0.69	1.18	0.90	0.95
Bachelor's or higher degree	0.55	0.96	0.76	0.66
Family SES in 10th grade				
Lowest quarter	1.08	1.51	1.10	1.37
Middle two quarters	0.59	1.01	0.77	0.74
Highest quarter	0.46	1.06	0.83	0.68
Family type in 10th grade				
Two-parent family	0.56	0.78	0.60	0.59
Single-parent family	1.02	1.38	1.09	1.27
Language student first learned to speak				
English	0.56	0.80	0.61	0.59
Non-English	1.31	1.78	1.27	1.41
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	1.79	2.27	1.72	2.26
High school diploma or less	2.08	3.08	2.15	3.19
Some college	1.61	2.24	1.65	2.06
Bachelor's or higher degree	0.43	0.81	0.62	0.55
Academic risk in 10th grade				
Low	0.35	0.91	0.80	0.50
Moderate	0.55	0.88	0.68	0.62
High	1.51	1.87	1.74	2.05
School disengagement in 10th grade				
Low	0.80	1.16	0.86	0.80
Moderate	0.61	0.94	0.77	0.67
High	1.14	1.39	1.08	1.31

See notes at end of table.

Table C-4b.
Standard errors for table C-4a: Percentage of spring 2002 high school sophomores who had enrolled in postsecondary education, and of those, percentage distribution of their postsecondary enrollment timing, by selected characteristics: 2012—Continued

Selected characteristics	Students who had enrolled in postsecondary education by 2012	Enrollment timing: Within 3 months following high school completion	Enrollment timing: 4–12 months following high school completion	Enrollment timing: 13 or more months following high school completion
School control in 10th grade				
Public	0.57	0.82	0.64	0.60
Private	0.50	1.45	1.29	0.82
Rigor of high school curriculum				
Below-standard	0.88	1.12	0.85	0.99
Standard	1.09	1.66	1.18	1.24
Moderately rigorous	0.45	1.14	0.91	0.69
Rigorous	0.14	1.80	1.76	0.52
Highest math course taken since grade 9				
No math, basic math, or pre-algebra	2.13	3.54	2.39	3.41
Algebra I, geometry, or algebra II	0.80	0.99	0.86	0.96
Trigonometry, statistics, or precalculus	0.53	1.20	0.96	0.69
Calculus	0.32	1.25	1.12	0.43
Highest science course taken since grade 9				
No science or low-level science	2.12	2.91	2.44	3.33
General biology	1.12	1.53	1.09	1.30
Chemistry I or physics I	0.65	1.27	0.93	0.85
Chemistry I and physics I	0.43	1.47	1.12	0.89
Chemistry II, physics II, or advanced biology	0.65	1.33	0.98	0.89
Cumulative academic GPA				
0.00–1.99	1.21	1.58	1.27	1.65
2.00–2.49	1.05	1.69	1.32	1.27
2.50–2.99	0.78	1.40	1.04	1.00
3.00–3.49	0.55	1.28	1.03	0.83
3.50–4.00	0.31	0.96	0.84	0.48
High school credential type				
High school diploma	0.46	0.75	0.61	0.51
GED, certificate of attendance, or other equivalency	2.30	2.56	2.78	3.05
High school completion year				
Before 2004	2.08	2.73	2.85	2.76
In 2004	0.44	0.77	0.58	0.57
After 2004	2.01	2.93	2.51	3.02

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-5a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and control of the institution they first attended, by selected characteristics: 2012

Selected characteristics	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit[1]	Other
Total	**36.5**	**15.4**	**36.4**	**9.3**	**2.5**
Demographic characteristics					
Sex					
Male	36.8	14.8	36.5	8.9	2.9
Female	36.2	15.8	36.2	9.6	2.2
Race/ethnicity[2]					
White	39.6	17.9	33.8	6.9	1.8
Black	33.2	11.3	36.5	14.4	4.5
Hispanic	23.9	7.7	49.7	15.3	3.4
Asian	47.0	17.2	29.0	5.7	1.1 !
Other	35.0	15.7	34.6	10.6	4.0
Highest education of parents					
High school diploma or less	26.4	7.4	46.2	15.5	4.4
Some college	32.9	11.8	42.4	10.2	2.8
Bachelor's or higher degree	45.0	22.7	26.0	5.1	1.2
Family SES in 10th grade					
Lowest quarter	24.7	7.3	48.2	15.4	4.5
Middle two quarters	35.4	12.6	39.6	9.8	2.5
Highest quarter	47.5	26.1	22.3	3.4	0.7
Family type in 10th grade					
Two-parent family	37.8	16.3	35.4	8.3	2.3
Single-parent family	32.9	12.4	39.9	11.9	3.0
Language student first learned to speak					
English	37.4	16.4	34.9	8.9	2.4
Non-English	30.3	8.3	46.0	12.2	3.2
High school characteristics					
Student's educational expectations in 10th grade					
Do not know yet	25.9	7.5	48.3	15.1	3.2
High school diploma or less	12.2	2.6	50.6	23.4	11.1
Some college	17.0	5.3	55.1	17.6	5.0
Bachelor's or higher degree	41.5	18.2	32.2	6.7	1.5
Academic risk in 10th grade[3]					
Low	54.0	33.9	10.7	1.0	0.4 !
Moderate	35.6	12.6	40.2	9.3	2.3
High	13.1	4.6	51.1	23.3	7.9
School disengagement in 10th grade[4]					
Low	41.8	20.3	30.7	5.7	1.5
Moderate	40.4	16.4	33.0	8.3	1.9
High	23.9	8.2	48.7	14.9	4.4

See notes at end of table.

Table C-5a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and control of the institution they first attended, by selected characteristics: 2012—Continued

Selected characteristics	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit[1]	Other
School control in 10th grade					
Public	36.0	13.4	37.9	9.9	2.7
Private	40.9	34.9	20.2	2.9	1.0
Rigor of high school curriculum[5,6]					
Below-standard	26.8	10.5	46.3	12.8	3.6
Standard	34.7	13.9	40.2	9.0	2.2
Moderately rigorous	49.4	19.0	26.6	4.2	0.7
Rigorous	56.3	36.8	5.9	1.0 !	‡
Highest math course taken since grade 9[6]					
No math, basic math, or pre-algebra	10.3	1.9 !	56.4	24.1	7.3
Algebra I, geometry, or algebra II	23.9	8.4	51.5	12.7	3.5
Trigonometry, statistics, or precalculus	50.5	19.1	25.4	4.3	0.7
Calculus	55.1	33.8	9.7	1.3	‡
Highest science course taken since grade 9[6]					
No science or low-level science	10.0	4.8	55.6	20.3	9.3
General biology	21.1	6.4	54.7	14.3	3.4
Chemistry I or physics I	39.7	14.4	36.3	8.1	1.5
Chemistry I and physics I	52.8	24.0	19.8	2.7	0.7 !
Chemistry II, physics II, or advanced biology	50.0	26.9	19.2	3.0	0.9 !
Cumulative academic GPA					
0.00–1.99	13.1	5.7	55.2	20.1	5.9
2.00–2.49	25.3	8.4	50.8	12.3	3.3
2.50–2.99	40.4	12.4	38.2	7.4	1.6
3.00–3.49	50.6	21.3	24.9	2.7	0.5 !
3.50–4.00	54.4	30.9	12.7	1.5	0.5 !
High school credential type					
High school diploma	38.1	16.1	35.5	8.3	2.1
GED, certificate of attendance, or other equivalence[7]	12.6	3.6	53.8	22.9	7.1
High school completion year					
Before 2004	20.7	6.1	52.7	15.9	4.6
In 2004	39.0	16.7	34.9	7.5	1.9
After 2004	11.0	2.2 !	49.4	29.1	8.4
Postsecondary characteristics					
Timing of initial postsecondary enrollment					
Within 3 months following high school completion	45.6	19.4	30.7	3.4	0.9
4–12 months following high school completion	26.8	12.0	40.2	16.7	4.3
13 or more months following high school completion	14.4	4.9	51.9	23.5	5.3

See notes at end of table.

Table C-5a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and control of the institution they first attended, by selected characteristics: 2012—Continued

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
[1] Includes for-profit institutions at all levels.
[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.
[6] Excludes about 15 percent of students with no or partial transcript information.
[7] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-5b.

Standard errors for table C-5a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and control of the institution they first attended, by selected characteristics: 2012

Selected characteristics	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit	Other
Total	**0.78**	**0.50**	**0.87**	**0.39**	**0.23**
Demographic characteristics					
Sex					
Male	1.05	0.66	1.14	0.53	0.34
Female	0.94	0.64	0.99	0.51	0.26
Race/ethnicity					
White	0.94	0.71	1.07	0.47	0.25
Black	1.58	0.97	1.85	1.20	0.83
Hispanic	1.80	0.84	2.18	1.15	0.62
Asian	2.24	1.58	2.06	0.94	0.41
Other	2.74	2.00	2.57	1.83	1.06
Highest education of parents					
High school diploma or less	1.10	0.64	1.48	1.03	0.57
Some college	1.07	0.65	1.25	0.64	0.36
Bachelor's or higher degree	1.07	0.97	1.02	0.44	0.21
Family SES in 10th grade					
Lowest quarter	1.36	0.70	1.70	1.13	0.59
Middle two quarters	1.05	0.61	1.18	0.51	0.33
Highest quarter	1.22	1.17	1.13	0.45	0.21
Family type in 10th grade					
Two-parent family	0.80	0.58	0.96	0.39	0.24
Single-parent family	1.36	0.87	1.45	1.01	0.48
Language student first learned to speak					
English	0.82	0.57	0.91	0.43	0.23
Non-English	1.53	0.81	2.02	1.21	0.64
High school characteristics					
Student's educational expectations in 10th grade					
Do not know yet	2.10	1.12	2.43	1.66	0.82
High school diploma or less	1.96	0.68	2.94	2.61	1.85
Some college	1.54	0.84	2.24	1.66	0.90
Bachelor's or higher degree	0.86	0.58	0.92	0.36	0.18
Academic risk in 10th grade					
Low	1.51	1.52	1.01	0.29	0.18
Moderate	0.91	0.53	0.99	0.44	0.25
High	1.43	0.83	2.25	1.77	1.14
School disengagement in 10th grade					
Low	1.26	1.07	1.43	0.57	0.31
Moderate	1.03	0.69	1.02	0.48	0.27
High	1.25	0.82	1.55	1.09	0.63

See notes at end of table.

Table C-5b.
Standard errors for table C-5a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and control of the institution they first attended, by selected characteristics: 2012—Continued

Selected characteristics	Public 4-year	Private nonprofit 4-year	Public 2-year	For-profit	Other
School control in 10th grade					
Public	0.84	0.51	0.95	0.42	0.25
Private	1.79	1.81	1.68	0.41	0.24
Rigor of high school curriculum					
Below-standard	1.14	0.67	1.28	0.72	0.43
Standard	1.67	1.36	2.11	0.87	0.46
Moderately rigorous	1.40	0.90	1.31	0.46	0.19
Rigorous	2.28	2.16	1.07	0.46	†
Highest math course taken since grade 9					
No math, basic math, or pre-algebra	1.86	0.86	3.48	2.58	1.82
Algebra I, geometry, or algebra II	1.02	0.58	1.18	0.71	0.40
Trigonometry, statistics, or precalculus	1.31	0.82	1.32	0.48	0.17
Calculus	1.77	1.74	1.05	0.37	†
Highest science course taken since grade 9					
No science or low-level science	1.89	1.20	2.92	2.28	1.61
General biology	1.37	0.66	1.51	0.98	0.52
Chemistry I or physics I	1.44	0.87	1.49	0.65	0.27
Chemistry I and physics I	1.63	1.41	1.55	0.60	0.29
Chemistry II, physics II, or advanced biology	1.74	1.35	1.31	0.54	0.27
Cumulative academic GPA					
0.00–1.99	1.08	0.67	1.60	1.17	0.68
2.00–2.49	1.33	0.76	1.45	1.02	0.62
2.50–2.99	1.61	0.83	1.60	0.74	0.34
3.00–3.49	1.32	1.18	1.34	0.43	0.23
3.50–4.00	1.56	1.41	1.14	0.38	0.19
High school credential type					
High school diploma	0.79	0.52	0.89	0.38	0.21
GED, certificate of attendance, or other equivalency	1.96	0.95	2.82	2.22	1.55
High school completion year					
Before 2004	2.65	1.20	3.03	2.08	1.21
In 2004	0.82	0.53	0.90	0.37	0.20
After 2004	2.01	0.87	2.85	2.50	1.81
Postsecondary characteristics					
Timing of initial postsecondary enrollment					
Within 3 months following high school completion	0.97	0.68	1.01	0.27	0.16
4−12 months following high school completion	1.95	1.31	1.72	1.44	0.82
13 or more months following high school completion	1.23	0.63	1.75	1.28	0.67

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-6a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and selectivity of the institution they first attended, by selected characteristics: 2012

Selected characteristics	4-year institution[1]				Less-than-4-year institution
	Highly selective	Moderately selective	Inclusive	Unclassified selectivity	
Total	**16.5**	**22.3**	**8.8**	**7.7**	**44.7**
Demographic characteristics					
Sex					
Male	16.9	21.0	8.8	8.9	44.5
Female	16.2	23.4	8.8	6.6	44.9
Race/ethnicity[2]					
White	20.2	26.4	6.8	6.7	39.8
Black	6.4	15.8	19.7	8.6	49.5
Hispanic	6.3	12.5	6.7	10.3	64.2
Asian	33.3	20.2	7.1	6.0	33.5
Other	14.4	19.8	11.0	10.8	44.0
Highest education of parents					
High school diploma or less	6.1	15.6	8.2	8.8	61.3
Some college	9.8	21.0	9.9	7.7	51.6
Bachelor's or higher degree	27.8	27.1	8.3	7.0	29.9
Family SES in 10th grade					
Lowest quarter	4.5	14.2	9.3	9.0	63.0
Middle two quarters	11.7	21.9	9.7	8.5	48.2
Highest quarter	33.9	29.3	6.8	5.5	24.5
Family type in 10th grade					
Two-parent family	18.1	23.2	8.1	7.5	43.0
Single-parent family	11.3	19.6	10.9	8.5	49.7
Language student first learned to speak					
English	17.2	23.7	9.0	7.5	42.6
Non-English	12.4	13.5	7.5	8.6	58.2
High school characteristics					
Student's educational expectations in 10th grade					
Do not know yet	9.3	11.5	9.5	8.2	61.5
High school diploma or less	1.2 !	7.3	4.2	11.1	76.1
Some college	2.4	7.9	6.2	10.7	72.7
Bachelor's or higher degree	19.9	26.1	9.2	7.1	37.6
Academic risk in 10th grade[3]					
Low	49.5	31.2	4.7	3.3	11.3
Moderate	11.2	22.6	9.6	8.5	48.1
High	1.0 !	4.6	9.5	8.9	75.9
School disengagement in 10th grade[4]					
Low	22.0	27.5	8.5	6.9	35.1
Moderate	18.9	24.4	9.1	7.4	40.2
High	5.5	13.5	8.8	9.8	62.4

See notes at end of table.

Table C-6a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and selectivity of the institution they first attended, by selected characteristics: 2012—Continued

Selected characteristics	4-year institution[1]				Less-than-4-year institution
	Highly selective	Moderately selective	Inclusive	Unclassified selectivity	
School control in 10th grade					
Public	14.8	21.7	9.0	7.7	46.8
Private	34.4	28.4	7.1	6.9	23.2
Rigor of high school curriculum[5,6]					
Below-standard	9.9	16.0	7.7	8.2	58.2
Standard	14.0	20.4	9.5	8.1	48.0
Moderately rigorous	18.5	34.3	11.1	6.6	29.5
Rigorous	61.4	26.0	4.6	1.9 !	6.1
Highest math course taken since grade 9[6]					
No math, basic math, or pre-algebra	‡	4.9	6.2	9.1	79.7
Algebra I, geometry, or algebra II	3.9	13.6	9.5	9.8	63.3
Trigonometry, statistics, or precalculus	21.1	35.0	10.0	5.5	28.4
Calculus	52.4	29.1	5.1	3.2	10.2
Highest science course taken since grade 9[6]					
No science or low-level science	‡	3.5	7.3	9.0	79.2
General biology	3.0	11.9	7.6	10.4	67.2
Chemistry I or physics I	12.8	26.3	11.6	6.7	42.5
Chemistry I and physics I	29.7	33.8	8.1	6.2	22.3
Chemistry II, physics II, or advanced biology	37.8	29.6	6.8	4.1	21.6
Cumulative academic GPA					
0.00–1.99	1.1	5.8	9.2	9.4	74.6
2.00–2.49	3.2	15.4	10.5	9.9	61.0
2.50–2.99	11.1	25.6	10.4	8.3	44.5
3.00–3.49	25.5	34.0	8.5	5.1	26.8
3.50–4.00	44.3	32.3	5.2	4.3	13.8
High school credential type					
High school diploma	17.5	23.5	8.9	7.5	42.6
GED, certificate of attendance, or other equivalency[7]	1.0 !	3.8 !	7.9	12.5	74.8
High school completion year					
Before 2004	3.8 !	7.0	7.9	13.7	67.7
In 2004	18.2	24.3	9.1	7.2	41.3
After 2004	‡	4.8	6.0	11.6	76.8
Postsecondary characteristics					
Timing of initial postsecondary enrollment					
Within 3 months following high school completion	22.3	29.0	9.9	5.2	33.6
4−12 months following high school completion	10.3	15.4	7.1	12.0	55.3
13 or more months following high school completion	2.4	5.8	6.4	14.0	71.4

See notes at end of table.

Table C-6a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and selectivity of the institution they first attended, by selected characteristics: 2012—Continued

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.

[1] Selectivity categories are based on 2010 Carnegie classifications. "Highly selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the top fifth of baccalaureate institutions; "moderately selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the middle two-fifths of baccalaureate institutions; "inclusive" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement; and "Unclassified" 4-year institutions are those that do not have information on students' postsecondary entrance test scores.

[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[6] Excludes about 15 percent of students with no or partial transcript information.

[7] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-6b.

Standard errors for table C-6a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and selectivity of the institution they first attended, by selected characteristics: 2012

Selected characteristics	4-year institution				Less-than-4-year institution
	Highly selective	Moderately selective	Inclusive	Unclassified selectivity	
Total	**0.70**	**0.64**	**0.41**	**0.50**	**0.92**
Demographic characteristics					
Sex					
Male	0.77	0.87	0.54	0.67	1.16
Female	0.85	0.77	0.52	0.50	1.04
Race/ethnicity					
White	0.94	0.80	0.45	0.55	1.13
Black	0.94	1.36	1.37	0.97	1.87
Hispanic	0.75	1.08	0.82	1.56	2.17
Asian	2.59	1.70	0.95	1.02	2.23
Other	2.00	2.26	1.76	1.79	2.90
Highest education of parents					
High school diploma or less	0.58	0.95	0.72	0.84	1.45
Some college	0.58	0.91	0.68	0.66	1.23
Bachelor's or higher degree	1.24	0.93	0.57	0.57	1.07
Family SES in 10th grade					
Lowest quarter	0.55	0.96	0.79	0.97	1.61
Middle two quarters	0.62	0.90	0.57	0.67	1.19
Highest quarter	1.39	1.07	0.59	0.51	1.19
Family type in 10th grade					
Two-parent family	0.76	0.71	0.41	0.55	1.00
Single-parent family	0.76	1.14	0.95	0.83	1.50
Language student first learned to speak					
English	0.76	0.70	0.45	0.52	0.97
Non-English	1.18	1.21	0.88	1.23	1.89
High school characteristics					
Student's educational expectations in 10th grade					
Do not know yet	1.29	1.34	1.37	1.43	2.38
High school diploma or less	0.50	1.48	1.21	2.01	2.66
Some college	0.61	1.06	1.14	1.47	1.92
Bachelor's or higher degree	0.77	0.77	0.48	0.52	0.96
Academic risk in 10th grade					
Low	1.80	1.52	0.61	0.48	1.06
Moderate	0.64	0.72	0.48	0.57	1.05
High	0.35	0.90	1.19	1.26	1.70

See notes at end of table.

Table C-6b.
Standard errors for table C-6a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of the level and selectivity of the institution they first attended, by selected characteristics: 2012—Continued

Selected characteristics	4-year institution				Less-than-4-year institution
	Highly selective	Moderately selective	Inclusive	Unclassified selectivity	
School disengagement in 10th grade					
Low	1.19	1.16	0.63	0.79	1.48
Moderate	0.89	0.89	0.58	0.53	1.10
High	0.62	0.99	0.81	1.10	1.54
School control in 10th grade					
Public	0.72	0.68	0.44	0.54	1.01
Private	2.38	1.52	0.87	0.98	1.84
Rigor of high school curriculum					
Below-standard	0.78	0.91	0.64	0.72	1.39
Standard	1.51	1.54	1.01	1.16	2.15
Moderately rigorous	1.00	1.29	0.77	0.73	1.40
Rigorous	2.33	2.01	1.05	0.62	1.08
Highest math course taken since grade 9					
No math, basic math, or pre-algebra	†	1.28	1.61	1.77	2.70
Algebra I, geometry, or algebra II	0.45	0.74	0.74	0.81	1.19
Trigonometry, statistics, or precalculus	1.27	1.26	0.71	0.58	1.43
Calculus	1.75	1.51	0.81	0.56	1.07
Highest science course taken since grade 9					
No science or low-level science	†	0.94	1.56	1.45	2.30
General biology	0.48	1.00	0.83	1.11	1.50
Chemistry I or physics I	0.99	1.28	0.81	0.64	1.51
Chemistry I and physics I	1.92	1.49	1.02	0.99	1.63
Chemistry II, physics II, or advanced biology	1.75	1.61	0.76	0.62	1.54
Cumulative academic GPA					
0.00–1.99	0.27	0.66	0.95	0.91	1.37
2.00–2.49	0.51	1.12	0.98	0.99	1.48
2.50–2.99	1.05	1.22	0.91	0.91	1.66
3.00–3.49	1.54	1.34	0.79	0.61	1.34
3.50–4.00	1.82	1.59	0.67	0.73	1.23
High school credential type					
High school diploma	0.73	0.67	0.43	0.51	0.93
GED, certificate of attendance, or other equivalency	0.46	1.15	1.62	1.95	2.36
High school completion year					
Before 2004	1.14	1.38	1.61	2.33	2.88
In 2004	0.76	0.70	0.45	0.47	0.95
After 2004	†	1.33	1.33	2.05	2.44
Postsecondary characteristics					
Timing of initial postsecondary enrollment					
Within 3 months following high school completion	0.91	0.82	0.51	0.41	1.06
4−12 months following high school completion	1.20	1.38	1.16	1.24	2.22
13 or more months following high school completion	0.47	0.72	0.79	1.21	1.58

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-7a.

Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012

Selected characteristics	Highest postsecondary degree						
	Total	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
Total	**61.5**	**12.0**	**10.3**	**31.4**	**7.9**	**14.2**	**24.3**
Demographic characteristics							
Sex							
Male	57.6	10.5	9.9	31.1	6.1	14.2	28.2
Female	65.0	13.4	10.6	31.6	9.4	14.1	20.9
Race/ethnicity[1]							
White	66.3	10.0	10.5	36.3	9.4	12.0	21.7
Black	50.8	17.7	9.1	19.5	4.5	19.5	29.7
Hispanic	50.7	15.7	11.5	19.9	3.6	17.2	32.1
Asian	69.9	9.3	6.1	42.6	11.9	15.4	14.7
Other	57.1	12.2	10.5	27.4	7.1	15.8	27.1
Highest education of parents							
High school diploma or less	53.5	17.2	12.8	20.0	3.5	15.0	31.4
Some college	56.2	14.3	11.2	25.6	5.0	15.5	28.3
Bachelor's or higher degree	70.4	7.2	8.0	42.5	12.6	12.6	17.1
Family SES in 10th grade							
Lowest quarter	49.4	17.8	11.4	17.1	3.1	17.6	32.9
Middle two quarters	58.7	13.1	11.5	28.5	5.6	14.9	26.3
Highest quarter	75.3	6.0	7.0	47.0	15.2	10.0	14.7
Family type in 10th grade							
Two-parent family	63.3	11.3	10.3	33.1	8.7	13.2	23.5
Single-parent family	55.2	14.7	9.8	25.7	5.0	17.4	27.4
Language student first learned to speak							
English	62.3	11.7	10.2	32.3	8.2	13.8	23.9
Non-English	56.3	14.2	10.6	25.6	5.9	16.3	27.4

See notes at end of table.

Table C-7a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012—Continued

Selected characteristics	Highest postsecondary degree						
	Total	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
High school characteristics							
Student's educational expectations in 10th grade							
Do not know yet	50.1	15.7	10.4	19.8	4.2	16.0	34.0
High school diploma or less	38.9	22.0	9.9	6.4	‡	17.5	43.7
Some college	47.3	20.1	14.9	10.9	1.4	16.7	36.0
Bachelor's or higher degree	65.7	10.2	9.6	36.5	9.4	13.4	20.9
Academic risk in 10th grade[2]							
Low	85.0	2.9	4.1	56.3	21.7	7.2	7.7
Moderate	59.5	12.5	11.7	29.4	5.8	14.9	25.6
High	38.3	23.1	9.6	5.4	‡	20.0	41.8
School disengagement in 10th grade[3]							
Low	71.7	8.0	11.2	40.4	12.1	10.1	18.1
Moderate	63.4	11.6	10.1	33.5	8.3	13.7	22.9
High	47.2	17.1	10.2	17.1	2.9	18.6	34.2
School control in 10th grade							
Public	60.1	12.5	10.5	29.8	7.2	14.6	25.2
Private	75.5	6.6	7.5	47.2	14.1	9.2	15.3
Rigor of high school curriculum[4,5]							
Below-standard	52.7	15.4	10.9	22.2	4.3	16.5	30.8
Standard	60.7	12.6	11.6	30.0	6.5	15.2	24.1
Moderately rigorous	71.3	7.9	10.6	42.0	10.7	10.5	18.2
Rigorous	85.8	2.2	3.1	56.4	24.1	7.9	6.3
Highest math course taken since grade 9[5]							
No math, basic math, or pre-algebra	36.8	23.7	9.0	4.0	‡	20.8	42.5
Algebra I, geometry, or algebra II	50.6	16.9	13.3	18.2	2.3	17.1	32.3
Trigonometry, statistics, or precalculus	70.7	7.0	9.2	43.8	10.8	11.5	17.8
Calculus	85.9	3.1	4.7	56.3	21.8	7.0	7.1

See notes at end of table.

Table C-7a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012—Continued

Selected characteristics	Total	Highest postsecondary degree: Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
Highest science course taken since grade 9[5]							
No science or low-level science	39.9	21.5	11.0	6.9	‡	19.3	40.7
General biology	47.3	18.4	12.4	14.9	1.6	17.9	34.8
Chemistry I or physics I	63.0	11.2	12.3	32.9	6.6	13.7	23.3
Chemistry I and physics I	77.2	5.6	7.8	49.6	14.2	9.5	13.4
Chemistry II, physics II, or advanced biology	76.2	5.1	6.5	48.0	16.7	10.0	13.8
Cumulative academic GPA							
0.00–1.99	36.4	19.4	9.5	7.0	0.5	22.8	40.8
2.00–2.49	48.1	14.8	13.1	18.3	1.9	18.0	33.9
2.50–2.99	62.3	13.2	13.9	30.3	4.8	12.8	24.9
3.00–3.49	77.1	7.5	9.9	49.4	10.3	9.4	13.5
3.50–4.00	86.6	2.8	4.8	55.7	23.3	6.0	7.3
High school credential type							
High school diploma	63.4	11.4	10.4	33.2	8.3	13.4	23.2
GED, certificate of attendance, or other equivalence[6]	32.4	19.4	8.9	3.4	‡	28.0	39.6
High school completion year							
Before 2004	46.4	15.5	10.6	17.0	3.3	17.4	36.3
In 2004	64.3	11.3	10.3	34.1	8.6	13.1	22.6
After 2004	30.7	17.9	9.6	3.0	‡	30.8	38.6
Postsecondary characteristics							
Timing of initial postsecondary enrollment							
Within 3 months following high school completion	71.2	8.5	10.2	41.8	10.7	10.0	18.8
4–12 months following high school completion	54.6	17.8	10.6	21.2	5.1	13.2	32.2
13 or more months following high school completion	34.1	18.2	9.9	5.5	0.5	28.2	37.7
Type of first-attended institution							
Public 4-year	72.4	5.5	6.3	47.8	12.7	10.8	16.9
Private nonprofit 4-year	77.0	3.4	4.8	50.9	17.9	9.0	14.0
Public 2-year	47.2	14.1	15.6	16.1	1.4	18.4	34.4
For-profit[7]	53.0	30.3	15.4	6.6	0.7	15.2	31.8
Other	52.2	41.6	5.2	5.3	‡	17.3	30.5

See notes at end of table.

Table C-7a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012—Continued

Selected characteristics	Highest postsecondary degree						
	Total	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
Selectivity of first-attended institution[8]							
Highly selective 4-year institution	85.2	2.4	1.7	60.8	20.4	7.7	7.0
Moderately selective 4-year institution	73.8	5.0	5.7	49.3	13.8	8.9	17.3
Inclusive	59.1	7.4	10.9	33.1	7.8	14.7	26.2
Less-than-4-year institution	49.2	19.7	14.8	13.6	1.1	17.5	33.3

‡ Reporting standards not met.

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[2] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[3] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[4] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[5] Excludes about 15 percent of students with no or partial transcript information.

[6] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[7] Includes for-profit institutions at all levels.

[8] Selectivity categories are based on 2010 Carnegie classifications. "Highly selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the top fifth of baccalaureate institutions; "moderately selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the middle two-fifths of baccalaureate institutions; and "inclusive" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement. Institutions with unclassified selectivity (i.e., those that do not have test score data) are included in the "Total" row but not displayed separately.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-7b.

Standard errors for table C-7a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012

	Highest postsecondary degree						
Selected characteristics	Total	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
Total	**0.57**	**0.40**	**0.41**	**0.67**	**0.30**	**0.42**	**0.51**
Demographic characteristics							
Sex							
Male	0.83	0.54	0.58	0.99	0.38	0.59	0.69
Female	0.77	0.54	0.57	0.82	0.46	0.61	0.65
Race/ethnicity							
White	0.71	0.47	0.54	0.81	0.41	0.53	0.61
Black	1.42	1.15	0.96	1.23	0.65	1.33	1.34
Hispanic	1.63	1.06	1.08	1.43	0.60	1.36	1.70
Asian	1.74	1.03	0.96	2.11	1.03	1.28	1.35
Other	2.79	1.73	1.65	2.40	1.43	1.93	2.41
Highest education of parents							
High school diploma or less	1.08	0.95	0.85	1.01	0.43	0.87	1.02
Some college	0.96	0.68	0.62	0.91	0.45	0.74	0.93
Bachelor's or higher degree	0.98	0.48	0.58	1.00	0.63	0.59	0.79
Family SES in 10th grade							
Lowest quarter	1.39	0.99	0.85	1.12	0.45	1.06	1.20
Middle two quarters	0.81	0.58	0.59	0.84	0.38	0.64	0.71
Highest quarter	1.07	0.56	0.61	1.14	0.74	0.64	0.92
Family type in 10th grade							
Two-parent family	0.67	0.44	0.48	0.73	0.34	0.49	0.55
Single-parent family	1.12	0.93	0.76	1.14	0.58	0.90	1.09
Language student first learned to speak							
English	0.61	0.39	0.43	0.70	0.33	0.43	0.54
Non-English	1.52	1.14	1.03	1.46	0.71	1.26	1.50

See notes at end of table.

Table C-7b.
Standard errors for table C-7a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012—Continued

Selected characteristics	Highest postsecondary degree						
	Total	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
High school characteristics							
Student's educational expectations in 10th grade							
Do not know yet	2.31	1.40	1.29	1.81	0.85	1.71	1.97
High school diploma or less	2.78	2.55	1.68	1.29	†	2.15	2.78
Some college	2.14	1.78	1.56	1.23	0.49	1.62	1.90
Bachelor's or higher degree	0.61	0.41	0.46	0.73	0.38	0.44	0.58
Academic risk in 10th grade							
Low	0.98	0.48	0.57	1.39	1.08	0.69	0.83
Moderate	0.65	0.49	0.51	0.75	0.32	0.51	0.60
High	1.75	1.45	1.12	0.86	†	1.43	1.88
School disengagement in 10th grade							
Low	1.16	0.64	0.85	1.33	0.81	0.74	1.00
Moderate	0.79	0.55	0.53	0.84	0.46	0.59	0.67
High	1.39	1.08	0.92	1.03	0.49	1.05	1.33
School control in 10th grade							
Public	0.61	0.43	0.44	0.72	0.32	0.45	0.54
Private	1.13	0.65	0.70	1.39	0.93	0.69	1.09
Rigor of high school curriculum							
Below-standard	1.11	0.71	0.64	0.97	0.40	0.69	0.98
Standard	1.33	1.05	0.93	1.62	0.75	0.93	1.37
Moderately rigorous	1.04	0.55	0.79	1.04	0.65	0.71	0.89
Rigorous	1.48	0.60	1.00	2.02	1.67	1.36	1.01
Highest math course taken since grade 9							
No math, basic math, or pre-algebra	3.29	2.57	1.96	1.06	†	2.61	3.08
Algebra I, geometry, or algebra II	0.92	0.70	0.64	0.79	0.28	0.76	0.88
Trigonometry, statistics, or precalculus	1.06	0.56	0.68	1.11	0.71	0.75	0.87
Calculus	1.05	0.50	0.75	1.62	1.27	0.77	0.82

See notes at end of table.

Table C-7b.
Standard errors for table C-7a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012—Continued

Selected characteristics	Highest postsecondary degree						
	Total	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
Highest science course taken since grade 9							
No science or low-level science	2.46	2.54	1.65	1.83	†	2.03	2.34
General biology	1.33	0.94	0.87	1.04	0.35	0.99	1.18
Chemistry I or physics I	1.15	0.74	0.79	1.24	0.60	0.73	0.94
Chemistry I and physics I	1.31	0.66	1.00	1.54	1.07	0.92	0.97
Chemistry II, physics II, or advanced biology	1.39	0.66	0.74	1.67	1.03	0.93	1.04
Cumulative academic GPA							
0.00–1.99	1.32	1.01	0.82	0.70	0.16	1.11	1.35
2.00–2.49	1.30	1.02	0.98	1.09	0.36	1.10	1.36
2.50–2.99	1.28	0.91	1.03	1.29	0.63	0.86	1.20
3.00–3.49	1.07	0.69	0.83	1.31	0.77	0.76	0.88
3.50–4.00	0.91	0.44	0.58	1.29	1.06	0.65	0.77
High school credential type							
High school diploma	0.57	0.39	0.44	0.68	0.31	0.42	0.51
GED, certificate of attendance, or other equivalence	2.46	2.05	1.54	0.94	†	2.10	2.71
High school completion year							
Before 2004	2.86	2.02	1.94	2.20	0.87	2.25	2.77
In 2004	0.58	0.40	0.44	0.70	0.33	0.41	0.52
After 2004	2.78	2.30	1.84	1.06	†	2.75	2.84
Postsecondary characteristics							
Timing of initial postsecondary enrollment							
Within 3 months following high school completion	0.65	0.40	0.48	0.80	0.42	0.44	0.61
4−12 months following high school completion	1.64	1.50	1.05	1.41	0.79	1.18	1.71
13 or more months following high school completion	1.29	1.06	0.84	0.74	0.16	1.33	1.31
Type of first-attended institution							
Public 4-year	0.91	0.42	0.56	1.06	0.62	0.56	0.71
Private nonprofit 4-year	1.31	0.54	0.65	1.42	1.02	0.89	1.10
Public 2-year	0.98	0.73	0.81	0.83	0.22	0.83	0.94
For-profit	2.16	2.14	1.59	1.00	0.34	1.47	2.02
Other	4.07	4.00	1.35	1.69	†	2.82	3.48

See notes at end of table.

Table C-7b.
Standard errors for table C-7a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage distribution of their highest postsecondary attainment, by selected characteristics: 2012—Continued

Selected characteristics	Highest postsecondary degree						
	Total	Certificate	Associate's degree	Bachelor's degree	Master's or higher degree	No degree, still enrolled	No degree, not enrolled
Selectivity of first-attended institution							
Highly selective 4-year institution	1.02	0.41	0.37	1.37	0.99	0.72	0.84
Moderately selective 4-year institution	1.16	0.42	0.61	1.18	0.91	0.69	1.02
Inclusive	2.01	1.03	1.51	2.06	1.07	1.38	1.66
Less-than-4-year institution	0.84	0.75	0.71	0.71	0.17	0.75	0.83

† Not applicable.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-8a.

Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, average total number of months between postsecondary entry and first bachelor's degree attainment, percentage distribution by number of months to the first bachelor's degree, and average age when they completed the first bachelor's degree, by selected characteristics: 2012

Selected characteristics	Average total months elapsed to first bachelor's degree[1]	Number of months to the first bachelor's degree attainment				Average age when completing the first bachelor's degree
		48 or fewer months	49–60 months	61–72 months	73 or more months	
Total	**55.3**	**47.3**	**27.2**	**12.8**	**12.7**	**23.1**
Demographic characteristics						
Sex						
Male	56.4	42.4	28.5	15.2	13.9	23.3
Female	54.3	51.2	26.3	10.8	11.7	23.0
Race/ethnicity[2]						
White	54.5	49.1	27.8	11.9	11.2	23.1
Black	59.0	36.3	27.0	19.1	17.5	23.4
Hispanic	58.2	40.9	25.1	14.9	19.1	23.3
Asian	54.6	51.2	22.9	12.1	13.9	23.0
Other	55.5	47.1	28.5	11.1	13.3	23.1
Highest education of parents						
High school diploma or less	58.3	38.1	26.4	18.3	17.2	23.4
Some college	56.8	41.2	30.5	12.2	16.2	23.2
Bachelor's or higher degree	53.8	52.3	26.0	11.7	10.1	23.0
Family SES in 10th grade						
Lowest quarter	58.9	38.3	23.7	18.2	19.8	23.5
Middle two quarters	56.6	41.9	30.3	12.6	15.2	23.2
Highest quarter	53.2	53.7	25.7	11.4	9.2	22.9
Family type in 10th grade						
Two-parent family	55.0	48.4	26.9	11.9	12.8	23.1
Single-parent family	56.9	39.7	30.7	16.3	13.3	23.3
Language student first learned to speak						
English	55.0	48.1	27.5	12.3	12.2	23.1
Non-English	57.4	40.9	25.4	16.9	16.7	23.3
High school characteristics						
Student's educational expectations in 10th grade						
Do not know yet	57.3	42.4	21.2	19.4	17.0	23.3
High school diploma or less	61.4	27.3 !	25.7 !	‡	29.0 !	23.9
Some college	59.9	36.5	23.2	19.7	20.7	23.8
Bachelor's or higher degree	55.0	47.7	28.0	12.0	12.3	23.1
Academic risk in 10th grade[3]						
Low	50.9	61.7	24.1	8.4	5.8	22.7
Moderate	57.2	40.7	29.0	14.6	15.7	23.3
High	65.8	23.0 !	19.2 !	25.9 !	31.9	24.8
School disengagement in 10th grade[4]						
Low	53.9	50.9	28.0	10.7	10.3	23.0
Moderate	55.2	47.2	27.0	13.2	12.7	23.1
High	60.5	32.6	28.5	15.3	23.6	23.5

See notes at end of table.

Table C-8a.
Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, average total number of months between postsecondary entry and first bachelor's degree attainment, percentage distribution by number of months to the first bachelor's degree, and average age when they completed the first bachelor's degree, by selected characteristics: 2012 —Continued

Selected characteristics	Average total months elapsed to first bachelor's degree[1]	Number of months to the first bachelor's degree attainment				Average age when completing the first bachelor's degree
		48 or fewer months	49–60 months	61–72 months	73 or more months	
School control in 10th grade						
Public	55.4	47.0	26.7	13.0	13.3	23.1
Private	54.1	49.1	30.4	11.4	9.1	23.0
Rigor of high school curriculum[5,6]						
Below-standard	56.9	42.6	27.8	13.4	16.2	23.2
Standard	56.1	43.5	27.1	17.8	11.7	23.2
Moderately rigorous	55.5	45.8	28.5	12.1	13.6	23.1
Rigorous	50.4	65.3	22.1	7.6	5.0	22.7
Highest math course taken since grade 9[6]						
No math, basic math, or pre-algebra	‡	28.0 !	‡	‡	33.9 !	‡
Algebra I, geometry, or algebra II	61.1	30.0	29.5	17.2	23.3	23.6
Trigonometry, statistics, or precalculus	55.1	46.7	28.4	13.0	12.0	23.1
Calculus	50.7	62.7	23.1	8.9	5.4	22.7
Highest science course taken since grade 9[6]						
No science or low-level science	65.2	32.9 !	22.5 !	‡	37.1	24.2
General biology	59.7	33.3	28.9	17.4	20.3	23.6
Chemistry I or physics I	56.5	42.0	28.3	14.9	14.8	23.2
Chemistry I and physics I	54.2	50.9	27.0	11.1	11.0	23.0
Chemistry II, physics II, or advanced biology	52.9	55.3	25.3	10.7	8.8	22.9
Cumulative academic GPA						
0.00–1.99	66.2	23.6	24.4	18.5	33.5	24.3
2.00–2.49	62.3	26.9	26.5	22.9	23.7	23.8
2.50–2.99	59.7	34.8	27.5	16.2	21.5	23.5
3.00–3.49	54.6	44.7	32.7	12.2	10.4	23.0
3.50–4.00	50.5	63.2	23.1	8.3	5.4	22.7
High school credential type						
High school diploma	55.2	47.5	27.3	12.7	12.5	23.1
GED, certificate of attendance, or other equivalency[7]	‡	18.6 !	‡	26.3 !	44.6	‡
High school completion year						
Before 2004	66.9	28.9	15.7 !	18.0	37.4	24.2
In 2004	54.9	47.8	27.6	12.5	12.0	23.1
After 2004	‡	‡	‡	46.7 !	‡	‡
Postsecondary characteristics						
Timing of initial postsecondary enrollment						
Within 3 months following high school completion	54.9	48.7	27.2	12.1	12.1	23.0
4−12 months following high school completion	57.1	38.3	28.5	17.8	15.5	23.4
13 or more months following high school completion	54.2	54.1	14.7	17.3	14.0	24.9

See notes at end of table.

Table C-8a.
Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, average total number of months between postsecondary entry and first bachelor's degree attainment, percentage distribution by number of months to the first bachelor's degree, and average age when they completed the first bachelor's degree, by selected characteristics: 2012 —Continued

Selected characteristics	Average total months elapsed to first bachelor's degree[1]	Number of months to the first bachelor's degree attainment				Average age when completing the first bachelor's degree
		48 or fewer months	49–60 months	61–72 months	73 or more months	
Type of first-attended institution						
Public 4-year	54.7	46.3	29.7	13.8	10.2	23.1
Private nonprofit 4-year	50.5	66.1	21.9	6.4	5.6	22.7
Public 2-year	65.2	18.9	29.4	19.8	32.0	23.9
For-profit[8]	52.8	57.5	16.1 !	‡	18.2 !	23.4
Other	‡	‡	‡	‡	‡	‡
Selectivity of first-attended institution[9]						
Highly selective 4-year institution	50.4	64.7	23.1	7.4	4.8	22.7
Moderately selective 4-year institution	54.2	46.9	30.3	13.5	9.3	23.0
Inclusive	58.3	36.8	29.9	16.5	16.7	23.3
Less-than-4-year institution	65.2	19.3	29.2	19.3	32.2	23.9

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

‡ Reporting standards not met.

[1] Includes anyone who earned a bachelor's or higher degree.

[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[6] Excludes about 15 percent of students with no or partial transcript information.

[7] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[8] Includes for-profit institutions at all levels.

[9] Selectivity categories are based on 2010 Carnegie classifications. "Highly selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the top fifth of baccalaureate institutions; "moderately selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the middle two-fifths of baccalaureate institutions; and "inclusive" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement. Institutions with unclassified selectivity (i.e., those that do not have test score data) are included in the "Total" row but not displayed separately.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-8b.

Standard errors for table C-8a: Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, average total number of months between postsecondary entry and first bachelor's degree attainment, percentage distribution by number of months to the first bachelor's degree, and average age when they completed the first bachelor's degree, by selected characteristics: 2012

Selected characteristics	Average total months elapsed to first bachelor's degree	Number of months to the first bachelor's degree attainment				Average age when completing the first bachelor's degree
		48 or fewer months	49–60 months	61–72 months	73 or more months	
Total	**0.31**	**1.06**	**0.90**	**0.62**	**0.65**	**0.03**
Demographic characteristics						
Sex						
Male	0.42	1.39	1.32	0.98	1.02	0.04
Female	0.40	1.35	1.13	0.80	0.85	0.03
Race/ethnicity						
White	0.34	1.29	1.07	0.73	0.75	0.03
Black	0.94	3.03	3.04	2.66	2.53	0.10
Hispanic	1.00	3.12	2.56	2.54	2.37	0.11
Asian	0.77	2.79	1.90	1.53	1.77	0.07
Other	1.23	4.47	4.16	2.97	2.99	0.10
Highest education of parents						
High school diploma or less	0.81	2.55	2.54	2.03	2.13	0.07
Some college	0.56	1.75	1.66	1.04	1.39	0.05
Bachelor's or higher degree	0.37	1.37	1.08	0.82	0.76	0.04
Family SES in 10th grade						
Lowest quarter	0.92	2.81	2.36	2.13	2.24	0.09
Middle two quarters	0.43	1.48	1.39	0.86	1.04	0.04
Highest quarter	0.39	1.56	1.21	0.91	0.79	0.04
Family type in 10th grade						
Two-parent family	0.34	1.15	0.96	0.65	0.74	0.03
Single-parent family	0.56	2.19	2.10	1.79	1.52	0.06
Language student first learned to speak						
English	0.31	1.12	0.95	0.64	0.68	0.03
Non-English	0.85	2.69	2.13	1.98	2.07	0.10
High school characteristics						
Student's educational expectations in 10th grade						
Do not know yet	1.34	4.26	3.08	3.33	3.02	0.13
High school diploma or less	3.73	9.63	9.07	†	9.31	0.30
Some college	2.07	5.42	4.50	4.45	5.19	0.19
Bachelor's or higher degree	0.34	1.18	0.98	0.65	0.72	0.03
Academic risk in 10th grade						
Low	0.38	1.76	1.48	0.89	0.70	0.03
Moderate	0.39	1.20	1.09	0.82	0.87	0.04
High	2.92	7.50	6.77	8.11	7.65	0.32
School disengagement in 10th grade						
Low	0.53	1.84	1.50	1.11	1.18	0.05
Moderate	0.41	1.46	1.30	0.86	0.93	0.04
High	0.99	2.79	2.65	2.19	2.53	0.09

See notes at end of table.

Table C-8b.
Standard errors for table C-8a: Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, average total number of months between postsecondary entry and first bachelor's degree attainment, percentage distribution by number of months to the first bachelor's degree, and average age when they completed the first bachelor's degree, by selected characteristics: 2012—Continued

Selected characteristics	Average total months elapsed to first bachelor's degree	Number of months to the first bachelor's degree attainment				Average age when completing the first bachelor's degree
		48 or fewer months	49–60 months	61–72 months	73 or more months	
School control in 10th grade						
Public	0.36	1.23	1.04	0.71	0.76	0.03
Private	0.48	2.05	1.56	1.08	0.79	0.04
Rigor of high school curriculum						
Below-standard	0.65	2.18	1.80	1.29	1.43	0.06
Standard	0.78	2.53	2.42	1.93	1.83	0.07
Moderately rigorous	0.49	1.68	1.42	0.99	1.14	0.05
Rigorous	0.62	2.50	1.99	1.34	1.14	0.06
Highest math course taken since grade 9						
No math, basic math, or pre-algebra	†	13.54	†	†	14.71	†
Algebra I, geometry, or algebra II	0.75	2.17	2.05	1.52	1.96	0.07
Trigonometry, statistics, or precalculus	0.42	1.40	1.27	0.96	1.00	0.04
Calculus	0.43	1.86	1.51	1.24	0.74	0.04
Highest science course taken since grade 9						
No science or low-level science	4.92	12.38	7.47	†	9.90	0.40
General biology	1.05	3.15	2.59	2.01	2.75	0.10
Chemistry I or physics I	0.55	1.87	1.54	1.22	1.21	0.05
Chemistry I and physics I	0.65	2.14	1.76	1.17	1.41	0.05
Chemistry II, physics II, or advanced biology	0.44	1.84	1.63	1.16	0.88	0.04
Cumulative academic GPA						
0.00–1.99	1.92	4.44	4.20	3.49	5.02	0.19
2.00–2.49	0.93	2.49	3.10	2.85	2.48	0.09
2.50–2.99	0.82	2.23	2.02	1.58	1.97	0.08
3.00–3.49	0.45	1.78	1.75	1.11	1.11	0.04
3.50–4.00	0.36	1.71	1.33	0.97	0.68	0.03
High school credential type						
High school diploma	0.30	1.05	0.89	0.62	0.64	0.03
GED, certificate of attendance, or other equivalency	†	8.35	†	11.73	12.49	†
High school completion year						
Before 2004	2.77	5.55	4.88	4.88	6.30	0.43
In 2004	0.30	1.06	0.91	0.63	0.65	0.03
After 2004	†	†	†	19.12	†	†
Postsecondary characteristics						
Timing of initial postsecondary enrollment						
Within 3 months following high school completion	0.31	1.10	0.92	0.64	0.66	0.03
4–12 months following high school completion	1.13	3.47	2.79	2.93	2.40	0.11
13 or more months following high school completion	1.92	5.82	3.86	4.85	3.75	0.15

See notes at end of table.

Table C-8b.
Standard errors for table C-8a: Among spring 2002 high school sophomores who had earned a bachelor's or higher degree, average total number of months between postsecondary entry and first bachelor's degree attainment, percentage distribution by number of months to the first bachelor's degree, and average age when they completed the first bachelor's degree, by selected characteristics: 2012—Continued

Selected characteristics	Average total months elapsed to first bachelor's degree	Number of months to the first bachelor's degree attainment				Average age when completing the first bachelor's degree
		48 or fewer months	49–60 months	61–72 months	73 or more months	
Type of first-attended institution						
Public 4-year	0.31	1.30	1.24	0.82	0.69	0.03
Private nonprofit 4-year	0.44	1.79	1.42	0.83	0.78	0.04
Public 2-year	0.91	2.01	2.28	1.81	2.39	0.08
For-profit	3.13	7.94	5.81	†	5.52	0.35
Other	†	†	†	†	†	†
Selectivity of first-attended institution						
Highly selective 4-year institution	0.35	1.58	1.40	0.80	0.67	0.03
Moderately selective 4-year institution	0.40	1.73	1.37	0.97	0.88	0.04
Inclusive	0.97	3.08	2.60	2.42	2.26	0.10
Less-than-4-year institution	0.86	1.92	2.25	1.76	2.31	0.08

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-9a.

Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who had ever taken out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012

Selected characteristics	Estimated from students' self-reports		Estimated from NSLDS[1]	
	Percent taking out a student loan[2]	Average total amount of student loans ($)[3]	Percent taking out a federal loan[4]	Average total amount of federal loans ($)[5]
Total	**60.2**	**$30,000**	**58.6**	**$24,900**
Demographic characteristics				
Sex				
Male	56.5	30,600	53.8	24,300
Female	63.4	29,600	62.9	25,400
Race/ethnicity[6]				
White	60.0	31,900	59.0	25,700
Black	66.9	25,000	69.4	23,200
Hispanic	55.3	21,600	49.0	19,300
Asian	57.6	47,300	53.6	38,700
Other	60.3	31,400	57.5	24,600
Highest education of parents				
High school diploma or less	58.8	22,200	56.2	18,800
Some college	61.9	27,100	60.3	21,300
Bachelor's or higher degree	59.6	36,900	58.6	31,300
Family SES in 10th grade				
Lowest quarter	57.9	22,000	56.3	19,400
Middle two quarters	62.4	27,400	61.2	22,100
Highest quarter	58.7	41,200	58.6	34,500
Family type in 10th grade				
Two-parent family	60.1	31,300	58.9	25,800
Single-parent family	61.3	26,200	61.0	22,700
Language student first learned to speak				
English	61.2	30,300	60.2	24,900
Non-English	53.8	28,100	48.7	24,900
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	47.9	23,100	48.4	19,600
High school diploma or less	51.2	16,900	47.7	13,700
Some college	51.6	19,300	49.7	15,500
Bachelor's or higher degree	63.3	32,400	62.4	26,900
Academic risk in 10th grade[7]				
Low	65.6	46,600	64.7	40,600
Moderate	60.3	27,500	58.7	22,300
High	50.8	17,100	47.9	14,200
School disengagement in 10th grade[8]				
Low	61.0	35,200	60.4	27,600
Moderate	61.5	31,700	60.7	26,800
High	56.5	22,000	54.4	18,700

See notes at end of table.

Table C-9a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who had ever taken out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012—Continued

Selected characteristics	Estimated from students' self-reports: Percent taking out a student loan[2]	Estimated from students' self-reports: Average total amount of student loans ($)[3]	Estimated from NSLDS[1]: Percent taking out a federal loan[4]	Estimated from NSLDS[1]: Average total amount of federal loans ($)[5]
School control in 10th grade				
Public	60.7	29,000	59.0	24,300
Private	55.0	41,400	55.2	32,300
Rigor of high school curriculum[9,10]				
Below-standard	56.5	24,100	53.9	19,600
Standard	59.5	29,600	60.8	24,700
Moderately rigorous	64.8	33,400	64.3	26,900
Rigorous	67.1	51,100	66.6	45,800
Highest math course taken since grade 9[10]				
No math, basic math, or pre-algebra	49.3	17,000	44.4	13,000
Algebra I, geometry, or algebra II	56.1	21,000	54.4	17,500
Trigonometry, statistics, or precalculus	65.0	35,000	65.4	27,800
Calculus	65.5	46,900	63.6	41,400
Highest science course taken since grade 9[10]				
No science or low-level science	45.6	15,500	40.7	13,000
General biology	54.2	19,700	51.2	16,200
Chemistry I or physics I	62.2	27,900	62.1	22,400
Chemistry I and physics I	66.3	37,200	66.5	30,000
Chemistry II, physics II, or advanced biology	65.5	44,000	65.2	38,000
Cumulative academic GPA				
0.00–1.99	54.4	17,700	48.7	15,100
2.00–2.49	54.8	22,200	56.1	17,800
2.50–2.99	61.6	27,400	61.6	21,300
3.00–3.49	65.0	35,400	64.4	28,000
3.50–4.00	64.8	46,800	64.2	41,200
High school credential type				
High school diploma	60.9	30,900	59.6	25,500
GED, certificate of attendance, or other equivalency[11]	51.3	14,200	46.1	13,400
Postsecondary characteristics				
Timing of initial postsecondary enrollment				
Within 3 months following high school completion	63.5	34,600	62.5	28,200
4−12 months following high school completion	58.7	24,500	55.8	20,600
13 or more months following high school completion	51.6	15,600	50.1	14,500
Type of first-attended institution				
Public 4-year	64.6	33,400	64.3	29,000
Private nonprofit 4-year	75.3	47,200	74.9	35,600
Public 2-year	47.8	19,600	45.4	17,200
For-profit[12]	74.7	18,500	74.7	12,900
Other	41.9	18,700	28.9	13,300

See notes at end of table.

Table C-9a.
Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who had ever taken out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012—Continued

Selected characteristics	Estimated from students' self-reports: Percent taking out a student loan[2]	Estimated from students' self-reports: Average total amount of student loans ($)[3]	Estimated from NSLDS[1]: Percent taking out a federal loan[4]	Estimated from NSLDS[1]: Average total amount of federal loans ($)[5]
Selectivity of first-attended institution[13]				
Highly selective 4-year institution	65.4	50,900	65.0	43,200
Moderately selective 4-year institution	71.1	35,000	70.8	28,000
Inclusive	73.8	27,800	75.0	22,200
Less-than-4-year institution	50.5	18,500	47.6	15,700
Highest postsecondary attainment at the time of the 2012 interview				
Some college but no postsecondary credential	51.6	16,700	49.8	14,800
Undergraduate certificate	56.2	16,400	53.4	11,600
Associate's degree	58.5	22,100	59.8	17,100
Bachelor's degree	68.3	37,000	66.5	28,300
Master's or higher degree	77.9	71,700	76.6	67,700

[1] NSLDS refers to the National Student Loan Data System. The NSLDS database contains records of all federal loan information for anyone who has such a loan.

[2] Student loans, which must be paid back or forgiven, include federal Direct Subsidized and Unsubsidized Loans, federal Perkins Loans, state loans, institutional loans, and private or alternative loans.

[3] Includes only students who reported taking out a student loan.

[4] Includes any type of federal loan.

[5] Includes only students who took out a federal loan, as indicated by NSLDS.

[6] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[7] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[8] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[9] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below -standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[10] Excludes about 15 percent of students with no or partial transcript information.

[11] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[12] Includes for-profit institutions at all levels.

[13] Selectivity categories are based on 2010 Carnegie classifications. "Highly selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the top fifth of baccalaureate institutions; "moderately selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the middle two-fifths of baccalaureate institutions; and "inclusive" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement. Institutions with unclassified selectivity (i.e., those that do not have test score data) are included in the "Total" row but not displayed separately.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-9b.

Standard errors for table C-9a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who had ever taken out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012

Selected characteristics	Estimated from students' self-reports		Estimated from NSLDS	
	Percent taking out a student loan	Average total amount of student loans ($)	Percent taking out a federal loan	Average total amount of federal loans ($)
Total	**0.69**	**$540**	**0.73**	**$480**
Demographic characteristics				
Sex				
Male	0.92	850	0.98	730
Female	0.90	680	0.94	630
Race/ethnicity				
White	0.80	720	0.84	650
Black	1.59	920	1.67	920
Hispanic	1.88	1,180	1.92	1,060
Asian	1.89	3,080	1.70	2,670
Other	2.75	2,880	2.54	2,210
Highest education of parents				
High school diploma or less	1.12	770	1.31	600
Some college	1.07	860	1.16	650
Bachelor's or higher degree	0.91	1,010	0.94	910
Family SES in 10th grade				
Lowest quarter	1.44	900	1.51	740
Middle two quarters	0.94	660	0.98	550
Highest quarter	1.10	1,360	1.22	1,190
Family type in 10th grade				
Two-parent family	0.78	600	0.84	530
Single-parent family	1.33	950	1.36	850
Language student first learned to speak				
English	0.72	550	0.75	510
Non-English	1.52	1,670	1.76	1,500
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	1.91	1,980	1.99	1,570
High school diploma or less	2.70	1,540	2.69	1,770
Some college	2.23	1,430	2.23	1,030
Bachelor's or higher degree	0.78	630	0.80	580
Academic risk in 10th grade				
Low	1.32	1,740	1.28	1,540
Moderate	0.76	550	0.82	470
High	2.08	1,070	1.99	790
School disengagement in 10th grade				
Low	1.33	1,300	1.37	1,030
Moderate	0.94	810	1.01	690
High	1.54	850	1.49	760

See notes at end of table.

Table C-9b.
Standard errors for table C-9a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who had ever taken out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012—Continued

Selected characteristics	Estimated from students' self-reports		Estimated from NSLDS	
	Percent taking out a student loan	Average total amount of student loans ($)	Percent taking out a federal loan	Average total amount of federal loans ($)
School control in 10th grade				
Public	0.76	560	0.79	520
Private	1.36	1,580	1.52	1,370
Rigor of high school curriculum				
Below-standard	1.07	820	1.10	680
Standard	1.78	1,300	1.75	1,290
Moderately rigorous	1.06	920	1.11	710
Rigorous	2.21	2,800	2.32	3,160
Highest math course taken since grade 9				
No math, basic math, or pre-algebra	2.67	1,730	2.94	1,290
Algebra I, geometry, or algebra II	1.15	600	1.22	480
Trigonometry, statistics, or precalculus	1.02	990	1.07	880
Calculus	1.62	1,780	1.77	1,810
Highest science course taken since grade 9				
No science or low-level science	2.92	1,400	2.99	1,100
General biology	1.57	770	1.56	600
Chemistry I or physics I	1.09	860	1.17	670
Chemistry I and physics I	1.33	1,500	1.39	1,450
Chemistry II, physics II, or advanced biology	1.51	1,610	1.60	1,680
Cumulative academic GPA				
0.00–1.99	1.49	800	1.60	610
2.00–2.49	1.42	900	1.50	670
2.50–2.99	1.30	870	1.27	800
3.00–3.49	1.16	1,210	1.25	1,070
3.50–4.00	1.42	1,760	1.37	1,680
High school credential type				
High school diploma	0.70	560	0.75	500
GED, certificate of attendance, or other equivalency	2.52	1,130	2.79	990
Postsecondary characteristics				
Timing of initial postsecondary enrollment				
Within 3 months following high school completion	0.80	650	0.86	600
4−12 months following high school completion	1.77	1,660	1.94	1,410
13 or more months following high school completion	1.43	690	1.38	650
Type of first-attended institution				
Public 4-year	1.14	890	1.21	780
Private nonprofit 4-year	1.32	1,560	1.30	1,560
Public 2-year	1.08	680	1.17	590
For-profit	1.93	1,220	1.88	740
Other	3.77	2,620	2.94	1,580

See notes at end of table.

Table C-9b.
Standard errors for table C-9a: Among spring 2002 high school sophomores who had enrolled in postsecondary education, percentage who had ever taken out a student loan to pay for their postsecondary education and average total amount of student loans, by selected characteristics: 2012—Continued

Selected characteristics	Estimated from students' self-reports		Estimated from NSLDS	
	Percent taking out a student loan	Average total amount of student loans ($)	Percent taking out a federal loan	Average total amount of federal loans ($)
Selectivity of first-attended institution				
Highly selective 4-year institution	1.48	1,690	1.52	1,640
Moderately selective 4-year institution	1.33	1,090	1.34	970
Inclusive	2.00	1,450	1.92	1,040
Less-than-4-year institution	0.98	550	1.06	490
Highest postsecondary attainment at the time of the 2012 interview				
Some college but no postsecondary credential	1.05	510	1.07	510
Undergraduate certificate	1.65	810	1.67	500
Associate's degree	1.92	1,060	1.98	730
Bachelor's degree	1.02	820	1.07	770
Master's or higher degree	1.57	2,640	1.62	2,360

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-10a.

Among spring 2002 high school sophomores who reported ever taking out a student loan to pay for their postsecondary education, percentage indicating various impacts of student loan debt on their employment plans, by selected characteristics and student loan amount: 2012

Selected characteristics	Took a job outside field of study or training	Took a less desirable job	Had to work at more than one job at the same time	Had to work more hours than desired
Total	**36.7**	**34.3**	**24.5**	**36.1**
Demographic characteristics				
Sex				
Male	36.7	34.8	22.5	35.8
Female	36.8	34.0	26.0	36.4
Race/ethnicity[1]				
White	35.1	33.6	25.3	35.0
Black	40.9	37.6	24.1	39.5
Hispanic	38.9	33.2	23.6	39.4
Asian	36.5	34.5	19.6	32.3
Other	39.3	36.9	22.8	34.2
Highest education of parents				
High school diploma or less	38.3	33.9	25.5	37.6
Some college	39.2	36.7	25.7	37.1
Bachelor's or higher degree	33.9	32.6	23.1	34.5
Family SES in 10th grade				
Lowest quarter	37.9	34.1	21.7	36.0
Middle two quarters	39.3	36.0	26.8	37.3
Highest quarter	32.2	33.0	23.3	33.6
Family type in 10th grade				
Two-parent family	36.0	33.7	24.6	35.3
Single-parent family	40.7	38.3	25.4	38.4
Language student first learned to speak				
English	36.7	34.6	24.8	35.8
Non-English	37.3	32.3	22.6	38.4
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	41.1	36.4	27.0	37.0
High school diploma or less	42.1	41.6	27.9	40.1
Some college	32.6	27.7	22.0	33.5
Bachelor's or higher degree	36.8	34.9	24.7	35.9
Academic risk in 10th grade[2]				
Low	29.7	29.4	20.3	29.6
Moderate	38.0	35.4	25.6	37.6
High	41.7	35.6	25.3	38.2
School disengagement in 10th grade[3]				
Low	35.0	32.7	25.4	33.6
Moderate	36.8	34.9	23.7	35.9
High	41.4	37.1	27.9	41.7

See notes at end of table.

Table C-10a.
Among spring 2002 high school sophomores who reported ever taking out a student loan to pay for their postsecondary education, percentage indicating various impacts of student loan debt on their employment plans, by selected characteristics and student loan amount: 2012—Continued

Selected characteristics	Took a job outside field of study or training	Took a less desirable job	Had to work at more than one job at the same time	Had to work more hours than desired
School control in 10th grade				
Public	37.1	34.6	24.6	36.4
Private	32.9	31.0	23.8	32.7
Rigor of high school curriculum[4,5]				
Below-standard	38.9	34.5	23.8	34.9
Standard	38.6	37.1	27.1	39.7
Moderately rigorous	34.9	34.5	24.2	35.9
Rigorous	28.4	28.4	21.4	33.5
Highest math course taken since grade 9[5]				
No math, basic math, or pre-algebra	43.0	39.5	21.6	45.7
Algebra I, geometry, or algebra II	41.0	35.9	26.9	38.1
Trigonometry, statistics, or precalculus	35.0	34.9	24.5	36.2
Calculus	28.6	28.7	18.8	28.1
Highest science course taken since grade 9[5]				
No science or low-level science	38.5	32.6	18.5	34.9
General biology	38.8	34.8	24.4	36.6
Chemistry I or physics I	37.8	35.7	24.3	37.3
Chemistry I and physics I	36.2	34.5	27.2	35.8
Chemistry II, physics II, or advanced biology	31.9	32.3	22.4	32.8
Cumulative academic GPA				
0.00–1.99	39.5	34.8	23.8	37.5
2.00–2.49	36.6	34.1	22.9	38.8
2.50–2.99	42.6	38.7	30.0	40.8
3.00–3.49	36.4	35.0	23.9	35.3
3.50–4.00	28.2	28.6	20.7	28.8
High school credential type				
High school diploma	36.6	34.2	24.8	36.2
GED, certificate of attendance, or other equivalency[6]	36.9	34.5	18.5	33.8
Postsecondary characteristics				
Timing of initial postsecondary enrollment				
Within 3 months following high school completion	36.8	35.0	25.2	36.3
4–12 months following high school completion	35.5	32.0	22.9	34.5
13 or more months following high school completion	36.2	31.9	22.1	35.7
Type of first-attended institution				
Public 4-year	35.5	34.3	23.8	34.9
Private nonprofit 4-year	34.9	36.3	28.4	35.4
Public 2-year	38.0	32.0	22.6	36.4
For-profit[7]	40.9	36.6	24.1	38.8
Other	46.9	37.7	37.2	60.4

See notes at end of table.

Table C-10a.
Among spring 2002 high school sophomores who reported ever taking out a student loan to pay for their postsecondary education, percentage indicating various impacts of student loan debt on their employment plans, by selected characteristics and student loan amount: 2012—Continued

Selected characteristics	Took a job outside field of study or training	Took a less desirable job	Had to work at more than one job at the same time	Had to work more hours than desired
Selectivity of first-attended institution[8]				
Highly selective 4-year institution	31.9	33.4	22.1	31.6
Moderately selective 4-year institution	35.3	35.3	26.8	36.7
Inclusive	39.4	36.0	25.7	36.0
Less-than-4-year institution	38.9	32.5	23.3	37.2
Highest postsecondary attainment at the time of the 2012 interview				
Some college but no postsecondary credential	40.3	34.6	23.4	36.6
Undergraduate certificate	36.1	30.7	22.8	37.1
Associate's degree	38.4	31.3	27.2	41.3
Bachelor's degree	36.6	36.9	25.1	35.3
Master's or higher degree	25.6	30.9	25.0	31.5
Total amount of student loans borrowed				
Less than $10,000	30.0	24.9	16.6	27.7
$10,000 to $24,999	35.0	30.3	23.0	33.4
$25,000 to $49,999	43.0	41.9	29.6	42.6
$50,000 or more	41.8	45.5	32.6	45.2

[1] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[2] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[3] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[4] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[5] Excludes about 15 percent of students with no or partial transcript information.

[6] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[7] Includes for-profit institutions at all levels.

[8] Selectivity categories are based on 2010 Carnegie classifications. "Highly selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the top fifth of baccalaureate institutions; "moderately selective" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores place them in roughly the middle two-fifths of baccalaureate institutions; and "inclusive" 4-year institutions refer to those whose first-year students' postsecondary entrance test scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement. Institutions with unclassified selectivity (i.e., those that do not have test score data) are included in the "Total" row but not displayed separately.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-10b.

Standard errors for table C-10a: Among spring 2002 high school sophomores who reported ever taking out a student loan to pay for their postsecondary education, percentage indicating various impacts of student loan debt on their employment plans, by selected characteristics and student loan amount: 2012

Selected characteristics	Took a job outside field of study or training	Took a less desirable job	Had to work at more than one job at the same time	Had to work more hours than desired
Total	**0.81**	**0.85**	**0.69**	**0.83**
Demographic characteristics				
Sex				
Male	1.25	1.28	1.07	1.24
Female	0.98	1.06	0.94	1.14
Race/ethnicity				
White	0.98	0.99	0.85	0.97
Black	2.10	2.00	1.81	2.07
Hispanic	2.37	2.25	2.16	2.27
Asian	2.34	2.39	1.90	2.26
Other	3.73	3.47	3.19	3.74
Highest education of parents				
High school diploma or less	1.60	1.63	1.58	1.56
Some college	1.34	1.45	1.23	1.34
Bachelor's or higher degree	1.11	1.18	0.89	1.20
Family SES in 10th grade				
Lowest quarter	1.77	1.76	1.70	1.95
Middle two quarters	1.07	1.17	1.07	1.17
Highest quarter	1.26	1.40	1.07	1.44
Family type in 10th grade				
Two-parent family	0.90	0.89	0.81	0.93
Single-parent family	1.64	1.73	1.43	1.77
Language student first learned to speak				
English	0.84	0.89	0.74	0.87
Non-English	2.12	2.08	1.92	2.29
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	3.02	2.96	2.85	3.03
High school diploma or less	4.20	4.15	3.67	4.00
Some college	2.61	2.68	2.42	3.07
Bachelor's or higher degree	0.88	0.98	0.80	0.94
Academic risk in 10th grade				
Low	1.67	1.63	1.37	1.70
Moderate	0.98	1.01	0.85	1.02
High	2.77	2.60	2.57	2.54
School disengagement in 10th grade				
Low	1.74	1.66	1.70	1.71
Moderate	1.18	1.21	0.97	1.19
High	1.94	1.80	1.67	1.86

See notes at end of table.

Table C-10b.
Standard errors for table C-10a: Among spring 2002 high school sophomores who reported ever taking out a student loan to pay for their postsecondary education, percentage indicating various impacts of student loan debt on their employment plans, by selected characteristics and student loan amount: 2012—Continued

Selected characteristics	Took a job outside field of study or training	Took a less desirable job	Had to work at more than one job at the same time	Had to work more hours than desired
School control in 10th grade				
Public	0.86	0.91	0.74	0.89
Private	1.28	1.56	1.32	1.49
Rigor of high school curriculum				
Below-standard	1.44	1.36	1.11	1.36
Standard	2.06	2.15	1.94	2.01
Moderately rigorous	1.36	1.47	1.27	1.39
Rigorous	2.53	2.58	2.35	2.63
Highest math course taken since grade 9				
No math, basic math, or pre-algebra	4.79	4.60	3.81	4.65
Algebra I, geometry, or algebra II	1.45	1.51	1.32	1.57
Trigonometry, statistics, or precalculus	1.43	1.37	1.24	1.32
Calculus	1.61	1.69	1.45	1.75
Highest science course taken since grade 9				
No science or low-level science	4.42	4.05	3.32	4.17
General biology	1.85	1.93	1.57	1.94
Chemistry I or physics I	1.44	1.50	1.37	1.63
Chemistry I and physics I	1.82	1.80	1.75	1.93
Chemistry II, physics II, or advanced biology	1.54	1.49	1.47	1.78
Cumulative academic GPA				
0.00–1.99	2.10	1.98	1.56	1.78
2.00–2.49	2.07	2.10	1.71	2.10
2.50–2.99	1.84	1.79	1.70	1.88
3.00–3.49	1.70	1.66	1.49	1.69
3.50–4.00	1.64	1.63	1.26	1.63
High school credential type				
High school diploma	0.83	0.88	0.72	0.86
GED, certificate of attendance, or other equivalency	3.84	3.87	3.13	3.74
Postsecondary characteristics				
Timing of initial postsecondary enrollment				
Within 3 months following high school completion	0.92	0.98	0.84	0.90
4−12 months following high school completion	2.14	2.13	1.64	2.16
13 or more months following high school completion	2.00	1.93	1.75	2.02
Type of first-attended institution				
Public 4-year	1.20	1.35	1.15	1.26
Private nonprofit 4-year	1.74	1.79	1.60	1.70
Public 2-year	1.56	1.59	1.44	1.91
For-profit	2.39	2.51	2.06	2.47
Other	7.93	8.09	7.81	7.61

See notes at end of table.

Table C-10b.
Standard errors for table C-10a: Among spring 2002 high school sophomores who reported ever taking out a student loan to pay for their postsecondary education, percentage indicating various impacts of student loan debt on their employment plans, by selected characteristics and student loan amount: 2012—Continued

Selected characteristics	Took a job outside field of study or training	Took a less desirable job	Had to work at more than one job at the same time	Had to work more hours than desired
Selectivity of first-attended institution				
Highly selective 4-year institution	1.62	1.67	1.26	1.64
Moderately selective 4-year institution	1.35	1.34	1.33	1.39
Inclusive	2.40	2.70	2.31	2.58
Less-than-4-year institution	1.42	1.51	1.22	1.59
Highest postsecondary attainment at the time of the 2012 interview				
Some college but no postsecondary credential	1.44	1.41	1.19	1.51
Undergraduate certificate	2.25	2.43	2.15	2.53
Associate's degree	2.67	2.43	2.41	2.64
Bachelor's degree	1.31	1.22	1.12	1.33
Master's or higher degree	2.09	2.12	1.97	2.22
Total amount of student loans borrowed				
$0.01 to $9,999	1.56	1.46	1.29	1.51
$10,000 to $24,999	1.45	1.39	1.21	1.37
$25,000 to $49,999	1.75	1.66	1.67	1.80
$50,000 or more	1.67	1.90	1.62	1.57

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-11a.
Percentage distribution of spring 2002 high school sophomores' marital status, by selected characteristics: 2012

Selected characteristics	Single never married[1]	Married	Divorced/ separated/ widowed[1]	Living with partner
Total	**45.6**	**28.2**	**3.3**	**22.9**
Demographic characteristics				
Sex				
Male	50.5	25.7	2.6	21.3
Female	40.9	30.7	4.0	24.4
Race/ethnicity[2]				
White	41.4	32.3	3.3	23.0
Black	59.7	14.1	3.2	23.0
Hispanic	44.5	28.7	4.2	22.6
Asian	62.7	18.0	1.5	17.7
Other	45.2	26.2	2.9	25.7
Highest education of parents				
High school diploma or less	41.5	30.5	3.7	24.4
Some college	42.4	30.0	3.8	23.9
Bachelor's or higher degree	51.4	25.0	2.7	20.9
Family SES in 10th grade				
Lowest quarter	42.1	30.0	3.5	24.3
Middle two quarters	43.2	29.6	3.8	23.5
Highest quarter	51.9	26.0	2.3	19.8
Family type in 10th grade				
Two-parent family	44.2	30.1	3.4	22.4
Single-parent family	48.5	24.3	3.2	24.0
Language student first learned to speak				
English	45.0	28.2	3.3	23.4
Non-English	48.9	28.1	3.2	19.8
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	43.4	27.5	3.5	25.6
High school diploma or less	42.2	24.9	4.4	28.4
Some college	42.1	31.4	3.7	22.8
Bachelor's or higher degree	46.1	29.0	3.2	21.8
Academic risk in 10th grade[3]				
Low	47.5	30.8	1.7	19.9
Moderate	44.8	28.6	3.4	23.2
High	47.7	23.9	4.4	24.0
School disengagement in 10th grade[4]				
Low	47.0	30.9	3.4	18.6
Moderate	44.5	30.0	3.1	22.4
High	43.6	25.3	3.5	27.6
School control in 10th grade				
Public	44.9	28.4	3.4	23.2
Private	53.7	25.6	1.8	18.9
Rigor of high school curriculum[5,6]				
Below-standard	43.1	28.5	3.7	24.7
Standard	45.9	28.7	3.7	21.7
Moderately rigorous	46.2	30.1	2.4	21.3
Rigorous	57.5	20.2	‡	21.1

See notes at end of table.

Table C-11a.
Percentage distribution of spring 2002 high school sophomores' marital status, by selected characteristics: 2012—Continued

Selected characteristics	Single never married[1]	Married	Divorced/ separated/ widowed[1]	Living with partner
Highest math course taken since grade 9[6]				
No math, basic math, or pre-algebra	45.1	25.9	4.1	24.9
Algebra I, geometry, or algebra II	41.9	29.5	4.2	24.4
Trigonometry, statistics, or precalculus	47.3	27.9	2.3	22.4
Calculus	53.6	27.4	1.0	18.0
Highest science course taken since grade 9[6]				
No science or low-level science	46.8	24.3	4.2	24.7
General biology	42.3	29.0	4.6	24.1
Chemistry I or physics I	43.2	29.9	3.1	23.8
Chemistry I and physics I	49.1	27.7	1.8 !	21.4
Chemistry II, physics II, or advanced biology	49.7	28.6	1.5	20.2
Cumulative academic GPA				
0.00–1.99	45.7	24.3	3.8	26.1
2.00–2.49	45.0	27.1	4.1	23.8
2.50–2.99	46.1	28.2	3.0	22.7
3.00–3.49	43.4	31.7	3.0	22.0
3.50–4.00	45.7	33.9	1.8	18.7
Highest educational attainment in 2012				
Less than high school	39.8	24.0	5.5	30.8
High school only	40.9	29.4	4.2	25.5
Some college but no postsecondary credential	45.5	26.1	3.8	24.5
Undergraduate certificate	40.6	30.8	5.4	23.2
Associate's degree	40.4	33.6	4.8	21.3
Bachelor's degree	50.6	28.1	1.3	20.0
Master's or higher degree	51.9	27.8	1.1 !	19.2

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.

[1] Not living with any partner.

[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[6] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-11b.

Standard errors for table C-11a: Percentage distribution of spring 2002 high school sophomores' marital status, by selected characteristics: 2012

Selected characteristics	Single never married	Married	Divorced/ separated/ widowed	Living with partner
Total	**0.58**	**0.56**	**0.19**	**0.46**
Demographic characteristics				
Sex				
Male	0.80	0.77	0.25	0.65
Female	0.83	0.76	0.30	0.65
Race/ethnicity				
White	0.72	0.77	0.27	0.63
Black	1.45	1.12	0.52	1.18
Hispanic	1.45	1.31	0.56	1.25
Asian	1.92	1.46	0.42	1.35
Other	2.34	1.97	0.81	2.15
Highest education of parents				
High school diploma or less	1.02	1.04	0.42	0.92
Some college	0.83	0.81	0.40	0.71
Bachelor's or higher degree	0.94	0.81	0.28	0.74
Family SES in 10th grade				
Lowest quarter	1.13	1.10	0.42	0.88
Middle two quarters	0.74	0.73	0.31	0.67
Highest quarter	1.09	0.96	0.36	0.96
Family type in 10th grade				
Two-parent family	0.65	0.60	0.24	0.54
Single-parent family	1.21	1.09	0.45	1.01
Language student first learned to speak				
English	0.62	0.63	0.21	0.50
Non-English	1.60	1.31	0.51	1.20
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	1.82	1.69	0.66	1.65
High school diploma or less	2.07	1.61	0.84	1.82
Some college	1.92	1.79	0.72	1.37
Bachelor's or higher degree	0.70	0.67	0.22	0.53
Academic risk in 10th grade				
Low	1.54	1.28	0.40	1.27
Moderate	0.68	0.67	0.22	0.55
High	1.50	1.26	0.65	1.28
School disengagement in 10th grade				
Low	1.29	1.20	0.48	0.93
Moderate	0.81	0.78	0.26	0.74
High	1.12	0.99	0.46	1.08
School control in 10th grade				
Public	0.63	0.61	0.21	0.48
Private	1.48	1.56	0.34	1.06
Rigor of high school curriculum				
Below-standard	0.89	0.92	0.32	0.76
Standard	1.67	1.51	0.59	1.24
Moderately rigorous	1.15	1.07	0.36	0.90
Rigorous	2.32	1.74	†	1.88

See notes at end of table.

Table C-11b.
Standard errors for table C-11a: Percentage distribution of spring 2002 high school sophomores' marital status, by selected characteristics: 2012—Continued

Selected characteristics	Single never married	Married	Divorced/ separated/ widowed	Living with partner
Highest math course taken since grade 9				
No math, basic math, or pre-algebra	2.12	1.91	0.98	1.64
Algebra I, geometry, or algebra II	0.92	0.90	0.28	0.70
Trigonometry, statistics, or precalculus	1.08	0.99	0.35	0.91
Calculus	1.76	1.43	0.29	1.28
Highest science course taken since grade 9				
No science or low-level science	2.05	1.79	0.81	1.72
General biology	1.15	1.18	0.49	0.89
Chemistry I or physics I	1.15	1.02	0.36	0.91
Chemistry I and physics I	1.62	1.55	0.56	1.22
Chemistry II, physics II, or advanced biology	1.62	1.36	0.36	1.35
Cumulative academic GPA				
0.00–1.99	1.12	0.86	0.45	0.96
2.00–2.49	1.29	1.09	0.50	1.21
2.50–2.99	1.45	1.20	0.43	1.07
3.00–3.49	1.37	1.26	0.46	1.06
3.50–4.00	1.67	1.50	0.38	1.28
Highest educational attainment in 2012				
Less than high school	2.93	2.64	1.41	2.93
High school only	1.60	1.50	0.61	1.48
Some college but no postsecondary credential	0.89	0.87	0.38	0.77
Undergraduate certificate	1.79	1.66	0.79	1.42
Associate's degree	1.90	1.76	0.80	1.48
Bachelor's degree	1.08	1.06	0.24	0.90
Master's or higher degree	2.01	1.71	0.47	1.66

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-12a.
Percentage of spring 2002 high school sophomores with children, and of parents, percentage who were single, by selected characteristics: 2012

Selected characteristics	Had children[1]		Single parent[2]
	No	Yes	
Total	**66.8**	**33.2**	**12.8**
Demographic characteristics			
Sex			
Male	74.2	25.8	6.7
Female	59.9	40.1	16.5
Race/ethnicity[3]			
White	71.4	28.6	10.4
Black	52.6	47.4	20.1
Hispanic	57.0	43.0	12.7
Asian	86.5	13.5	11.8
Other	62.8	37.2	11.7
Highest education of parents			
High school diploma or less	54.1	45.9	13.5
Some college	62.7	37.3	13.8
Bachelor's or higher degree	79.0	21.0	10.3
Family SES in 10th grade			
Lowest quarter	49.9	50.1	14.0
Middle two quarters	65.8	34.2	12.5
Highest quarter	84.1	15.9	8.0
Family type in 10th grade			
Two-parent family	68.6	31.4	12.0
Single-parent family	60.5	39.5	14.0
Language student first learned to speak			
English	67.3	32.7	12.8
Non-English	63.0	37.0	12.8
High school characteristics			
Student's educational expectations in 10th grade			
Do not know yet	58.8	41.2	13.1
High school diploma or less	50.8	49.2	11.7
Some college	51.9	48.1	13.5
Bachelor's or higher degree	71.4	28.6	12.3
Academic risk in 10th grade[4]			
Low	87.5	12.5	4.6 !
Moderate	65.9	34.1	12.6
High	47.5	52.5	15.9
School disengagement in 10th grade[5]			
Low	75.2	24.8	9.9
Moderate	68.8	31.2	11.8
High	55.1	44.9	14.2
School control in 10th grade			
Public	65.3	34.7	12.9
Private	83.7	16.3	11.7
Rigor of high school curriculum[6,7]			
Below-standard	59.5	40.5	12.0
Standard	68.5	31.5	16.3
Moderately rigorous	76.8	23.2	11.2
Rigorous	92.8	7.2	‡

See notes at end of table.

Table C-12a.
Percentage of spring 2002 high school sophomores with children, and of parents, percentage who were single, by selected characteristics: 2012—Continued

Selected characteristics	Had children[1]		Single parent[2]
	No	Yes	
Highest math course taken since grade 9[7]			
No math, basic math, or pre-algebra	47.3	52.7	14.5
Algebra I, geometry, or algebra II	57.9	42.1	13.1
Trigonometry, statistics, or precalculus	78.6	21.4	11.1
Calculus	89.7	10.3	4.1 !
Highest science course taken since grade 9[7]			
No science or low-level science	51.1	48.9	13.1
General biology	55.1	44.9	14.5
Chemistry I or physics I	69.5	30.5	10.9
Chemistry I and physics I	83.2	16.8	10.1
Chemistry II, physics II, or advanced biology	81.9	18.1	9.0
Cumulative academic GPA			
0.00–1.99	51.7	48.3	14.6
2.00–2.49	57.1	42.9	14.6
2.50–2.99	70.1	29.9	12.4
3.00–3.49	78.1	21.9	6.8
3.50–4.00	85.8	14.2	5.9
Highest educational attainment in 2012			
Less than high school	30.4	69.6	15.2
High school only	47.0	53.0	12.2
Some college but no postsecondary credential	59.5	40.5	14.0
Undergraduate certificate	51.6	48.4	14.3
Associate's degree	64.6	35.4	15.0
Bachelor's degree	87.2	12.8	5.5
Master's or higher degree	90.9	9.1	‡

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.

[1] Includes biological and adopted children.

[2] Denominator includes only cohort members who reported that they had children in 2012.

[3] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[4] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[5] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[6] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[7] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-12b.

Standard errors for table C-12a: Percentage of spring 2002 high school sophomores with children, and of parents, percentage who were single, by selected characteristics: 2012

Selected characteristics	Had children		Single parent
	No	Yes	
Total	**0.69**	**0.69**	**0.75**
Demographic characteristics			
Sex			
Male	0.84	0.84	0.87
Female	0.94	0.94	1.03
Race/ethnicity			
White	0.82	0.82	0.87
Black	1.67	1.67	1.87
Hispanic	1.71	1.71	1.66
Asian	1.56	1.56	3.45
Other	2.46	2.46	3.01
Highest education of parents			
High school diploma or less	1.15	1.15	1.14
Some college	1.06	1.06	1.18
Bachelor's or higher degree	0.82	0.82	1.21
Family SES in 10th grade			
Lowest quarter	1.36	1.36	1.21
Middle two quarters	0.92	0.92	1.06
Highest quarter	0.93	0.93	1.44
Family type in 10th grade			
Two-parent family	0.74	0.74	0.85
Single-parent family	1.30	1.30	1.31
Language student first learned to speak			
English	0.73	0.73	0.80
Non-English	1.63	1.63	1.79
High school characteristics			
Student's educational expectations in 10th grade			
Do not know yet	1.96	1.96	1.95
High school diploma or less	2.07	2.07	1.95
Some college	1.90	1.90	1.88
Bachelor's or higher degree	0.74	0.74	0.95
Academic risk in 10th grade			
Low	0.97	0.97	1.71
Moderate	0.77	0.77	0.86
High	1.53	1.53	1.68
School disengagement in 10th grade			
Low	1.12	1.12	1.37
Moderate	0.96	0.96	0.96
High	1.30	1.30	1.31
School control in 10th grade			
Public	0.74	0.74	0.78
Private	1.28	1.28	1.90
Rigor of high school curriculum			
Below-standard	1.03	1.03	0.99
Standard	1.53	1.53	2.22
Moderately rigorous	1.03	1.03	1.56
Rigorous	1.21	1.21	†

See notes at end of table.

Table C-12b.
Standard errors for table C-12a: Percentage of spring 2002 high school sophomores with children, and of parents, percentage who were single, by selected characteristics: 2012—Continued

Selected characteristics	Had children		Single parent
	No	Yes	
Highest math course taken since grade 9			
No math, basic math, or pre-algebra	2.48	2.48	2.16
Algebra I, geometry, or algebra II	1.05	1.05	1.18
Trigonometry, statistics, or precalculus	1.03	1.03	1.42
Calculus	1.06	1.06	1.81
Highest science course taken since grade 9			
No science or low-level science	1.96	1.96	1.98
General biology	1.29	1.29	1.30
Chemistry I or physics I	1.15	1.15	1.21
Chemistry I and physics I	1.29	1.29	2.06
Chemistry II, physics II, or advanced biology	1.26	1.26	2.08
Cumulative academic GPA			
0.00–1.99	1.11	1.11	1.25
2.00–2.49	1.50	1.50	1.44
2.50–2.99	1.40	1.40	1.76
3.00–3.49	1.21	1.21	1.55
3.50–4.00	1.11	1.11	1.73
Highest educational attainment in 2012			
Less than high school	3.20	3.20	2.80
High school only	1.75	1.75	1.50
Some college but no postsecondary credential	1.08	1.08	1.24
Undergraduate certificate	1.91	1.91	1.77
Associate's degree	1.88	1.88	2.39
Bachelor's degree	0.77	0.77	1.19
Master's or higher degree	1.37	1.37	†

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-13a.
Percentage distribution of spring 2002 high school sophomores' living arrangements and percentage who owned a home, by selected characteristics: 2012

Selected characteristics	Living with						Percent who owned a home
	Parents	Spouse/ partner[1]	Friends/ roommates[2]	Children[3]	Alone	Other	
Total	**22.7**	**42.3**	**10.0**	**2.8**	**18.8**	**3.4**	**20.5**
Demographic characteristics							
Sex							
Male	24.9	38.8	12.6	1.8	17.6	4.3	19.6
Female	20.7	45.6	7.5	3.8	19.9	2.6	21.4
Race/ethnicity[4]							
White	18.1	47.8	11.4	2.1	17.9	2.8	25.2
Black	28.3	30.1	6.8	5.7	24.9	4.2	8.9
Hispanic	32.2	35.0	6.8	3.3	18.4	4.3	14.9
Asian	39.2	25.8	11.6	1.9	15.4	6.1	11.9
Other	22.6	43.4	8.8	3.8	17.5	3.9	18.1
Highest education of parents							
High school diploma or less	26.2	43.0	5.8	4.0	17.6	3.4	21.5
Some college	22.0	45.3	7.6	3.3	18.1	3.7	21.5
Bachelor's or higher degree	20.9	39.3	14.8	1.6	20.2	3.1	19.0
Family SES in 10th grade							
Lowest quarter	25.9	42.0	4.7	5.0	19.1	3.3	19.3
Middle two quarters	22.4	44.8	8.7	2.8	18.0	3.3	22.2
Highest quarter	18.1	40.5	16.5	1.0	20.9	3.0	20.3
Family type in 10th grade							
Two-parent family	22.0	43.7	10.1	2.4	18.6	3.2	22.1
Single-parent family	22.5	40.3	9.1	4.4	20.3	3.4	17.3
Language student first learned to speak							
English	21.0	43.7	10.5	2.9	18.8	3.1	21.3
Non-English	33.7	33.1	6.5	2.7	18.8	5.1	15.7
High school characteristics							
Student's educational expectations in 10th grade							
Do not know yet	26.6	43.6	5.8	3.4	17.3	3.3	18.0
High school diploma or less	26.2	42.4	5.3	4.7	16.2	5.2	18.6
Some college	23.8	45.7	6.3	5.4	16.3	2.4	23.6
Bachelor's or higher degree	20.9	42.6	11.3	2.2	19.9	3.1	21.3
Academic risk in 10th grade[5]							
Low	12.8	46.3	18.0	0.6 !	19.9	2.5	22.9
Moderate	23.6	42.4	9.2	2.8	18.7	3.3	21.1
High	29.3	37.2	4.6	5.9	17.9	5.1	14.5
School disengagement in 10th grade[6]							
Low	21.9	41.8	10.2	1.7	20.9	3.5	23.3
Moderate	21.4	43.5	10.6	2.6	18.7	3.3	22.1
High	23.3	44.4	7.6	4.2	17.8	2.7	16.9
School control in 10th grade							
Public	22.8	42.6	9.4	3.0	18.7	3.4	20.6
Private	21.6	38.6	15.8	1.3	19.6	3.1	19.4
Rigor of high school curriculum[7,8]							
Below-standard	23.3	43.1	8.2	3.5	18.6	3.3	19.6
Standard	24.5	41.6	8.3	4.1	18.6	3.0	22.5
Moderately rigorous	21.1	42.9	12.0	1.6	18.4	4.0	23.7
Rigorous	17.8	38.1	20.9	‡	20.3	2.8	16.0

See notes at end of table.

Table C-13a.
Percentage distribution of spring 2002 high school sophomores' living arrangements and percentage who owned a home, by selected characteristics: 2012—Continued

Selected characteristics	Living with						Percent who owned a home
	Parents	Spouse/ partner[1]	Friends/ roommates[2]	Children[3]	Alone	Other	
Highest math course taken since grade 9[8]							
No math, basic math, or pre-algebra	28.1	39.5	4.9	6.0	15.6	5.9	14.6
Algebra I, geometry, or algebra II	24.6	43.3	7.0	3.9	18.1	3.0	20.6
Trigonometry, statistics, or precalculus	21.6	42.8	12.1	1.4	18.9	3.3	22.6
Calculus	14.0	40.4	19.6	0.6 !	22.0	3.4	22.0
Highest science course taken since grade 9[8]							
No science or low-level science	29.5	36.6	6.6	5.0	17.2	5.0	16.2
General biology	24.4	42.2	6.7	4.5	18.8	3.4	20.3
Chemistry I or physics I	22.0	44.6	9.5	2.4	18.3	3.2	23.1
Chemistry I and physics I	20.8	42.6	14.4	0.9	18.7	2.6	20.5
Chemistry II, physics II, or advanced biology	17.5	42.7	15.4	1.2	19.8	3.5	21.8
Cumulative academic GPA							
0.00–1.99	28.3	39.4	6.2	4.5	17.4	4.3	14.6
2.00–2.49	24.4	42.2	8.5	4.1	17.9	2.9	20.4
2.50–2.99	25.1	41.5	9.0	2.6	18.8	3.0	20.6
3.00–3.49	18.8	44.8	12.5	1.3	19.2	3.5	25.7
3.50–4.00	12.5	46.7	16.2	0.8	21.2	2.5	26.1
Highest educational attainment in 2012							
Less than high school	28.0	42.7	2.7 !	5.9	14.3	6.3 !	10.7
High school only	27.3	44.0	5.8	4.5	14.4	4.0	19.6
Some college but no postsecondary credential	25.5	40.5	7.5	3.8	19.2	3.6	16.1
Undergraduate certificate	21.2	44.4	6.6	3.8	20.3	3.7	22.1
Associate's degree	22.9	45.6	7.4	3.6	18.1	2.4	29.2
Bachelor's degree	19.6	42.0	15.9	0.7	18.9	2.9	23.2
Master's or higher degree	14.6	42.0	15.4	‡	24.5	2.9	22.0

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.

[1] Living with spouse/partner and not living with parents.

[2] Living with friends/roommates and not living with parents, spouse/partner, children, or siblings.

[3] Living with children and not living with parents or spouse/partner.

[4] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[5] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[6] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[7] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[8] Excludes about 15 percent of students with no or partial transcript information.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-13b.

Standard errors for table C-13a: Percentage distribution of spring 2002 high school sophomores' living arrangements and percentage who owned a home, by selected characteristics: 2012

Selected characteristics	Living with						Percent who owned a home
	Parents	Spouse/ partner	Friends/ roommates	Children	Alone	Other	
Total	**0.56**	**0.61**	**0.39**	**0.19**	**0.40**	**0.20**	**0.51**
Demographic characteristics							
Sex							
Male	0.78	0.78	0.61	0.22	0.66	0.30	0.72
Female	0.66	0.82	0.41	0.30	0.58	0.26	0.68
Race/ethnicity							
White	0.67	0.82	0.53	0.20	0.54	0.25	0.71
Black	1.51	1.59	0.85	0.69	1.37	0.62	0.98
Hispanic	1.51	1.48	0.78	0.59	1.18	0.67	1.10
Asian	1.92	1.83	1.09	0.53	1.46	0.89	1.36
Other	2.26	2.51	1.56	0.98	1.99	0.92	1.95
Highest education of parents							
High school diploma or less	0.96	1.23	0.59	0.42	0.83	0.40	0.87
Some college	0.90	0.97	0.47	0.35	0.79	0.34	0.85
Bachelor's or higher degree	0.86	0.92	0.73	0.23	0.64	0.30	0.70
Family SES in 10th grade							
Lowest quarter	1.06	1.15	0.53	0.52	0.94	0.42	0.94
Middle two quarters	0.69	0.88	0.47	0.28	0.68	0.28	0.75
Highest quarter	1.00	1.10	0.86	0.20	0.89	0.37	0.90
Family type in 10th grade							
Two-parent family	0.64	0.69	0.43	0.19	0.47	0.22	0.54
Single-parent family	1.03	1.23	0.71	0.51	1.09	0.41	1.00
Language student first learned to speak							
English	0.62	0.68	0.42	0.19	0.45	0.22	0.59
Non-English	1.54	1.44	0.74	0.45	1.30	0.65	1.32
High school characteristics							
Student's educational expectations in 10th grade							
Do not know yet	1.83	2.08	1.00	0.76	1.52	0.68	1.50
High school diploma or less	2.09	2.32	1.01	0.95	1.65	0.94	1.71
Some college	1.66	2.04	0.95	0.88	1.48	0.51	1.45
Bachelor's or higher degree	0.64	0.69	0.47	0.20	0.54	0.22	0.59
Academic risk in 10th grade							
Low	1.00	1.49	1.06	0.20	1.12	0.45	1.24
Moderate	0.63	0.73	0.45	0.22	0.47	0.23	0.60
High	1.60	1.56	0.74	0.76	1.33	0.70	1.09
School disengagement in 10th grade							
Low	1.05	1.25	0.76	0.28	0.97	0.46	1.02
Moderate	0.73	0.76	0.59	0.29	0.64	0.28	0.73
High	1.10	1.22	0.67	0.47	0.97	0.32	0.97
School control in 10th grade							
Public	0.60	0.66	0.43	0.21	0.43	0.21	0.55
Private	1.12	1.32	0.95	0.28	0.87	0.36	1.13
Rigor of high school curriculum							
Below-standard	0.87	0.94	0.52	0.31	0.69	0.35	0.86
Standard	1.54	1.69	0.91	0.69	1.04	0.50	1.23
Moderately rigorous	0.94	1.16	0.81	0.29	0.82	0.45	1.05
Rigorous	1.87	2.30	1.86	†	1.74	0.76	1.48

See notes at end of table.

Table C-13b.
Standard errors for table C-13a: Percentage distribution of spring 2002 high school sophomores' living arrangements and percentage who owned a home, by selected characteristics: 2012—Continued

Selected characteristics	Living with						Percent who owned a home
	Parents	Spouse/ partner	Friends/ roommates	Children	Alone	Other	
Highest math course taken since grade 9							
No math, basic math, or pre-algebra	2.23	2.33	1.16	1.13	1.66	1.15	1.70
Algebra I, geometry, or algebra II	0.91	1.04	0.52	0.38	0.69	0.32	0.88
Trigonometry, statistics, or precalculus	0.90	1.11	0.74	0.23	0.83	0.37	0.92
Calculus	1.23	1.60	1.35	0.23	1.30	0.58	1.29
Highest science course taken since grade 9							
No science or low-level science	2.12	2.15	1.13	0.98	1.56	1.02	1.52
General biology	1.06	1.33	0.63	0.55	0.96	0.45	1.05
Chemistry I or physics I	0.94	1.15	0.70	0.31	0.87	0.38	1.12
Chemistry I and physics I	1.44	1.51	1.18	0.25	1.05	0.49	1.19
Chemistry II, physics II, or advanced biology	1.18	1.71	1.05	0.28	1.12	0.51	1.15
Cumulative academic GPA							
0.00–1.99	1.15	1.31	0.62	0.46	0.88	0.54	0.86
2.00–2.49	1.29	1.30	0.95	0.53	1.00	0.46	1.08
2.50–2.99	1.33	1.59	0.83	0.44	1.10	0.46	1.07
3.00–3.49	1.00	1.47	0.95	0.30	1.10	0.47	1.06
3.50–4.00	1.05	1.66	1.05	0.24	1.18	0.47	1.35
Highest educational attainment in 2012							
Less than high school	3.09	3.42	1.05	1.68	2.47	1.99	1.99
High school only	1.64	1.66	0.85	0.69	1.11	0.73	1.56
Some college but no postsecondary credential	0.97	1.03	0.61	0.38	0.70	0.38	0.74
Undergraduate certificate	1.78	1.88	0.98	0.73	1.63	0.68	1.62
Associate's degree	1.69	1.96	1.18	0.71	1.55	0.59	1.79
Bachelor's degree	0.98	1.13	0.82	0.17	0.77	0.36	0.94
Master's or higher degree	1.52	2.13	1.53	†	1.85	0.68	1.61

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-14a.

Percentage distribution of spring 2002 high school sophomores' employment status and percentage who had ever served in the military, by selected characteristics: 2012

Selected characteristics	Employed			Unemployed	Out of the labor force	Ever served in the military
	Total	Worked 35 or more hours/ week	Worked 1–34 hours/ week			
Total	**82.0**	**68.9**	**13.1**	**11.1**	**6.9**	**5.9**
Highest educational attainment in 2012						
Less than high school	63.3	51.2	12.1	25.9	10.9	‡
High school only	75.5	62.1	13.5	15.2	9.3	6.2
GED, certificate of attendance, or other equivalency[1]	71.2	52.9	18.3	21.1	7.7	‡
High school diploma	76.4	64.0	12.4	13.9	9.7	6.8
Some college but no postsecondary credential	78.7	63.9	14.8	14.2	7.1	9.5
Still enrolled in 2012	77.5	57.6	19.9	13.6	8.8	12.4
Not enrolled in 2012	79.4	67.6	11.8	14.5	6.2	7.8
Undergraduate certificate	81.1	68.0	13.2	11.8	7.0	5.2
Associate's degree	85.3	70.8	14.5	9.7	5.0	7.3
Bachelor's degree	88.8	77.6	11.2	5.1	6.1	3.2
Master's or higher degree	89.8	79.9	10.0	5.8	4.4	1.8 !
Demographic characteristics						
Sex						
Male	85.7	74.9	10.8	10.4	3.9	10.1
Female	78.4	63.2	15.3	11.8	9.8	2.1
Race/ethnicity[2]						
White	84.7	72.9	11.8	7.9	7.4	6.0
Black	78.7	62.9	15.8	18.0	3.3	5.7
Hispanic	77.9	64.2	13.7	15.5	6.6	4.9
Asian	77.2	61.1	16.1	12.7	10.1	3.2
Other	76.0	60.1	15.9	15.1	8.9	10.3
Highest education of parents						
High school diploma or less	79.2	66.1	13.1	13.3	7.5	5.1
Some college	82.1	69.4	12.6	12.0	6.0	7.0
Bachelor's or higher degree	84.0	70.5	13.5	8.8	7.3	5.6
Family SES in 10th grade						
Lowest quarter	76.7	62.7	14.0	15.2	8.0	4.9
Middle two quarters	84.0	71.2	12.8	10.0	5.9	7.1
Highest quarter	85.4	73.3	12.1	6.9	7.7	5.1
Family type in 10th grade						
Two-parent family	83.0	70.5	12.5	9.9	7.1	6.2
Single-parent family	80.7	66.0	14.7	13.2	6.1	5.4
Language student first learned to speak						
English	82.8	70.0	12.8	10.5	6.7	6.2
Non-English	77.0	62.4	14.5	15.1	7.9	4.0

See notes at end of table.

Table C-14a.
Percentage distribution of spring 2002 high school sophomores' employment status and percentage who had ever served in the military, by selected characteristics: 2012—Continued

Selected characteristics	Employed			Unemployed	Out of the labor force	Ever served in the military
	Total	Worked 35 or more hours/ week	Worked 1–34 hours/ week			
High school characteristics						
Student's educational expectations in 10th grade						
Do not know yet	77.3	60.4	16.9	14.8	7.9	7.4
High school diploma or less	74.0	61.8	12.2	18.2	7.8	5.4
Some college	81.5	69.1	12.3	11.3	7.2	7.8
Bachelor's or higher degree	84.4	71.8	12.6	9.0	6.6	5.7
Academic risk in 10th grade[3]						
Low	85.6	74.3	11.4	5.1	9.2	3.9
Moderate	82.8	69.6	13.2	10.7	6.5	6.7
High	74.3	60.3	13.9	19.3	6.4	4.2
School disengagement in 10th grade[4]						
Low	85.9	73.4	12.5	8.0	6.0	5.7
Moderate	83.5	70.5	13.0	9.2	7.3	5.3
High	79.2	66.3	12.9	14.5	6.3	7.8
School control in 10th grade						
Public	81.8	68.6	13.2	11.5	6.8	6.1
Private	84.5	72.9	11.5	7.0	8.6	3.7
Rigor of high school curriculum[5,6]						
Below-standard	79.4	65.7	13.7	13.3	7.3	6.1
Standard	81.1	69.9	11.1	12.5	6.4	5.9
Moderately rigorous	87.5	75.1	12.4	6.7	5.8	6.0
Rigorous	87.4	77.1	10.3	4.2	8.4	2.8
Highest math course taken since grade 9[6]						
No math, basic math, or pre-algebra	67.2	54.4	12.8	24.5	8.3	4.8
Algebra I, geometry, or algebra II	80.6	67.0	13.6	12.2	7.1	6.9
Trigonometry, statistics, or precalculus	87.3	74.8	12.5	7.1	5.6	5.5
Calculus	86.7	77.2	9.5	5.2	8.1	3.2
Highest science course taken since grade 9[6]						
No science or low-level science	72.7	57.5	15.2	18.9	8.4	6.6
General biology	78.0	66.3	11.7	14.8	7.2	7.1
Chemistry I or physics I	86.4	72.4	14.0	8.1	5.6	5.5
Chemistry I and physics I	86.2	74.8	11.4	6.8	7.1	4.8
Chemistry II, physics II, or advanced biology	84.7	72.9	11.8	7.7	7.6	4.5
Cumulative academic GPA						
0.00–1.99	76.4	62.9	13.6	17.5	6.1	7.6
2.00–2.49	80.2	66.7	13.5	12.9	6.9	7.8
2.50–2.99	84.4	70.3	14.1	8.9	6.7	5.7
3.00–3.49	87.3	75.1	12.2	6.0	6.7	3.9
3.50–4.00	86.0	75.8	10.2	5.2	8.7	3.3
Marital status in 2012						
Single never married[7]	81.7	66.4	15.4	13.1	5.1	4.3
Married	80.6	70.5	10.1	7.9	11.5	8.5
Divorced/separated/widowed[7]	79.5	66.8	12.7	17.1	3.4 !	19.8
Living with partner	84.4	72.0	12.4	10.3	5.3	3.8
Number of children had in 2012						
None	86.2	72.7	13.5	8.9	4.8	5.2
One or more[8]	73.2	60.1	13.1	15.5	11.3	6.2

See notes at end of table.

Table C-14a.
Percentage distribution of spring 2002 high school sophomores' employment status and percentage who had ever served in the military, by selected characteristics: 2012—Continued

! Interpret data with caution.

‡ Reporting standards not met.

[1] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[6] Excludes about 15 percent of students with no or partial transcript information.

[7] Not living with any partner.

[8] Includes biological and adopted children.

NOTE: Persons are classified as employed if they currently have a job; unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work; or out of the labor force if they are neither working nor looking for work. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-14b.

Standard errors for table C-14a: Percentage distribution of spring 2002 high school sophomores' employment status and percentage who had ever served in the military, by selected characteristics: 2012

Selected characteristics	Employed			Unemployed	Out of the labor force	Ever served in the military
	Total	Worked 35 or more hours/ week	Worked 1–34 hours/ week			
Total	**0.47**	**0.54**	**0.35**	**0.40**	**0.26**	**0.30**
Highest educational attainment in 2012						
Less than high school	2.75	2.86	1.92	2.89	2.15	†
High school only	1.47	1.72	1.07	1.25	0.95	0.99
GED, certificate of attendance, or other equivalency	3.65	3.89	3.72	3.19	2.15	†
High school diploma	1.54	1.79	1.04	1.32	1.03	1.10
Some college but no postsecondary credential	0.78	0.91	0.61	0.71	0.48	0.61
Still enrolled in 2012	1.40	1.56	1.20	1.14	0.84	1.14
Not enrolled in 2012	0.93	1.25	0.81	0.88	0.55	0.69
Undergraduate certificate	1.26	1.51	1.08	1.17	0.77	0.92
Associate's degree	1.43	1.70	1.38	1.27	0.78	1.12
Bachelor's degree	0.58	0.82	0.65	0.43	0.46	0.45
Master's or higher degree	1.14	1.56	1.25	0.94	0.76	0.61
Demographic characteristics						
Sex						
Male	0.65	0.68	0.46	0.58	0.30	0.53
Female	0.68	0.77	0.54	0.52	0.43	0.22
Race/ethnicity						
White	0.50	0.66	0.47	0.41	0.35	0.38
Black	1.28	1.62	1.11	1.34	0.49	0.79
Hispanic	1.39	1.36	0.87	1.06	0.75	0.71
Asian	1.47	1.49	1.14	1.29	1.07	0.73
Other	1.95	2.16	1.80	1.74	1.37	1.60
Highest education of parents						
High school diploma or less	0.74	0.84	0.60	0.71	0.50	0.53
Some college	0.78	0.94	0.66	0.69	0.44	0.54
Bachelor's or higher degree	0.68	0.83	0.59	0.57	0.43	0.45
Family SES in 10th grade						
Lowest quarter	0.87	1.01	0.79	0.81	0.57	0.50
Middle two quarters	0.57	0.74	0.55	0.49	0.36	0.43
Highest quarter	0.80	0.98	0.70	0.58	0.60	0.56
Family type in 10th grade						
Two-parent family	0.49	0.60	0.42	0.39	0.30	0.36
Single-parent family	0.96	1.16	0.80	0.87	0.59	0.53
Language student first learned to speak						
English	0.50	0.59	0.38	0.43	0.28	0.32
Non-English	1.33	1.30	0.92	1.18	0.78	0.71

See notes at end of table.

Table C-14b.
Standard errors for table C-14a: Percentage distribution of spring 2002 high school sophomores' employment status and percentage who had ever served in the military, by selected characteristics: 2012—Continued

Selected characteristics	Employed			Unemployed	Out of the labor force	Ever served in the military
	Total	Worked 35 or more hours/ week	Worked 1–34 hours/ week			
High school characteristics						
Student's educational expectations in 10th grade						
Do not know yet	1.51	1.95	1.41	1.35	0.96	0.98
High school diploma or less	1.67	1.86	1.36	1.50	1.14	0.95
Some college	1.44	1.66	1.09	1.18	0.75	1.11
Bachelor's or higher degree	0.46	0.58	0.42	0.40	0.31	0.32
Academic risk in 10th grade						
Low	0.97	1.21	0.88	0.66	0.78	0.61
Moderate	0.58	0.62	0.41	0.47	0.31	0.34
High	1.32	1.54	1.09	1.22	0.72	0.71
School disengagement in 10th grade						
Low	0.83	1.08	0.77	0.67	0.56	0.54
Moderate	0.61	0.77	0.54	0.49	0.38	0.45
High	0.99	0.98	0.78	0.83	0.55	0.67
School control in 10th grade						
Public	0.50	0.58	0.38	0.43	0.28	0.32
Private	0.76	1.03	0.62	0.60	0.64	0.49
Rigor of high school curriculum						
Below-standard	0.80	0.89	0.60	0.67	0.47	0.46
Standard	1.12	1.29	0.87	1.10	0.78	0.72
Moderately rigorous	0.70	0.96	0.68	0.60	0.50	0.58
Rigorous	1.36	1.71	1.20	0.90	1.13	0.61
Highest math course taken since grade 9						
No math, basic math, or pre-algebra	2.09	2.12	1.38	2.07	1.25	1.07
Algebra I, geometry, or algebra II	0.71	0.85	0.65	0.57	0.47	0.49
Trigonometry, statistics, or precalculus	0.72	0.88	0.64	0.59	0.44	0.49
Calculus	1.00	1.29	0.85	0.67	0.80	0.54
Highest science course taken since grade 9						
No science or low-level science	1.97	2.13	1.40	1.83	0.98	1.16
General biology	1.08	1.15	0.64	0.93	0.60	0.64
Chemistry I or physics I	0.77	1.02	0.78	0.65	0.49	0.52
Chemistry I and physics I	1.12	1.38	0.82	0.77	0.87	0.74
Chemistry II, physics II, or advanced biology	0.96	1.31	0.91	0.76	0.64	0.62
Cumulative academic GPA						
0.00–1.99	0.95	1.10	0.77	0.94	0.52	0.67
2.00–2.49	1.09	1.25	0.89	0.93	0.65	0.67
2.50–2.99	1.05	1.26	0.95	0.75	0.63	0.62
3.00–3.49	0.91	1.14	0.85	0.64	0.64	0.55
3.50–4.00	0.98	1.17	0.84	0.71	0.77	0.51
Marital status in 2012						
Single never married	0.66	0.80	0.57	0.61	0.31	0.32
Married	0.89	1.03	0.60	0.61	0.66	0.67
Divorced/separated/widowed	2.49	2.92	2.02	2.38	1.13	2.53
Living with partner	0.80	1.01	0.74	0.68	0.54	0.47
Number of children had in 2012						
None	0.47	0.64	0.48	0.43	0.27	0.33
One or more	0.92	1.02	0.67	0.79	0.58	0.49

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-15a.

Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012

Selected characteristics	Business/ management occupations	STEM occupations[1]	Health care occupations	PK–12 educators/ social service professionals[2]	Sales occupations	Business support/ administrative assistants	Trade/ technical occupations	Other[3]
Total	**13.5**	**5.9**	**10.2**	**6.4**	**7.9**	**16.5**	**32.4**	**7.2**
Highest educational attainment in 2012								
Less than high school	8.0	#	3.1 !	‡	7.6	15.2	64.5	‡
High school only	7.2	1.0 !	3.4	0.8 !	9.4	18.6	57.2	2.3
GED, certificate of attendance, or other equivalency[4]	‡	‡	6.7 !	#	11.7	20.1	53.8	‡
High school diploma	8.0	0.9 !	2.7	1.0 !	9.0	18.3	57.9	2.2
Some college but no postsecondary credential	12.4	3.5	5.9	3.0	9.8	19.9	41.2	4.4
Still enrolled in 2012	12.1	3.6	8.1	4.7	8.9	21.3	37.0	4.3
Not enrolled in 2012	12.5	3.4	4.6	2.1	10.4	19.1	43.5	4.4
Undergraduate certificate	8.5	1.9	22.9	2.4	5.4	14.9	41.1	2.9
Associate's degree	9.7	4.9	17.7	3.2	7.9	20.6	30.1	5.9
Bachelor's degree	20.7	12.3	8.2	11.0	7.7	13.9	14.6	11.5
Master's or higher degree	13.7	7.8	23.1	23.8	1.2 !	6.5	4.5	19.5
Demographic characteristics								
Sex								
Male	14.1	8.7	3.7	3.0	7.8	11.5	45.2	6.0
Female	13.0	3.0	16.9	10.1	8.0	21.7	18.9	8.5
Race/ethnicity[5]								
White	14.8	7.2	10.5	6.8	7.6	14.3	30.6	8.1
Black	10.4	3.4	9.9	6.5	7.8	19.7	36.6	5.7
Hispanic	10.4	2.8	8.3	5.9	8.9	22.9	35.5	5.4
Asian	17.5	9.3	14.6	5.0	7.7	17.7	20.3	8.1
Other	12.9	4.1	9.1	4.1	8.1	14.5	42.6	4.7
Highest education of parents								
High school diploma or less	9.8	3.4	9.8	4.9	8.6	19.4	40.4	3.8
Some college	12.9	5.0	10.0	6.3	7.1	17.9	34.9	5.9
Bachelor's or higher degree	16.7	8.5	10.6	7.6	8.0	13.3	24.7	10.7

See notes at end of table.

Table C-15a.
Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012—Continued

Selected characteristics	Business/ management occupations	STEM occupations[1]	Health care occupations	PK–12 educators/ social service professionals[2]	Sales occupations	Business support/ administrative assistants	Trade/ technical occupations	Other[3]
Family SES in 10th grade								
Lowest quarter	9.0	3.0	10.4	5.0	8.2	18.8	41.8	3.9
Middle two quarters	13.0	5.2	10.1	5.9	7.7	17.8	34.2	6.1
Highest quarter	18.7	9.7	10.1	8.9	7.8	11.8	20.6	12.3
Family type in 10th grade								
Two-parent family	13.7	6.2	10.3	6.7	7.7	16.2	31.4	7.7
Single-parent family	12.8	4.7	9.6	5.7	8.3	17.1	36.3	5.4
Language student first learned to speak								
English	13.7	6.0	10.1	6.7	7.9	15.9	32.4	7.3
Non-English	12.5	5.2	10.6	5.0	7.4	20.6	32.1	6.5
High school characteristics								
Student's educational expectations in 10th grade								
Do not know yet	10.6	3.3	6.7	5.5	9.4	17.5	41.8	5.3
High school diploma or less	9.2	2.1	3.3	1.9 !	8.0	14.1	57.8	3.5
Some college	11.7	2.9	7.9	2.6	7.6	13.9	49.9	3.6
Bachelor's or higher degree	14.6	7.0	11.5	7.6	7.7	16.9	26.4	8.3
Academic risk in 10th grade[6]								
Low	17.7	13.9	14.1	10.3	5.0	11.4	13.0	14.6
Moderate	13.5	5.0	10.0	6.4	8.5	17.2	33.0	6.5
High	9.1	1.7	6.6	2.2	7.9	18.5	51.2	2.9
School disengagement in 10th grade[7]								
Low	12.9	8.1	12.9	8.7	7.5	14.1	26.5	9.2
Moderate	13.9	6.5	10.4	7.0	7.6	17.4	29.9	7.3
High	13.4	2.5	7.3	3.6	8.7	16.6	43.4	4.5
School control in 10th grade								
Public	13.1	5.8	10.0	6.3	7.9	16.8	33.4	6.8
Private	19.0	7.5	11.9	8.4	7.6	13.3	20.5	11.8

See notes at end of table.

Table C-15a.
Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012—Continued

Selected characteristics	Business/ management occupations	STEM occupations[1]	Health care occupations	PK–12 educators/ social service professionals[2]	Sales occupations	Business support/ administrative assistants	Trade/ technical occupations	Other[3]
Rigor of high school curriculum[8,9]								
Below-standard	12.1	4.6	8.0	4.8	8.7	16.8	40.0	5.1
Standard	13.4	5.9	11.8	6.0	5.8	17.5	32.5	7.1
Moderately rigorous	16.1	6.3	13.0	9.8	7.7	15.9	21.9	9.2
Rigorous	19.2	15.2	14.1	10.1	4.6	9.4	12.6	14.9
Highest math course taken since grade 9[9]								
No math, basic math, or pre-algebra	7.1	2.0 !	4.8	2.1 !	9.9	17.3	54.5	2.4 !
Algebra I, geometry, or algebra II	11.6	2.8	9.1	4.6	8.8	18.4	39.4	5.3
Trigonometry, statistics, or precalculus	16.4	6.7	12.2	10.4	6.8	15.4	23.7	8.3
Calculus	18.9	17.8	13.8	7.5	4.7	10.2	13.1	14.0
Highest science course taken since grade 9[8]								
No science or low-level science	9.2	2.6	4.1	1.2 !	7.3	16.2	56.3	3.1
General biology	10.8	2.7	9.7	3.4	8.4	17.7	42.6	4.6
Chemistry I or physics I	14.9	3.9	11.6	9.0	8.6	17.9	27.4	6.7
Chemistry I and physics I	16.4	10.6	9.7	9.5	7.1	14.1	21.1	11.6
Chemistry II, physics II, or advanced biology	16.9	13.5	13.8	8.4	5.7	12.3	18.9	10.4
Cumulative academic GPA								
0.00–1.99	10.5	2.7	6.6	2.1	8.8	16.4	49.4	3.5
2.00–2.49	12.0	3.4	7.6	4.2	8.4	18.8	41.0	4.7
2.50–2.99	13.0	5.4	10.3	7.6	10.0	18.1	29.0	6.4
3.00–3.49	18.0	8.3	12.3	8.8	6.7	15.5	20.7	9.7
3.50–4.00	17.5	12.4	16.4	12.3	4.0	12.0	11.9	13.6
Marital status in 2012								
Single never married[10]	13.6	6.6	9.1	6.5	9.0	16.5	31.0	7.8
Married	12.7	6.1	12.6	8.2	5.7	15.9	32.7	6.2
Divorced/separated/widowed[10]	10.1	4.8 !	8.5	2.8 !	9.6	19.6	38.7	5.8
Living with partner	14.9	4.7	9.6	4.8	8.1	16.6	34.0	7.3
Number of children had in 2012								
None	15.4	7.2	10.1	7.4	7.5	15.6	27.7	9.0
One or more[11]	10.2	3.3	10.9	5.6	8.6	18.4	39.6	3.6

See notes at end of table.

Table C-15a.
Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012—Continued

Rounds to zero.
! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
[1] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.
[2] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.
[3] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.
[4] A General Educational Development certificate (GED) is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.
[5] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[6] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[7] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[8] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.
[9] Excludes about 15 percent of students with no or partial transcript information.
[10] Not living with any partner.
[11] Includes biological and adopted children.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-15b.

Standard errors for table C-15a: Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012

Selected characteristics	Business/ management occupations	STEM occupations	Health care occupations	PK–12 educators/ social service professionals	Sales occupations	Business support/ administrative assistants	Trade/ technical occupations	Other
Total	**0.45**	**0.31**	**0.38**	**0.30**	**0.31**	**0.46**	**0.65**	**0.34**
Highest educational attainment in 2012								
Less than high school	2.02	†	1.47	†	1.64	3.06	3.71	†
High school only	1.03	0.39	0.71	0.31	1.12	1.40	1.88	0.59
GED, certificate of attendance, or other equivalency	†	†	2.72	†	3.28	3.88	5.21	†
High school diploma	1.09	0.39	0.61	0.37	1.20	1.59	2.05	0.63
Some college but no postsecondary credential	0.72	0.42	0.58	0.34	0.65	0.92	1.13	0.43
Still enrolled in 2012	1.36	0.69	1.02	0.76	0.93	1.50	1.91	0.76
Not enrolled in 2012	0.95	0.52	0.67	0.34	0.77	1.04	1.42	0.56
Undergraduate certificate	1.03	0.52	1.57	0.60	0.84	1.28	1.86	0.63
Associate's degree	1.21	0.91	1.80	0.73	1.08	1.76	1.75	1.20
Bachelor's degree	0.88	0.72	0.60	0.75	0.65	0.78	0.78	0.71
Master's or higher degree	1.50	1.27	1.68	1.75	0.38	1.24	0.94	1.76
Demographic characteristics								
Sex								
Male	0.58	0.50	0.30	0.28	0.45	0.53	0.86	0.41
Female	0.63	0.32	0.68	0.53	0.47	0.73	0.74	0.49
Race/ethnicity								
White	0.58	0.42	0.52	0.40	0.38	0.53	0.78	0.44
Black	1.04	0.58	1.06	0.82	0.79	1.24	1.61	0.75
Hispanic	0.96	0.47	0.91	0.84	0.84	1.24	1.64	0.80
Asian	1.80	1.14	1.36	0.84	1.07	1.50	1.87	1.11
Other	1.86	1.05	1.36	1.07	1.43	2.07	2.87	1.18
Highest education of parents								
High school diploma or less	0.74	0.49	0.66	0.52	0.62	0.94	1.23	0.44
Some college	0.78	0.47	0.63	0.49	0.51	0.80	0.95	0.51
Bachelor's or higher degree	0.74	0.55	0.55	0.49	0.48	0.63	0.85	0.55

See notes at end of table.

Table C-15b.
Standard errors for table C-15a: Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012—Continued

Selected characteristics	Business/ management occupations	STEM occupations	Health care occupations	PK–12 educators/ social service professionals	Sales occupations	Business support/ administrative assistants	Trade/ technical occupations	Other
Family SES in 10th grade								
Lowest quarter	0.74	0.40	0.75	0.61	0.68	0.99	1.35	0.51
Middle two quarters	0.67	0.38	0.57	0.39	0.42	0.64	0.75	0.45
Highest quarter	0.93	0.74	0.64	0.69	0.65	0.76	1.00	0.77
Family type in 10th grade								
Two-parent family	0.51	0.35	0.44	0.35	0.36	0.52	0.71	0.40
Single-parent family	1.03	0.56	0.76	0.60	0.64	0.99	1.34	0.62
Language student first learned to speak								
English	0.48	0.33	0.41	0.32	0.33	0.48	0.70	0.36
Non-English	1.06	0.71	1.12	0.76	0.78	1.26	1.72	0.86
High school characteristics								
Student's educational expectations in 10th grade								
Do not know yet	1.32	0.73	1.10	0.96	1.11	1.64	1.95	1.01
High school diploma or less	1.32	0.57	0.89	0.69	1.18	1.67	2.35	0.87
Some college	1.34	0.66	1.05	0.58	1.00	1.50	2.04	0.65
Bachelor's or higher degree	0.53	0.39	0.45	0.37	0.38	0.56	0.72	0.43
Academic risk in 10th grade								
Low	1.22	1.02	1.03	0.86	0.67	0.97	1.13	1.20
Moderate	0.53	0.34	0.45	0.38	0.36	0.53	0.71	0.36
High	0.99	0.50	0.93	0.54	0.94	1.33	1.86	0.60
School disengagement in 10th grade								
Low	0.96	0.67	0.94	0.70	0.68	0.87	1.26	0.74
Moderate	0.64	0.45	0.55	0.47	0.46	0.74	0.81	0.54
High	0.90	0.46	0.70	0.52	0.73	0.95	1.30	0.57
School control in 10th grade								
Public	0.47	0.33	0.41	0.32	0.33	0.50	0.70	0.35
Private	0.93	0.58	0.80	0.60	0.67	0.84	1.07	0.93

See notes at end of table.

Table C-15b.
Standard errors for table C-15a: Among spring 2002 high school sophomores who were currently employed, percentage distribution of their current occupation, by selected characteristics: 2012—Continued

Selected characteristics	Business/ management occupations	STEM occupations	Health care occupations	PK–12 educators/ social service professionals	Sales occupations	Business support/ administrative assistants	Trade/ technical occupations	Other
Rigor of high school curriculum								
Below-standard	0.61	0.43	0.54	0.46	0.49	0.73	0.97	0.46
Standard	1.07	0.73	1.17	0.78	0.72	1.17	1.73	0.81
Moderately rigorous	0.87	0.60	0.79	0.71	0.65	0.97	1.04	0.67
Rigorous	1.84	1.70	1.43	1.53	0.85	1.34	1.78	1.65
Highest math course taken since grade 9								
No math, basic math, or pre-algebra	1.52	0.83	1.20	0.73	1.30	1.88	3.00	0.76
Algebra I, geometry, or algebra II	0.59	0.32	0.59	0.43	0.52	0.86	1.00	0.52
Trigonometry, statistics, or precalculus	0.85	0.52	0.75	0.71	0.52	0.79	1.00	0.60
Calculus	1.30	1.30	1.11	0.83	0.80	0.98	1.13	1.15
Highest science course taken since grade 9								
No science or low-level science	1.40	0.76	0.86	0.50	1.17	1.56	2.44	0.78
General biology	0.82	0.48	0.79	0.50	0.70	1.08	1.43	0.59
Chemistry I or physics I	0.86	0.46	0.79	0.65	0.58	0.92	1.14	0.61
Chemistry I and physics I	1.20	0.96	0.96	0.98	0.79	1.04	1.50	1.16
Chemistry II, physics II, or advanced biology	1.26	1.07	1.00	0.87	0.65	0.96	1.39	1.08
Cumulative academic GPA								
0.00–1.99	0.77	0.44	0.70	0.34	0.71	0.98	1.26	0.47
2.00–2.49	0.99	0.52	0.71	0.62	0.81	1.15	1.35	0.69
2.50–2.99	0.85	0.65	0.92	0.78	0.79	1.11	1.32	0.77
3.00–3.49	1.15	0.90	0.98	0.78	0.70	0.98	1.26	0.87
3.50–4.00	1.19	1.02	1.10	0.97	0.63	0.99	0.98	1.10
Marital status in 2012								
Single never married	0.66	0.46	0.51	0.42	0.51	0.72	0.89	0.50
Married	0.74	0.54	0.72	0.63	0.55	0.77	1.07	0.53
Divorced/separated/widowed	1.82	1.58	1.96	1.04	2.22	2.65	3.63	1.73
Living with partner	1.00	0.50	0.72	0.52	0.64	0.93	1.25	0.66
Number of children had in 2012								
None	0.55	0.42	0.43	0.40	0.41	0.60	0.78	0.47
One or more	0.76	0.48	0.77	0.53	0.62	0.85	1.19	0.40

† Not applicable.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-16a.

Among spring 2002 high school sophomores who were currently employed, median and percentage distribution of standardized hourly wage for their current job, by selected characteristics: 2012

Selected characteristics	Median standardized hourly wage ($)[1]	Standardized hourly wage in[1]		
		Lowest quarter	Middle two quarters	Highest quarter
Total	**14.4**	**25.1**	**50.5**	**24.4**
Highest educational attainment in 2012				
Less than high school	10.0	53.2	41.5	5.3 !
High school only	12.0	36.4	51.6	12.0
GED, certificate of attendance, or other equivalency[2]	10.5	49.9	42.4	7.7 !
High school diploma	12.8	33.8	53.4	12.8
Some college but no postsecondary credential	12.3	34.6	51.7	13.7
Still enrolled in 2012	12.0	37.4	49.6	13.0
Not enrolled in 2012	12.5	33.0	52.9	14.1
Undergraduate certificate	13.1	28.8	53.2	18.0
Associate's degree	14.3	20.2	56.3	23.5
Bachelor's degree	17.3	12.8	49.2	38.0
Master's or higher degree	20.9	6.5	41.2	52.3
Demographic characteristics				
Sex				
Male	15.0	22.1	51.0	26.9
Female	14.0	28.2	50.0	21.8
Race/ethnicity[3]				
White	15.0	21.3	50.4	28.3
Black	12.0	40.0	47.1	12.9
Hispanic	13.6	28.1	54.5	17.4
Asian	16.3	17.7	47.8	34.5
Other	13.9	28.9	50.3	20.8
Highest education of parents				
High school diploma or less	13.4	30.2	52.3	17.5
Some college	14.0	25.5	53.6	20.8
Bachelor's or higher degree	15.7	21.2	46.5	32.3
Family SES in 10th grade				
Lowest quarter	12.5	35.3	50.7	14.0
Middle two quarters	14.2	24.7	52.5	22.7
Highest quarter	16.7	17.1	46.6	36.3
Family type in 10th grade				
Two-parent family	15.0	23.4	50.5	26.1
Single-parent family	13.0	31.6	50.6	17.8
Language student first learned to speak				
English	14.5	24.8	50.5	24.7
Non-English	14.0	26.8	50.7	22.5

See notes at end of table.

Table C-16a.
Among spring 2002 high school sophomores who were currently employed, median and percentage distribution of standardized hourly wage for their current job, by selected characteristics: 2012—Continued

Selected characteristics	Median standardized hourly wage ($)[1]	Standardized hourly wage in[1]		
		Lowest quarter	Middle two quarters	Highest quarter
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	12.8	33.1	50.8	16.0
High school diploma or less	12.0	37.9	49.5	12.6
Some college	12.8	32.7	51.2	16.2
Bachelor's or higher degree	15.0	22.0	50.6	27.5
Academic risk in 10th grade[4]				
Low	18.5	11.5	45.1	43.4
Moderate	14.4	24.8	52.0	23.2
High	11.4	42.7	48.1	9.2
School disengagement in 10th grade[5]				
Low	15.4	20.9	49.1	30.0
Moderate	14.5	24.5	50.3	25.2
High	13.6	29.3	52.9	17.8
School control in 10th grade				
Public	14.1	26.0	50.6	23.4
Private	17.0	14.8	48.7	36.4
Rigor of high school curriculum[6,7]				
Below-standard	13.4	30.3	50.6	19.1
Standard	15.0	23.2	50.5	26.3
Moderately rigorous	15.4	18.0	52.7	29.3
Rigorous	20.0	11.0	40.0	48.9
Highest math course taken since grade 9[7]				
No math, basic math, or pre-algebra	10.8	47.5	44.3	8.2
Algebra I, geometry, or algebra II	13.2	29.8	53.8	16.4
Trigonometry, statistics, or precalculus	16.0	17.3	51.4	31.3
Calculus	20.0	10.4	40.4	49.1
Highest science course taken since grade 9[7]				
No science or low-level science	11.9	40.7	46.3	13.0
General biology	13.0	31.3	52.6	16.1
Chemistry I or physics I	14.8	22.0	54.1	24.0
Chemistry I and physics I	16.8	15.8	49.1	35.1
Chemistry II, physics II, or advanced biology	17.5	16.4	44.1	39.4
Cumulative academic GPA				
0.00–1.99	12.0	36.1	51.0	12.9
2.00–2.49	13.3	30.1	55.3	14.5
2.50–2.99	14.3	25.4	51.2	23.4
3.00–3.49	16.3	16.8	50.3	32.8
3.50–4.00	19.1	10.1	44.4	45.5

See notes at end of table.

Table C-16a.
Among spring 2002 high school sophomores who were currently employed, median and percentage distribution of standardized hourly wage for their current job, by selected characteristics: 2012—Continued

Selected characteristics	Median standardized hourly wage ($)[1]	Standardized hourly wage in[1]		
		Lowest quarter	Middle two quarters	Highest quarter
Current occupation				
Business/management occupations	17.5	11.3	52.5	36.1
STEM occupations[8]	22.3	5.6	38.9	55.6
Health care occupations	17.0	13.2	47.2	39.6
PK–12 educators/social service professionals[9]	16.0	15.0	59.1	25.9
Sales occupations	11.1	43.5	44.8	11.7
Business support/administrative assistants	12.6	30.4	59.9	9.8
Trade/technical professionals	13.0	34.2	47.8	18.1
Other[10]	16.0	18.2	50.4	31.4
Marital status in 2012				
Single never married[11]	13.7	29.4	48.2	22.4
Married	16.0	16.0	52.6	31.4
Divorced/separated/widowed[11]	12.0	40.0	43.3	16.8
Living with partner	14.0	25.8	52.8	21.4
Number of children had in 2012				
None	15.0	21.3	49.9	28.8
One or more[12]	13.0	32.5	50.3	17.3

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

[1] Earnings that were reported in a format other than dollars per hour (e.g., dollars per week) were standardized to dollars per hour.

[2] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[3] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[4] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[5] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[6] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[7] Excludes about 15 percent of students with no or partial transcript information.

[8] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.

[9] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.

[10] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.

[11] Not living with any partner.

[12] Includes biological and adopted children.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-16b.

Standard errors for table C-16a: Among spring 2002 high school sophomores who were currently employed, median and percentage distribution of standardized hourly wage for their current job, by selected characteristics: 2012

Selected characteristics	Median standardized hourly wage ($)	Standardized hourly wage in Lowest quarter	Middle two quarters	Highest quarter
Total	**0.18**	**0.61**	**0.73**	**0.64**
Highest educational attainment in 2012				
Less than high school	0.33	3.99	3.82	1.89
High school only	0.39	2.01	2.00	1.27
GED, certificate of attendance, or other equivalency	0.59	5.16	4.96	2.53
High school diploma	0.40	2.16	2.25	1.38
Some college but no postsecondary credential	0.22	1.08	1.18	0.86
Still enrolled in 2012	0.28	1.72	1.67	1.30
Not enrolled in 2012	0.25	1.31	1.48	1.09
Undergraduate certificate	0.31	1.65	1.94	1.52
Associate's degree	0.36	1.83	2.22	1.89
Bachelor's degree	0.26	0.78	1.20	1.21
Master's or higher degree	0.56	1.08	2.08	2.07
Demographic characteristics				
Sex				
Male	0.05	0.82	0.98	0.89
Female	0.15	0.94	1.04	0.79
Race/ethnicity				
White	0.20	0.70	0.89	0.87
Black	0.29	1.67	1.88	1.25
Hispanic	0.37	1.63	1.79	1.26
Asian	0.60	1.52	2.09	2.32
Other	0.72	2.68	2.85	2.38
Highest education of parents				
High school diploma or less	0.24	1.09	1.37	0.95
Some college	0.13	0.96	1.16	0.82
Bachelor's or higher degree	0.33	0.80	1.04	1.07
Family SES in 10th grade				
Lowest quarter	0.29	1.35	1.41	0.93
Middle two quarters	0.19	0.79	0.95	0.75
Highest quarter	0.34	0.93	1.31	1.41
Family type in 10th grade				
Two-parent family	0.20	0.63	0.82	0.74
Single-parent family	0.19	1.26	1.36	1.02
Language student first learned to speak				
English	0.21	0.63	0.76	0.69
Non-English	0.28	1.62	1.92	1.42

See notes at end of table.

Table C-16b.
Standard errors for table C-16a: Among spring 2002 high school sophomores who were currently employed, median and percentage distribution of standardized hourly wage for their current job, by selected characteristics: 2012—Continued

Selected characteristics	Median standardized hourly wage ($)	Standardized hourly wage in: Lowest quarter	Middle two quarters	Highest quarter
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	0.41	2.23	2.15	1.62
High school diploma or less	0.31	2.32	2.37	1.55
Some college	0.28	1.82	2.02	1.59
Bachelor's or higher degree	0.03	0.65	0.81	0.73
Academic risk in 10th grade				
Low	0.43	1.11	1.63	1.66
Moderate	0.20	0.71	0.89	0.72
High	0.33	1.85	2.07	1.11
School disengagement in 10th grade				
Low	0.33	1.21	1.48	1.37
Moderate	0.24	0.75	0.96	0.82
High	0.33	1.43	1.66	1.20
School control in 10th grade				
Public	0.18	0.65	0.79	0.69
Private	0.24	1.04	1.19	1.33
Rigor of high school curriculum				
Below-standard	0.24	1.00	1.18	0.98
Standard	0.27	1.59	1.81	1.77
Moderately rigorous	0.30	0.97	1.34	1.14
Rigorous	0.61	1.50	2.76	2.70
Highest math course taken since grade 9				
No math, basic math, or pre-algebra	0.54	2.68	2.76	1.59
Algebra I, geometry, or algebra II	0.18	1.02	1.20	0.84
Trigonometry, statistics, or precalculus	0.19	0.85	1.23	1.16
Calculus	0.41	0.92	1.57	1.64
Highest science course taken since grade 9				
No science or low-level science	0.41	2.50	2.73	1.58
General biology	0.15	1.29	1.41	1.15
Chemistry I or physics I	0.24	0.99	1.28	1.05
Chemistry I and physics I	0.35	1.18	1.73	1.76
Chemistry II, physics II, or advanced biology	0.42	1.20	1.61	1.54
Cumulative academic GPA				
0.00–1.99	0.17	1.20	1.27	0.82
2.00–2.49	0.27	1.36	1.56	1.10
2.50–2.99	0.34	1.30	1.56	1.30
3.00–3.49	0.33	1.04	1.67	1.59
3.50–4.00	0.49	0.96	1.76	1.72

See notes at end of table.

Table C-16b.
Standard errors for table C-16a: Among spring 2002 high school sophomores who were currently employed, median and percentage distribution of standardized hourly wage for their current job, by selected characteristics: 2012—Continued

Selected characteristics	Median standardized hourly wage ($)	Standardized hourly wage in		
		Lowest quarter	Middle two quarters	Highest quarter
Current occupation				
Business/management occupations	0.31	1.08	1.60	1.60
STEM occupations	0.71	1.14	2.39	2.41
Health care occupations	0.54	1.36	2.03	1.95
PK–12 educators/social service professionals	0.42	1.65	2.36	2.29
Sales occupations	0.34	1.96	2.13	1.41
Business support/administrative assistants	0.24	1.44	1.57	0.95
Trade/technical professionals	0.15	1.09	1.23	0.93
Other	0.56	1.81	2.67	2.37
Marital status in 2012				
Single never married	0.22	0.92	1.06	0.83
Married	0.28	0.94	1.36	1.25
Divorced/separated/widowed	0.63	3.44	3.65	2.90
Living with partner	0.18	1.25	1.36	1.16
Number of children had in 2012				
None	0.23	0.67	0.87	0.75
One or more	0.19	1.13	1.26	1.07

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-17a.

Among spring 2002 high school sophomores who had worked for pay, percentage reporting the perception that their current or most recent job required various postsecondary credentials, and of those who had also enrolled in postsecondary education, percentage indicating that their current or most recent job was closely, somewhat, or not related to their most recent postsecondary major field: by selected characteristics: 2012

Selected characteristics	Current/most recent job required			Current/most recent job and postsecondary major field were		
	Undergraduate certificate	Associate's degree	Bachelor's or higher degree	Closely related	Somewhat related	Not related
Total	**18.4**	**11.6**	**26.6**	**35.5**	**22.0**	**42.5**
Highest educational attainment in 2012						
Less than high school	9.5	‡	‡	†	†	†
High school only	14.7	1.5 !	1.8	†	†	†
GED, certificate of attendance, or other equivalency[1]	19.4	‡	‡	†	†	†
High school diploma	13.6	1.2 !	2.0	†	†	†
Some college but no postsecondary credential	14.5	5.1	7.4	17.8	19.2	63.0
Still enrolled in 2012	16.6	7.4	12.1	24.9	20.5	54.6
Not enrolled in 2012	13.3	3.6	4.4	13.3	18.4	68.2
Undergraduate certificate	45.7	8.0	7.4	38.9	19.1	42.1
Associate's degree	20.1	31.0	7.7	40.4	18.6	41.0
Bachelor's degree	15.7	19.1	58.3	43.6	27.7	28.7
Master's or higher degree	14.7	14.7	84.4	70.8	19.2	10.0
Demographic characteristics						
Sex						
Male	16.3	9.9	24.0	33.0	22.7	44.3
Female	20.4	13.3	29.1	37.6	21.3	41.1
Race/ethnicity[2]						
White	16.3	12.0	30.5	39.5	21.5	39.1
Black	25.3	10.2	17.0	25.4	21.4	53.2
Hispanic	20.3	10.7	17.9	28.3	22.4	49.3
Asian	17.4	14.6	41.6	37.3	27.8	35.0
Other	20.4	11.1	19.6	31.0	23.6	45.4
Highest education of parents						
High school diploma or less	19.0	9.5	13.8	32.5	20.0	47.6
Some college	19.4	11.2	20.6	33.1	21.0	45.9
Bachelor's or higher degree	17.1	13.5	40.5	39.0	23.8	37.2
Family SES in 10th grade						
Lowest quarter	19.9	10.0	12.4	30.4	20.4	49.3
Middle two quarters	19.3	11.1	22.0	33.7	21.8	44.6
Highest quarter	15.3	14.0	47.7	41.6	24.0	34.4
Family type in 10th grade						
Two-parent family	17.7	12.0	28.3	36.6	22.1	41.3
Single-parent family	20.7	10.0	20.3	30.8	22.1	47.1
Language student first learned to speak						
English	18.0	11.6	26.9	36.1	21.9	42.0
Non-English	21.2	11.9	24.8	31.4	22.5	46.2

See notes at end of table.

Table C-17a.
Among spring 2002 high school sophomores who had worked for pay, percentage reporting the perception that their current or most recent job required various postsecondary credentials, and of those who had also enrolled in postsecondary education, percentage indicating that their current or most recent job was closely, somewhat, or not related to their most recent postsecondary major field: by selected characteristics: 2012—Continued

	Current/most recent job required			Current/most recent job and postsecondary major field were		
Selected characteristics	Under-graduate certificate	Associate's degree	Bachelor's or higher degree	Closely related	Some-what related	Not related
High school characteristics						
Student's educational expectations in 10th grade						
Do not know yet	18.2	7.3	14.5	24.7	20.9	54.5
High school diploma or less	17.3	5.1	3.9	22.8	20.2	56.9
Some college	21.0	6.6	7.5	32.0	20.1	48.0
Bachelor's or higher degree	18.2	13.4	32.9	37.5	22.6	39.9
Academic risk in 10th grade[3]						
Low	12.6	14.5	59.1	49.3	23.5	27.3
Moderate	18.4	11.7	23.3	33.7	22.1	44.2
High	25.0	7.6	6.3	23.9	17.8	58.3
School disengagement in 10th grade[4]						
Low	16.8	14.6	36.5	41.0	23.4	35.7
Moderate	18.9	12.2	29.2	36.2	23.1	40.7
High	18.1	6.9	11.9	26.3	18.9	54.8
School control in 10th grade						
Public	18.5	11.2	24.9	34.8	21.9	43.3
Private	16.7	16.0	46.5	42.6	22.5	34.9
Rigor of high school curriculum[5,6]						
Below-standard	18.9	9.7	16.5	30.8	20.8	48.3
Standard	20.5	13.1	26.6	35.1	24.2	40.7
Moderately rigorous	17.3	15.0	37.6	39.7	21.9	38.4
Rigorous	12.2	13.9	69.6	52.6	23.3	24.1
Highest math course taken since grade 9[6]						
No math, basic math, or pre-algebra	19.5	6.1	3.9	24.2	18.2	57.6
Algebra I, geometry, or algebra II	20.4	10.4	12.8	27.1	21.3	51.6
Trigonometry, statistics, or precalculus	17.6	15.1	39.4	41.7	22.3	36.1
Calculus	11.8	13.7	63.3	51.0	24.0	25.1
Highest science course taken since grade 9[6]						
No science or low-level science	21.4	7.3	4.7	22.7	16.9	60.4
General biology	20.1	9.2	11.6	28.1	20.7	51.2
Chemistry I or physics I	19.3	13.9	27.2	35.3	22.3	42.4
Chemistry I and physics I	16.4	15.7	47.4	43.5	24.2	32.4
Chemistry II, physics II, or advanced biology	13.4	12.6	49.3	44.7	22.4	32.9
Cumulative academic GPA						
0.00–1.99	19.7	7.0	6.7	23.4	17.4	59.2
2.00–2.49	20.5	8.8	12.2	26.4	22.0	51.6
2.50–2.99	18.2	12.2	23.9	32.1	22.4	45.6
3.00–3.49	18.1	16.6	41.4	42.9	24.0	33.0
3.50–4.00	13.7	16.7	61.4	53.0	22.9	24.1

See notes at end of table.

Table C-17a.
Among spring 2002 high school sophomores who had worked for pay, percentage reporting the perception that their current or most recent job required various postsecondary credentials, and of those who had also enrolled in postsecondary education, percentage indicating that their current or most recent job was closely, somewhat, or not related to their most recent postsecondary major field: by selected characteristics: 2012—Continued

	Current/most recent job required			Current/most recent job and postsecondary major field were		
Selected characteristics	Under-graduate certificate	Associate's degree	Bachelor's or higher degree	Closely related	Some-what related	Not related
Occupation of current/most recent job						
Business/management occupations	13.6	13.6	44.7	34.5	29.7	35.8
STEM occupations[7]	17.1	20.1	70.0	62.1	23.6	14.3
Health care occupations	41.1	27.2	32.9	68.8	18.8	12.4
PK–12 educators/social service professionals[8]	23.2	18.7	76.2	68.5	16.4	15.1
Sales occupations	10.0	4.6	12.0	9.7	21.2	69.1
Business support/administrative assistants	11.1	8.6	10.9	15.5	23.3	61.1
Trade/technical professionals	19.4	5.6	5.0	22.4	18.3	59.3
Other[9]	17.0	19.0	58.5	54.2	27.9	17.9
Marital status in 2012						
Single never married[10]	17.8	10.9	28.6	34.2	22.3	43.5
Married	18.5	12.4	27.3	40.7	21.5	37.8
Divorced/separated/widowed[10]	18.1	10.7	11.4	29.9	19.1	51.0
Living with partner	19.4	12.0	23.7	32.7	22.4	44.9
Number of children had in 2012						
None	17.0	13.0	34.8	37.8	23.2	38.9
One or more[11]	21.3	8.8	9.9	30.1	19.0	51.0

† Not applicable.

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

‡ Reporting standards not met.

[1] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[6] Excludes about 15 percent of students with no or partial transcript information.

[7] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.

[8] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.

[9] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.

[10] Not living with any partner.

[11] Includes biological and adopted children.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-17b.

Standard errors for table C-17a: Among spring 2002 high school sophomores who had worked for pay, percentage reporting the perception that their current or most recent job required various postsecondary credentials, and of those who had also enrolled in postsecondary education, percentage indicating that their current or most recent job was closely, somewhat, or not related to their most recent postsecondary major field: by selected characteristics: 2012

	Current/most recent job required			Current/most recent job and postsecondary major field were		
Selected characteristics	Under-graduate certificate	Associate's degree	Bachelor's or higher degree	Closely related	Some-what related	Not related
Total	**0.53**	**0.38**	**0.70**	**0.76**	**0.53**	**0.75**
Highest educational attainment in 2012						
Less than high school	2.14	†	†	†	†	†
High school only	1.28	0.47	0.44	†	†	†
GED, certificate of attendance, or other equivalency	3.53	†	†	†	†	†
High school diploma	1.26	0.37	0.50	†	†	†
Some college but no postsecondary credential	0.83	0.49	0.56	0.93	0.80	1.14
Still enrolled in 2012	1.48	0.94	1.25	1.63	1.30	1.87
Not enrolled in 2012	0.90	0.53	0.49	1.01	0.99	1.31
Undergraduate certificate	2.01	1.16	0.99	1.89	1.59	1.84
Associate's degree	1.60	1.79	1.15	2.04	1.53	2.13
Bachelor's degree	0.90	0.86	1.06	1.10	0.99	0.96
Master's or higher degree	1.75	1.78	1.43	1.78	1.51	1.19
Demographic characteristics						
Sex						
Male	0.71	0.48	0.85	1.00	0.80	1.02
Female	0.70	0.59	0.86	0.92	0.67	0.91
Race/ethnicity						
White	0.66	0.54	0.87	0.93	0.64	0.90
Black	1.44	0.97	1.23	1.49	1.63	1.85
Hispanic	1.39	1.21	1.42	1.77	1.25	1.90
Asian	1.54	1.52	2.29	1.86	1.74	1.91
Other	2.14	1.62	2.22	2.93	2.52	3.22
Highest education of parents						
High school diploma or less	0.94	0.74	0.88	1.36	1.01	1.33
Some college	0.87	0.59	0.92	1.03	0.87	1.14
Bachelor's or higher degree	0.76	0.65	1.06	1.05	0.78	1.01
Family SES in 10th grade						
Lowest quarter	1.05	0.81	0.87	1.46	1.01	1.43
Middle two quarters	0.78	0.51	0.82	0.94	0.82	1.01
Highest quarter	0.83	0.80	1.25	1.22	0.91	1.16
Family type in 10th grade						
Two-parent family	0.59	0.44	0.80	0.84	0.61	0.88
Single-parent family	1.05	0.76	1.02	1.27	1.08	1.43
Language student first learned to speak						
English	0.56	0.43	0.75	0.82	0.58	0.82
Non-English	1.18	1.04	1.55	1.71	1.46	1.91

See notes at end of table.

Table C-17b.
Standard errors for table C-17a: Among spring 2002 high school sophomores who had worked for pay, percentage reporting the perception that their current or most recent job required various postsecondary credentials, and of those who had also enrolled in postsecondary education, percentage indicating that their current or most recent job was closely, somewhat, or not related to their most recent postsecondary major field: by selected characteristics: 2012—Continued

	Current/most recent job required			Current/most recent job and postsecondary major field were		
Selected characteristics	Under-graduate certificate	Associate's degree	Bachelor's or higher degree	Closely related	Some-what related	Not related
High school characteristics						
Student's educational expectations in 10th grade						
Do not know yet	1.52	1.04	1.46	2.38	2.20	2.57
High school diploma or less	1.71	1.07	1.05	2.75	2.41	3.34
Some college	1.68	0.98	0.88	2.15	1.95	2.31
Bachelor's or higher degree	0.60	0.48	0.84	0.82	0.57	0.82
Academic risk in 10th grade						
Low	0.96	1.03	1.53	1.52	1.12	1.41
Moderate	0.59	0.45	0.77	0.86	0.65	0.83
High	1.49	1.00	0.86	1.84	1.59	2.21
School disengagement in 10th grade						
Low	1.00	0.88	1.33	1.58	1.22	1.45
Moderate	0.74	0.61	0.94	1.00	0.74	1.06
High	1.02	0.71	0.88	1.35	1.20	1.59
School control in 10th grade						
Public	0.57	0.40	0.75	0.83	0.58	0.81
Private	0.96	1.01	1.56	1.35	1.12	1.28
Rigor of high school curriculum						
Below-standard	0.87	0.60	0.80	1.05	0.88	1.14
Standard	1.19	0.99	1.70	1.94	1.46	1.70
Moderately rigorous	0.88	0.83	1.24	1.29	0.87	1.37
Rigorous	1.43	1.55	2.22	2.59	2.01	1.91
Highest math course taken since grade 9						
No math, basic math, or pre-algebra	1.78	1.38	0.93	2.87	2.64	3.33
Algebra I, geometry, or algebra II	0.84	0.67	0.71	0.95	0.87	1.12
Trigonometry, statistics, or precalculus	0.84	0.84	1.28	1.18	0.88	1.16
Calculus	1.00	1.21	1.54	1.55	1.38	1.31
Highest science course taken since grade 9						
No science or low-level science	1.87	1.20	0.97	2.27	2.05	2.72
General biology	1.11	0.78	0.95	1.50	1.23	1.61
Chemistry I or physics I	1.01	0.78	1.08	1.32	0.94	1.24
Chemistry I and physics I	1.18	1.20	1.78	1.83	1.32	1.59
Chemistry II, physics II, or advanced biology	1.00	1.10	1.86	1.53	1.15	1.47
Cumulative academic GPA						
0.00–1.99	1.02	0.66	0.64	1.37	1.15	1.58
2.00–2.49	1.22	0.90	0.94	1.40	1.29	1.62
2.50–2.99	1.17	0.92	1.31	1.50	1.19	1.53
3.00–3.49	1.09	1.01	1.54	1.54	1.18	1.51
3.50–4.00	1.05	1.15	1.54	1.38	1.11	1.17

See notes at end of table.

Table C-17b.
Standard errors for table C-17a: Among spring 2002 high school sophomores who had worked for pay, percentage reporting the perception that their current or most recent job required various postsecondary credentials, and of those who had also enrolled in postsecondary education, percentage indicating that their current or most recent job was closely, somewhat, or not related to their most recent postsecondary major field: by selected characteristics: 2012—Continued

	Current/most recent job required			Current/most recent job and postsecondary major field were		
Selected characteristics	Under-graduate certificate	Associate's degree	Bachelor's or higher degree	Closely related	Some-what related	Not related
Occupation of current/most recent job						
Business/management occupations	1.17	1.15	1.73	1.75	1.50	1.72
STEM occupations	1.99	2.10	2.18	2.60	2.17	1.64
Health care occupations	1.97	1.84	1.66	1.82	1.44	1.30
PK–12 educators/social service professionals	2.29	1.91	1.83	2.07	1.87	1.48
Sales occupations	1.22	0.75	1.24	1.27	1.84	2.00
Business support/administrative assistants	0.94	0.81	0.86	1.06	1.18	1.56
Trade/technical professionals	0.86	0.49	0.42	1.12	1.06	1.22
Other	1.65	1.67	2.25	2.17	2.07	1.53
Marital status in 2012						
Single never married	0.76	0.56	0.94	1.03	0.77	1.07
Married	0.91	0.77	1.01	1.18	0.92	1.24
Divorced/separated/widowed	2.59	2.06	2.08	3.41	2.84	3.75
Living with partner	1.04	0.76	1.21	1.39	1.09	1.31
Number of children had in 2012						
None	0.60	0.47	0.85	0.85	0.61	0.83
One or more	0.91	0.63	0.58	1.11	0.93	1.16

† Not applicable.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-18a.
Among spring 2002 high school sophomores, percentage distribution of employment since 2006, by selected characteristics: 2012

Selected characteristics	Students who have never worked for pay since 2006	Students who have worked for pay since 2006
Total	**2.4**	**97.6**
Highest educational attainment in 2012		
Less than high school	11.2	88.8
High school only	4.8	95.2
GED, certificate of attendance, or other equivalency[1]	3.5 !	96.5
High school diploma	5.1	94.9
Some college but no postsecondary credential	2.8	97.2
Still enrolled in 2012	3.0	97.0
Not enrolled in 2012	2.7	97.3
Undergraduate certificate	1.4 !	98.6
Associate's degree	1.3 !	98.7
Bachelor's degree	0.9	99.1
Master's or higher degree	1.0	99.0
Demographic characteristics		
Sex		
Male	1.7	98.3
Female	3.0	97.0
Race/ethnicity[2]		
White	1.4	98.6
Black	3.5	96.5
Hispanic	4.1	95.9
Asian	5.8	94.2
Other	3.3	96.7
Highest education of parents		
High school diploma or less	3.8	96.2
Some college	1.8	98.2
Bachelor's or higher degree	2.0	98.0
Family SES in 10th grade		
Lowest quarter	4.1	95.9
Middle two quarters	1.6	98.4
Highest quarter	1.4	98.6
Family type in 10th grade		
Two-parent family	2.0	98.0
Single-parent family	3.3	96.7
Language student first learned to speak		
English	5.2	94.8
Non-English	1.9 !	98.1

See notes at end of table.

Table C-18a.
Among spring 2002 high school sophomores, percentage distribution of employment since 2006, by selected characteristics: 2012—Continued

Selected characteristics	Students who have never worked for pay since 2006	Students who have worked for pay since 2006
High school characteristics		
Student's educational expectations in 10th grade		
Do not know yet	3.7	96.3
High school diploma or less	3.6	96.4
Some college	3.0	97.0
Bachelor's or higher degree	1.7	98.3
Academic risk in 10th grade[3]		
Low	1.1	98.9
Moderate	1.9	98.1
High	6.5	93.5
School disengagement in 10th grade[4]		
Low	1.8	98.2
Moderate	2.1	97.9
High	2.4	97.6
School control in 10th grade		
Public	2.5	97.5
Private	1.6	98.4
Rigor of high school curriculum[5,6]		
Below-standard	3.2	96.8
Standard	2.8	97.2
Moderately rigorous	0.8	99.2
Rigorous	1.3	98.7
Highest math course taken since grade 9[6]		
No math, basic math, or pre-algebra	7.4	92.6
Algebra I, geometry, or algebra II	2.8	97.2
Trigonometry, statistics, or precalculus	1.0	99.0
Calculus	1.2	98.8
Highest science course taken since grade 9[6]		
No science or low-level science	6.4	93.6
General biology	3.4	96.6
Chemistry I or physics I	1.3	98.7
Chemistry I and physics I	0.9 !	99.1
Chemistry II, physics II, or advanced biology	1.6	98.4
Cumulative academic GPA		
0.00–1.99	3.7	96.3
2.00–2.49	3.0	97.0
2.50–2.99	1.6	98.4
3.00–3.49	1.5	98.5
3.50–4.00	1.2	98.8

See notes at end of table.

Table C-18a.
Among spring 2002 high school sophomores, percentage distribution of employment since 2006, by selected characteristics: 2012—Continued

Selected characteristics	Students who have never worked for pay since 2006	Students who have worked for pay since 2006
Marital status in 2012		
Single never married[7]	2.9	97.1
Married	2.2	97.8
Divorced/separated/widowed[7]	‡	98.4
Living with partner	1.7	98.3
Number of children had in 2012		
None	1.6	98.4
One or more[8]	3.0	97.0

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
[1] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.
[2] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[3] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[4] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[5] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.
[6] Excludes about 15 percent of students with no or partial transcript information.
[7] Not living with any partner.
[8] Includes biological and adopted children.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-18b.
Standard errors for table C-18a: Among spring 2002 high school sophomores, percentage distribution of employment since 2006, by selected characteristics: 2012

Selected characteristics	Students who have never worked for pay since 2006	Students who have worked for pay since 2006
Total	**0.20**	**0.20**
Highest educational attainment in 2012		
Less than high school	2.25	2.25
High school only	0.68	0.68
GED, certificate of attendance, or other equivalency	1.36	1.36
High school diploma	0.79	0.79
Some college but no postsecondary credential	0.40	0.40
Still enrolled in 2012	0.61	0.61
Not enrolled in 2012	0.46	0.46
Undergraduate certificate	0.45	0.45
Associate's degree	0.43	0.43
Bachelor's degree	0.19	0.19
Master's or higher degree	0.26	0.26
Demographic characteristics		
Sex		
Male	0.24	0.24
Female	0.29	0.29
Race/ethnicity		
White	0.19	0.19
Black	0.62	0.62
Hispanic	0.64	0.64
Asian	0.78	0.78
Other	0.95	0.95
Highest education of parents		
High school diploma or less	0.44	0.44
Some college	0.27	0.27
Bachelor's or higher degree	0.26	0.26
Family SES in 10th grade		
Lowest quarter	0.51	0.51
Middle two quarters	0.22	0.22
Highest quarter	0.25	0.25
Family type in 10th grade		
Two-parent family	0.19	0.19
Single-parent family	0.48	0.48
Language student first learned to speak		
English	0.18	0.18
Non-English	0.66	0.66

See notes at end of table.

Table C-18b.
Standard errors for table C-18a: Among spring 2002 high school sophomores, percentage distribution of employment since 2006, by selected characteristics: 2012—Continued

Selected characteristics	Students who have never worked for pay since 2006	Students who have worked for pay since 2006
High school characteristics		
Student's educational expectations in 10th grade		
Do not know yet	0.69	0.69
High school diploma or less	0.79	0.79
Some college	0.69	0.69
Bachelor's or higher degree	0.18	0.18
Academic risk in 10th grade		
Low	0.27	0.27
Moderate	0.21	0.21
High	0.88	0.88
School disengagement in 10th grade		
Low	0.32	0.32
Moderate	0.24	0.24
High	0.39	0.39
School control in 10th grade		
Public	0.21	0.21
Private	0.33	0.33
Rigor of high school curriculum		
Below-standard	0.34	0.34
Standard	0.49	0.49
Moderately rigorous	0.19	0.19
Rigorous	0.31	0.31
Highest math course taken since grade 9		
No math, basic math, or pre-algebra	1.14	1.14
Algebra I, geometry, or algebra II	0.35	0.35
Trigonometry, statistics, or precalculus	0.21	0.21
Calculus	0.26	0.26
Highest science course taken since grade 9		
No science or low-level science	1.05	1.05
General biology	0.45	0.45
Chemistry I or physics I	0.29	0.29
Chemistry I and physics I	0.28	0.28
Chemistry II, physics II, or advanced biology	0.31	0.31
Cumulative academic GPA		
0.00–1.99	0.49	0.49
2.00–2.49	0.50	0.50
2.50–2.99	0.33	0.33
3.00–3.49	0.29	0.29
3.50–4.00	0.31	0.31
Marital status in 2012		
Single never married	0.28	0.28
Married	0.33	0.33
Divorced/separated/widowed	†	0.89
Living with partner	0.33	0.33
Number of children had in 2012		
None	0.18	0.18
One or more	0.35	0.35

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-19a.

Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009 and of those, average number of months unemployed and percentage distribution of unemployment spells since January 2009, by selected characteristics: 2012

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009[1]	Number of unemployment spells since 2009[1,2]		
			One spell	Two spells	Three or more spells
Total	**40.6**	**9.9**	**56.1**	**20.7**	**23.2**
Highest educational attainment in 2012					
Less than high school	53.0	13.3	47.5	15.6	36.9
High school only	45.2	11.7	51.6	21.0	27.4
GED, certificate of attendance, or other equivalency[3]	58.2	13.3	46.5	18.4	35.1
High school diploma	42.4	11.2	53.1	21.8	25.1
Some college but no postsecondary credential	45.0	11.0	52.7	20.0	27.3
Still enrolled in 2012	45.6	11.0	54.3	19.4	26.2
Not enrolled in 2012	44.6	11.0	51.7	20.4	27.9
Undergraduate certificate	41.4	10.9	53.7	19.5	26.8
Associate's degree	35.0	9.5	64.0	17.1	18.8
Bachelor's degree	35.7	6.8	60.9	24.7	14.4
Master's or higher degree	30.2	6.9	67.8	16.2	15.9
Demographic characteristics					
Sex					
Male	42.4	9.7	53.9	22.3	23.9
Female	38.9	10.1	58.4	19.1	22.5
Race/ethnicity[4]					
White	36.6	9.0	58.4	20.2	21.4
Black	52.9	11.0	50.1	23.0	26.9
Hispanic	44.0	10.6	56.4	20.4	23.2
Asian	40.2	9.6	57.5	19.8	22.7
Other	43.1	12.8	51.3	18.5	30.2
Highest education of parents					
High school diploma or less	41.4	10.7	53.1	21.8	25.1
Some college	41.6	10.3	56.6	19.7	23.7
Bachelor's or higher degree	39.1	8.9	57.9	20.7	21.4
Family SES in 10th grade					
Lowest quarter	43.1	10.9	53.8	21.8	24.4
Middle two quarters	40.7	9.7	56.7	19.9	23.4
Highest quarter	36.5	8.3	58.4	21.2	20.4
Family type in 10th grade					
Two-parent family	38.7	9.4	57.6	20.6	21.7
Single-parent family	45.4	10.7	52.6	20.7	26.7
Language student first learned to speak					
English	40.4	9.9	56.0	20.8	23.2
Non-English	42.2	10.1	57.2	19.5	23.2

See notes at end of table.

Table C-19a.
Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009 and of those, average number of months unemployed and percentage distribution of unemployment spells since January 2009, by selected characteristics: 2012—Continued

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009[1]	Number of unemployment spells since 2009[1,2]		
			One spell	Two spells	Three or more spells
High school characteristics					
Student's educational expectations in 10th grade					
Do not know yet	44.8	11.2	47.5	22.5	30.1
High school diploma or less	46.9	11.9	46.1	20.2	33.6
Some college	42.5	10.3	59.2	19.3	21.6
Bachelor's or higher degree	38.6	9.1	58.5	20.7	20.8
Academic risk in 10th grade[5]					
Low	32.8	6.5	64.9	21.3	13.8
Moderate	40.1	9.9	56.9	20.4	22.7
High	51.0	12.1	46.1	21.4	32.6
School disengagement in 10th grade[6]					
Low	35.7	8.8	62.0	20.1	17.9
Moderate	37.5	9.4	59.0	20.7	20.3
High	49.0	10.7	50.4	20.3	29.3
School control in 10th grade					
Public	41.1	10.0	55.9	20.6	23.5
Private	35.1	8.3	59.2	21.1	19.7
Rigor of high school curriculum[7,8]					
Below-standard	43.6	10.8	51.6	22.1	26.3
Standard	39.7	9.9	57.8	18.6	23.6
Moderately rigorous	34.2	8.2	60.4	21.8	17.8
Rigorous	31.5	6.9	68.7	19.9	11.5
Highest math course taken since grade 9[8]					
No math, basic math, or pre-algebra	50.3	13.4	43.9	21.7	34.5
Algebra I, geometry, or algebra II	42.4	10.8	52.9	21.3	25.8
Trigonometry, statistics, or precalculus	36.2	8.1	61.2	21.1	17.6
Calculus	30.1	6.4	65.3	21.5	13.2
Highest science course taken since grade 9[8]					
No science or low-level science	49.2	13.0	45.6	22.5	31.9
General biology	44.9	11.4	52.1	19.8	28.0
Chemistry I or physics I	35.8	9.0	59.0	21.9	19.1
Chemistry I and physics I	35.4	7.4	60.6	23.7	15.6
Chemistry II, physics II, or advanced biology	35.1	7.7	60.8	19.5	19.7
Cumulative academic GPA					
0.00–1.99	52.2	11.4	49.0	20.9	30.1
2.00–2.49	41.6	11.4	51.2	22.9	25.8
2.50–2.99	36.9	9.6	58.4	21.3	20.2
3.00–3.49	32.1	7.5	66.0	19.3	14.7
3.50–4.00	30.6	6.1	65.3	20.3	14.4

See notes at end of table.

Table C-19a.
Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009 and of those, average number of months unemployed and percentage distribution of unemployment spells since January 2009, by selected characteristics: 2012—Continued

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009[1]	Number of unemployment spells since 2009[1,2]		
			One spell	Two spells	Three or more spells
Marital status in 2012					
Single never married[9]	44.9	10.1	55.0	20.5	24.5
Married	31.2	9.6	62.4	18.5	19.0
Divorced/separated/widowed[9]	43.8	10.9	54.5	19.1	26.4
Living with partner	43.3	9.5	53.0	23.3	23.7
Number of children had in 2012					
None	38.1	8.9	57.2	21.0	21.8
One or more[10]	43.5	10.9	54.3	20.0	25.6

[1] Includes only students who have ever been unemployed since January 2009.

[2] An unemployment spell is a period of unemployment lasting at least one month.

[3] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.

[4] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.

[5] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.

[6] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.

[7] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.

[8] Excludes about 15 percent of students with no or partial transcript information.

[9] Not living with any partner.

[10] Includes biological and adopted children.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-19b.

Standard errors for table C-19a: Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009 and of those, average number of months unemployed and percentage distribution of unemployment spells since January 2009, by selected characteristics: 2012

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009	Number of unemployment spells since 2009		
			One spell	Two spells	Three or more spells
Total	**0.52**	**0.17**	**0.92**	**0.75**	**0.89**
Highest educational attainment in 2012					
Less than high school	2.91	1.07	5.06	3.85	4.43
High school only	1.52	0.55	2.60	2.04	2.19
GED, certificate of attendance, or other equivalency	3.74	1.07	5.22	3.88	5.25
High school diploma	1.65	0.64	2.85	2.37	2.40
Some college but no postsecondary credential	0.87	0.33	1.48	1.34	1.51
Still enrolled in 2012	1.70	0.53	2.38	1.93	2.21
Not enrolled in 2012	1.16	0.43	2.00	1.69	1.87
Undergraduate certificate	1.72	0.61	2.99	2.27	2.81
Associate's degree	1.75	0.61	3.41	2.80	2.61
Bachelor's degree	0.94	0.20	1.67	1.58	1.28
Master's or higher degree	2.05	0.48	3.54	2.77	2.98
Demographic characteristics					
Sex					
Male	0.79	0.24	1.23	1.15	1.23
Female	0.68	0.26	1.34	0.99	1.20
Race/ethnicity					
White	0.69	0.24	1.32	0.96	1.21
Black	1.45	0.46	2.72	2.01	2.47
Hispanic	1.41	0.46	2.39	2.16	2.00
Asian	1.63	0.62	3.01	2.28	2.88
Other	2.39	0.88	3.66	3.09	3.63
Highest education of parents					
High school diploma or less	0.94	0.33	1.84	1.48	1.58
Some college	0.95	0.32	1.53	1.19	1.39
Bachelor's or higher degree	0.88	0.27	1.36	1.27	1.29
Family SES in 10th grade					
Lowest quarter	0.99	0.39	1.92	1.58	1.62
Middle two quarters	0.80	0.28	1.31	1.08	1.18
Highest quarter	1.12	0.32	1.79	1.51	1.67
Family type in 10th grade					
Two-parent family	0.61	0.21	1.10	0.86	1.01
Single-parent family	1.13	0.35	1.70	1.49	1.61
Language student first learned to speak					
English	0.57	0.20	0.98	0.82	0.94
Non-English	1.41	0.45	2.36	1.98	1.94

See notes at end of table.

Table C-19b.
Standard errors for table C-19a: Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009 and of those, average number of months unemployed and percentage distribution of unemployment spells since January 2009, by selected characteristics: 2012—Continued

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009	Number of unemployment spells since 2009		
			One spell	Two spells	Three or more spells
High school characteristics					
Student's educational expectations in 10th grade					
Do not know yet	1.75	0.73	2.89	2.58	2.95
High school diploma or less	2.02	0.63	3.37	2.79	3.12
Some college	1.71	0.59	3.15	2.21	2.36
Bachelor's or higher degree	0.59	0.20	1.15	0.90	1.05
Academic risk in 10th grade					
Low	1.29	0.30	2.24	1.88	1.82
Moderate	0.58	0.20	1.09	0.85	0.94
High	1.57	0.54	2.61	2.24	2.56
School disengagement in 10th grade					
Low	1.04	0.42	2.08	1.67	1.72
Moderate	0.75	0.27	1.42	1.16	1.39
High	1.16	0.33	2.02	1.52	1.63
School control in 10th grade					
Public	0.54	0.18	0.97	0.81	0.93
Private	1.07	0.32	2.16	1.39	1.78
Rigor of high school curriculum					
Below-standard	0.92	0.29	1.42	1.28	1.31
Standard	1.36	0.51	2.46	1.87	2.31
Moderately rigorous	1.09	0.31	1.63	1.50	1.46
Rigorous	1.89	0.54	4.54	3.62	2.67
Highest math course taken since grade 9					
No math, basic math, or pre-algebra	1.85	0.79	3.60	2.87	3.78
Algebra I, geometry, or algebra II	0.88	0.27	1.40	1.22	1.29
Trigonometry, statistics, or precalculus	0.97	0.26	1.68	1.48	1.34
Calculus	1.36	0.35	2.92	2.37	2.01
Highest science course taken since grade 9					
No science or low-level science	2.05	0.67	2.83	2.48	3.15
General biology	1.17	0.42	2.03	1.64	1.81
Chemistry I or physics I	1.13	0.31	1.72	1.44	1.40
Chemistry I and physics I	1.61	0.37	2.51	2.14	1.82
Chemistry II, physics II, or advanced biology	1.30	0.37	2.31	1.75	2.08
Cumulative academic GPA					
0.00–1.99	1.08	0.32	1.93	1.58	1.60
2.00–2.49	1.32	0.47	2.21	1.92	2.14
2.50–2.99	1.27	0.47	2.17	1.93	1.86
3.00–3.49	1.24	0.37	2.16	1.78	1.74
3.50–4.00	1.26	0.25	2.09	1.84	1.72

See notes at end of table.

Table C-19b.
Standard errors for table C-19a: Percentage of spring 2002 high school sophomores who had ever been unemployed since January 2009 and of those, average number of months unemployed and percentage distribution of unemployment spells since January 2009, by selected characteristics: 2012—Continued

Selected characteristics	Ever unemployed since 2009	Average number of months unemployed since 2009	Number of unemployment spells since 2009		
			One spell	Two spells	Three or more spells
Marital status in 2012					
Single never married	0.78	0.25	1.31	1.03	1.19
Married	0.90	0.43	1.97	1.57	1.63
Divorced/separated/widowed	3.06	0.84	4.84	3.57	3.93
Living with partner	1.15	0.29	2.13	1.68	1.77
Number of children had in 2012					
None	0.67	0.23	1.12	0.95	1.09
One or more	0.88	0.36	1.49	1.17	1.35

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-20a.

Percentage distribution of spring 2002 high school sophomores' socioeconomic status in 2012 and percentage who or whose spouses, partners, or children received public assistance in 2011, by selected student characteristics

Selected characteristics	Sophomores' socioeconomic status in 2012: Lowest quarter	Middle two quarters	Highest quarter	Percent receiving public assistance in 2011[1]
Total	**25.2**	**49.8**	**24.9**	**18.9**
Highest educational attainment in 2012				
Less than high school	86.3	13.5	‡	47.5
High school only	63.4	35.9	0.7 !	32.5
GED, certificate of attendance, or other equivalency[2]	76.9	23.1	#	38.3
High school diploma	60.6	38.6	0.9 !	31.3
Some college but no postsecondary credential	39.1	58.0	2.9	25.2
Still enrolled in 2012	39.4	57.5	3.1	24.0
Not enrolled in 2012	38.8	58.3	2.9	25.9
Undergraduate certificate	15.1	75.0	10.0	26.3
Associate's degree	2.0	72.7	25.4	16.9
Bachelor's degree	#	44.1	55.9	5.1
Master's or higher degree	#	9.4	90.6	2.9
Demographic characteristics				
Sex				
Male	24.2	52.3	23.4	13.5
Female	26.2	47.4	26.4	23.9
Race/ethnicity[3]				
White	20.5	49.4	30.1	14.0
Black	34.4	51.1	14.5	34.6
Hispanic	34.0	52.4	13.6	24.2
Asian	18.4	46.6	35.0	7.3
Other	32.8	46.1	21.0	29.0
Highest education of parents				
High school diploma or less	37.0	48.5	14.4	27.2
Some college	26.5	53.6	19.9	21.4
Bachelor's or higher degree	15.6	47.3	37.1	11.1
Family SES in 10th grade				
Lowest quarter	40.3	47.6	12.1	31.4
Middle two quarters	24.4	53.3	22.3	18.7
Highest quarter	10.1	46.2	43.7	6.5
Family type in 10th grade				
Two-parent family	22.7	50.2	27.2	16.4
Single-parent family	32.7	49.3	18.1	26.5
Language student first learned to speak				
English	24.6	49.6	25.8	18.7
Non-English	29.5	51.0	19.5	20.5

See notes at end of table.

Table C-20a.
Percentage distribution of spring 2002 high school sophomores' socioeconomic status in 2012 and percentage who or whose spouses, partners, or children received public assistance in 2011, by selected student characteristics—Continued

Selected characteristics	Sophomores' socioeconomic status in 2012: Lowest quarter	Middle two quarters	Highest quarter	Percent receiving public assistance in 2011[1]
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	37.8	47.4	14.7	27.6
High school diploma or less	51.9	44.1	4.0	34.3
Some college	36.2	54.8	9.0	28.2
Bachelor's or higher degree	18.4	50.5	31.2	14.5
Academic risk in 10th grade[4]				
Low	5.7	35.7	58.5	4.6
Moderate	23.9	53.5	22.7	19.3
High	51.6	45.1	3.3	33.5
School disengagement in 10th grade[5]				
Low	17.0	46.7	36.3	11.7
Moderate	21.8	51.3	26.9	16.6
High	34.8	53.0	12.2	27.8
School control in 10th grade				
Public	26.5	50.2	23.3	20.0
Private	10.4	45.3	44.3	6.2
Rigor of high school curriculum[6,7]				
Below-standard	34.1	49.8	16.0	24.7
Standard	23.1	52.8	24.1	17.4
Moderately rigorous	11.3	51.0	37.7	10.7
Rigorous	4.1	33.5	62.5	1.6
Highest math course taken since grade 9[7]				
No math, basic math, or pre-algebra	59.2	38.9	1.9 !	39.9
Algebra I, geometry, or algebra II	31.3	55.5	13.2	24.4
Trigonometry, statistics, or precalculus	11.8	50.3	37.9	9.7
Calculus	4.6	33.5	61.9	3.6
Highest science course taken since grade 9[7]				
No science or low-level science	52.8	43.4	3.8	36.4
General biology	35.9	53.1	11.0	26.5
Chemistry I or physics I	18.0	54.2	27.8	15.4
Chemistry I and physics I	8.8	47.2	44.0	7.8
Chemistry II, physics II, or advanced biology	10.9	41.2	47.9	7.7
Cumulative academic GPA				
0.00–1.99	45.1	49.1	5.8	31.6
2.00–2.49	29.9	58.0	12.1	24.9
2.50–2.99	19.8	57.5	22.7	16.9
3.00–3.49	11.1	47.1	41.8	9.3
3.50–4.00	4.8	34.6	60.6	4.6

See notes at end of table.

Table C-20a.
Percentage distribution of spring 2002 high school sophomores' socioeconomic status in 2012 and percentage who or whose spouses, partners, or children received public assistance in 2011, by selected student characteristics—Continued

Selected characteristics	Sophomores' socioeconomic status in 2012: Lowest quarter	Middle two quarters	Highest quarter	Percent receiving public assistance in 2011[1]
Current occupation				
Business/management occupations	0.7 !	54.4	44.9	9.7
STEM occupations[8]	#	25.5	74.5	4.6
Health care occupations	4.9	45.8	49.3	15.3
PK–12 educators/social service professionals[9]	#	34.8	65.2	10.4
Sales occupations	46.5	49.2	4.3	26.7
Business support/administrative assistants	32.0	63.2	4.8	22.5
Trade/technical professionals	41.5	52.2	6.3	23.6
Other[10]	‡	45.5	54.0	9.4
Employment status in 2012				
Employed 35 or more hours/week	15.6	53.1	31.3	13.1
Employed 1–34 hours/week	38.6	47.5	13.9	24.7
Unemployed	55.9	37.1	7.0	39.1
Out of the labor force	46.6	42.0	11.4	33.2
Marital status in 2012				
Single never married[11]	26.5	48.7	24.8	14.8
Married	19.8	51.1	29.1	19.3
Divorced/separated/widowed[11]	33.0	53.3	13.7	32.8
Living with partner	28.6	49.5	21.9	24.9
Number of children had in 2012				
None	17.6	49.0	33.4	6.1
One or more[12]	37.8	49.7	12.5	44.8
Single parenthood in 2012[13]				
Yes	48.1	44.5	7.4	64.0
No	36.2	50.5	13.3	42.0

See notes at end of table.

Table C-20a.
Percentage distribution of spring 2002 high school sophomores' socioeconomic status in 2012 and percentage who or whose spouses, partners, or children received public assistance in 2011, by selected student characteristics—Continued

Rounds to zero.
! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.
‡ Reporting standards not met.
[1] "Public assistance" includes Supplemental Security Income (SSI), SNAP (the Food Stamp Program), TANF (the Temporary Assistance for Needy Families Program), the Free and Reduced Price School Lunch Program, or WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children). Includes sample member as well as sample member's spouse (if married) or partner (if living with significant other in a marriage-like relationship).
[2] A General Educational Development (GED) certificate is awarded to those who did not finish high school but who have earned the equivalent of a high school diploma by passing required GED exams. A certificate of attendance may be awarded when a student attended high school for the minimum amount of time required but did not complete all courses required for a diploma.
[3] Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Native Hawaiian, other Pacific Islander, and individuals who indicated Two or more races or Other. All race categories exclude Hispanic or Latino origin, unless specified.
[4] A composite measure derived from 10th-grade reading and math achievement test scores, 9th- and 10th-grade grade point average (GPA), and the number of grades repeated in grades K–10. See appendix A for detailed information about this variable.
[5] A composite measure derived from students' reports on frequencies of having such behaviors as being late for school, cutting/skipping classes, being absent from school, getting into trouble in school, being put on in-school suspension, being suspended/put on probation, and being transferred for disciplinary reasons while in 10th grade. See appendix A for detailed information about this variable.
[6] Students who attain a standard curriculum must earn 4 credits in English and 3 credits each in social studies, math, and science. Students who do not meet these requirements complete a below-standard curriculum. Students who attain a moderately rigorous curriculum must meet the standard curriculum requirements plus three additional requirements: math credits earned must include algebra and geometry; science courses completed must cover two subjects among biology, chemistry, and physics; and 1 credit must be earned in foreign language courses. Students who attain a rigorous curriculum must meet the moderately rigorous curriculum requirements plus three additional requirements: 4 credits must be earned in math, of which one course must be precalculus or a higher level; science courses completed must cover all three subjects of biology, chemistry, and physics; and 3 credits must be earned in foreign language courses.
[7] Excludes about 15 percent of students with no or partial transcript information.
[8] STEM occupations include life scientists, physical scientists, mathematics-related occupations, engineers, and computer/information systems occupations.
[9] Due to small sample sizes, PK–12 educators and social service professionals are combined in this report. Social service professional occupations include counselors, social workers, religious workers, clinical and school psychologists, and other community and social service specialists.
[10] Other occupations include air transportation professionals, artists and designers, communication professionals, information professionals, legal professionals, other educators, postsecondary educators, and social scientists.
[11] Not living with any partner.
[12] Includes biological and adopted children.
[13] Includes only those who reported that they had children in 2012.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).

Table C-20b.

Standard errors for table C-20a: Percentage distribution of spring 2002 high school sophomores' socioeconomic status in 2012 and percentage who or whose spouses, partners, or children received public assistance in 2011, by selected student characteristics

Selected characteristics	Sophomores' socioeconomic status in 2012: Lowest quarter	Sophomores' socioeconomic status in 2012: Middle two quarters	Sophomores' socioeconomic status in 2012: Highest quarter	Percent receiving public assistance in 2011
Total	**0.65**	**0.60**	**0.64**	**0.50**
Highest educational attainment in 2012				
Less than high school	2.12	2.10	†	3.63
High school only	1.60	1.58	0.28	1.60
GED, certificate of attendance, or other equivalency	3.50	3.50	†	4.17
High school diploma	1.72	1.71	0.34	1.62
Some college but no postsecondary credential	0.94	0.99	0.36	0.88
Still enrolled in 2012	1.50	1.57	0.60	1.42
Not enrolled in 2012	1.25	1.28	0.43	1.18
Undergraduate certificate	1.21	1.63	1.10	1.58
Associate's degree	0.48	1.88	1.78	1.63
Bachelor's degree	†	1.15	1.15	0.46
Master's or higher degree	†	1.10	1.10	0.72
Demographic characteristics				
Sex				
Male	0.76	0.81	0.82	0.58
Female	0.84	0.72	0.77	0.76
Race/ethnicity				
White	0.72	0.77	0.82	0.52
Black	1.51	1.50	1.10	1.38
Hispanic	1.54	1.59	1.28	1.47
Asian	1.50	1.72	2.00	1.18
Other	2.18	2.57	1.95	2.28
Highest education of parents				
High school diploma or less	1.11	1.08	0.75	1.11
Some college	0.90	0.98	0.78	0.79
Bachelor's or higher degree	0.67	0.88	0.97	0.60
Family SES in 10th grade				
Lowest quarter	1.26	1.21	0.75	1.27
Middle two quarters	0.78	0.73	0.70	0.71
Highest quarter	0.61	1.21	1.27	0.53
Family type in 10th grade				
Two-parent family	0.69	0.70	0.71	0.55
Single-parent family	1.06	1.16	0.94	1.04
Language student first learned to speak				
English	0.69	0.65	0.68	0.52
Non-English	1.53	1.53	1.36	1.46

See notes at end of table.

Table C-20b.
Standard errors for table C-20a: Percentage distribution of spring 2002 high school sophomores' socioeconomic status in 2012 and percentage who or whose spouses, partners, or children received public assistance in 2011, by selected student characteristics—Continued

Selected characteristics	Sophomores' socioeconomic status in 2012: Lowest quarter	Middle two quarters	Highest quarter	Percent receiving public assistance in 2011
High school characteristics				
Student's educational expectations in 10th grade				
Do not know yet	1.89	1.72	1.49	1.68
High school diploma or less	1.98	2.03	0.75	2.18
Some college	1.89	1.89	1.04	1.67
Bachelor's or higher degree	0.60	0.69	0.73	0.54
Academic risk in 10th grade				
Low	0.62	1.47	1.51	0.60
Moderate	0.68	0.68	0.67	0.59
High	1.62	1.59	0.49	1.55
School disengagement in 10th grade				
Low	0.89	1.20	1.19	0.83
Moderate	0.75	0.82	0.84	0.61
High	1.13	1.20	0.83	1.13
School control in 10th grade				
Public	0.69	0.65	0.68	0.55
Private	0.87	1.22	1.33	0.66
Rigor of high school curriculum				
Below-standard	1.04	0.89	0.80	0.82
Standard	1.28	1.50	1.55	1.20
Moderately rigorous	0.72	1.16	1.19	0.80
Rigorous	0.91	1.88	1.94	0.48
Highest math course taken since grade 9				
No math, basic math, or pre-algebra	2.04	1.98	0.60	2.63
Algebra I, geometry, or algebra II	0.91	0.85	0.66	0.77
Trigonometry, statistics, or precalculus	0.67	1.01	1.15	0.83
Calculus	0.65	1.33	1.43	0.60
Highest science course taken since grade 9				
No science or low-level science	2.11	1.98	0.86	2.05
General biology	1.18	1.06	0.83	1.19
Chemistry I or physics I	0.93	1.13	1.10	0.88
Chemistry I and physics I	0.82	1.46	1.55	0.93
Chemistry II, physics II, or advanced biology	1.02	1.35	1.66	0.77
Cumulative academic GPA				
0.00–1.99	1.20	1.16	0.53	1.18
2.00–2.49	1.39	1.38	0.86	1.17
2.50–2.99	1.10	1.34	1.19	1.07
3.00–3.49	0.77	1.29	1.45	0.89
3.50–4.00	0.64	1.35	1.38	0.68

See notes at end of table.

Table C-20b.
Standard errors for table C-20a: Percentage distribution of spring 2002 high school sophomores' socioeconomic status in 2012 and percentage who or whose spouses, partners, or children received public assistance in 2011, by selected student characteristics—Continued

Selected characteristics	Sophomores' socioeconomic status in 2012: Lowest quarter	Middle two quarters	Highest quarter	Percent receiving public assistance in 2011
Current occupation				
Business/management occupations	0.25	1.67	1.65	0.98
STEM occupations	†	2.14	2.14	1.09
Health care occupations	0.83	1.69	1.83	1.32
PK–12 educators/social service professionals	†	2.00	2.00	1.41
Sales occupations	2.19	2.17	0.76	1.70
Business support/administrative assistants	1.35	1.42	0.61	1.25
Trade/technical professionals	1.02	1.02	0.51	0.94
Other	†	2.07	2.05	1.30
Employment status in 2012				
Employed 35+ hours/week	0.59	0.71	0.78	0.52
Employed 1–34 hours/week	1.53	1.56	1.13	1.30
Unemployed	1.61	1.64	0.78	1.65
Out of the labor force	2.03	1.99	1.13	1.92
Marital status in 2012				
Single never married	0.88	0.80	0.75	0.65
Married	0.91	1.06	1.03	0.93
Divorced/separated/widowed	2.72	2.83	2.20	3.04
Living with partner	1.12	1.27	1.12	1.22
Number of children had in 2012				
None	0.63	0.77	0.80	0.34
One or more	1.10	1.08	0.71	1.03
Single parenthood in 2012				
Yes	2.88	2.90	1.44	2.65
No	1.11	1.11	0.78	1.10

† Not applicable.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/12).