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A Profile of the American High School Senior in 2004: A First Look

Initial Results From the First Follow-up of the Education Longitudinal Study of 2002 (ELS:2002)

E.D. TAB

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October 2005

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Suggested Citation

Ingels, S.J., Planty, M., and Bozick, R. (2005). *A Profile of the American High School Senior in 2004: A First Look—Initial Results From the First Follow-up of the Education Longitudinal Study of 2002 (ELS:2002)* (NCES 2006–348). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

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Foreword

The Education Longitudinal Study of 2002 (ELS:2002) provides a wealth of information from multiple sources about the factors and circumstances related to the performance and social development of the American high school student over time. This E.D. TAB profiles American high school seniors in the 2003–04 school year. The report supplies a brief examination of four aspects of the individual and educational characteristics of 2004 seniors: seniors' tested achievement in mathematics; their expectations for future educational attainment; the features of postsecondary institutions that are most important to them in selecting a college; and life goals and values associated with education, work, family, friends, community, and society. The appendix provides a comprehensive description of the ELS:2002 design for data users, in addition to outlining its research capabilities for addressing key research questions.

We hope that the information provided in this report will be useful to a wide range of interested readers, including policymakers and educators. We further hope that the results reported here will encourage other researchers to use the ELS:2002 data.

Jeffrey A. Owings, *Associate Commissioner*
Elementary/Secondary & Libraries Studies

Acknowledgments

A number of people contributed to the production of this E.D. TAB, and many more to the development of the Education Longitudinal Study of 2002 (ELS:2002) more generally. In particular, we wish to thank Marilyn Seastrom, Jeffrey A. Owings, John Wirt, and Larry Ogle from NCES, and Duc-Le To from the Institute of Education Sciences, for the quality of their input into this document.

We also would like to acknowledge the role of the ELS:2002 Technical Review Panel, whose members reviewed plans for the ELS:2002 data collection, helped refine them, and provided important suggestions to help guide development of the instrumentation. The following individuals serve as members of the Technical Review Panel: Marco Clark, Richard Duran, Jeremy Finn, Thomas B. Hoffer, Sally Kilgore, Richard Lawrence, Samuel R. Lucas, Aaron Pallas, and Andy Rogers.

Special thanks are in order to Jeffrey A. Owings, Project Officer and NCES Associate Commissioner of Elementary/Secondary & Libraries Studies, in whose division ELS:2002 is housed. Other NCES staff who have provided help, support, and assistance include Kathryn Chandler, Wilma Greene, Lisa Hudson, Paula Knepper, Mariann Lemke, Edith McArthur, and Peggy Quinn. Staff elsewhere in the U.S. Department of Education whose help we gratefully acknowledge are Clifford Adelman, Sharon Belli, Jeffery Rodamar, and Marsha Silverberg. Individuals elsewhere who have provided major assistance include Leslie A. Scott of ESSI and Denise Davis, formerly of the National Commission on Libraries and Information Science.

Daniel J. Pratt of RTI served as the ELS:2002 base-year and first follow-up project director. Steven J. Ingels of RTI was principal investigator. Key RTI task leaders were Ellen Stutts (associate project director), Debbie Herget (first follow-up in-school and field data collection), Doug Currivan (first follow-up out-of-school computer-assisted telephone interview [CATI] data collection), James Rogers (data processing), and Peter Siegel (sampling and statistics). Other RTI staff who played major roles in ELS:2002 were Christopher Alexander, Kimberly Ault, Stephen Black, Laura J. Burns, Debbie Capps, James Chromy, Elizabeth Copello, Marianne Daye, D. Wesley Dukes, Brian Evans, Catherine Forstner, Sherry Hubbard-Bednasz, Ruby Johnson, Tiffany Lytle, Mani Medarametla, Melanie Pressley, Denise Rhatigan, Helen Smith, Milorad Stojanovic, David Wilson, and Donghui Wang. Test development, scaling, and equating were conducted by Judith M. Pollack, Donald A. Rock, and Michelle Najarian, under a subcontract with Educational Testing Service.

Document preparation, editorial, and graphics support for this E.D. TAB were provided, respectively, by Lawanda King, Wallace Campbell, and Diane Caudill of RTI.

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Introduction

This report profiles the American high school senior of 2004 using data from the Education Longitudinal Study of 2002 (ELS:2002), the most recent secondary school longitudinal study conducted by the National Center for Education Statistics (NCES). ELS:2002 began with a nationally representative sample of 10th-graders in public and private schools in the United States in 2002. The 2002 sophomore cohort was surveyed again in the spring of 2004 when most of the sample members were high school seniors. This sample was "freshened" with a sample of spring 2004 seniors who were not high school sophomores or were not in the United States in the spring of 2002. This population provides a nationally representative sample of the 2004 senior class, which is the focus of this report. This report is the third in a series of reports profiling contemporary American high school students. The first two reports in the series, *The High School Sophomore Class of 2002: A Demographic Description—First Results From the Base Year of the Education Longitudinal Study of 2002* (NCES 2004–371) (Ingels and Scott 2004) and *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) (Ingels, Burns et al. 2005), profiled American high school sophomores.

Focus of This Report

Completion of high school is a major milestone for adolescents. It is also a point of normative transition, with most students proceeding directly to postsecondary education or training and others entering the labor market. As Entwisle (1990) observes, the end of high school is "the first of a series of life events marking the transition into adulthood." Although the senior year of high school represents the culmination of what is typically a program of a dozen years of elementary and secondary schooling, it also marks a fundamental crossroads, wherein youths make choices about their future. After high school graduation, some seniors will immediately enter the workforce or the military. Some will start families. Many will go directly into postsecondary education (some 79 percent of the senior cohort expected to go directly from high school to a postsecondary institution [data not shown]).[1] The choice to follow the path of further education itself involves many additional choices—choices that reflect the considerable heterogeneity of American postsecondary education. These decisions, moreover, may be both influenced and constrained by a variety of factors, including educational expectations, available financial resources, and quality of academic preparation and performance in high school.

This report focuses on four aspects of the high school seniors in the spring term of their final year of high school in 2004. One focus is tested achievement. How proficient are the nation's high school seniors in mathematics? A second focus is educational expectations. How much more education do the nation's high school seniors expect to achieve? A third focus, for the college-bound majority of the cohort, is the factors they deem most important in choosing a postsecondary institution. What matters most to high school seniors in selecting a college? A fourth and final focus is their life goals or values. How important to high school seniors are

[1] Another 7 percent stated that they did not know what they would do, while 13 percent indicated that they would not go directly to postsecondary education. All percents are weighted and based on the variable F1S45.

various aspects of education, work, and leisure? How do they rate the importance of various life values related to family and friendships, or community and society?

The analyses presented in the report are based on about 13,420 high school seniors, representing a population of about 3 million seniors in public and private schools in 2004. The data provided on each of these topics are further examined by selected student characteristics. The characteristics examined in this report are

- sex;
- age;
- race/ethnicity (American Indian or Alaska Native; Asian, Native Hawaiian/Pacific Islander; Black or African American; Hispanic or Latino; White; and More than one race. All race categories exclude individuals of Hispanic or Latino origin.);
- native language (English, non-English);
- family composition (mother and father, mother or father and guardian, single parent, other);
- parents' education (high school or less, some college, college graduation, graduate/professional degree);
- socioeconomic status (lowest quarter, middle two quarters, highest quarter);
- highest mathematics coursework (pre-algebra or lower, algebra 1, geometry, algebra 2, trigonometry, pre-calculus, or calculus);
- student's educational expectations (high school or less, some college, college graduation, graduate/professional degree);
- mathematics achievement test (lowest quarter, middle two quarters, highest quarter);
- school sector (public, Catholic, other private, transfer[2]); and
- school urbanicity (urban, suburban, rural, transfer[3]).

To set the stage for describing America's high school seniors in 2004, it is of interest to note that 2 years after their spring-term 2002 interview, the following spring-term 2004 enrollment statuses were recorded for the sophomore class of 2002 (weighted percentages):

- Nearly 80 percent were still enrolled in their base-year school.
- About 8 percent had transferred to another school.
- Nearly 5 percent graduated early or earned a General Education Development (GED) diploma prior to March 15, 2004.

[2] School information for students who transferred out of their base-year school was not available in the first follow-up survey.
[3] School information for students who transferred out of their base-year school was not available in the first follow-up survey.

- Almost 7 percent had left school as dropouts.
- About one-third of 1 percent were being homeschooled.

This analysis focuses on those students who either remained in their base-year school or transferred, but were in the 12th grade in 2004. Dropouts, early graduates, homeschoolers, and students who were not in the 12th grade were excluded from the analysis.

About the Education Longitudinal Study of 2002 (ELS:2002)

NCES is involved in research on the development and critical transitions experienced by students as they proceed through high school and into postsecondary education and the labor market. ELS:2002 is a longitudinal study, starting with a nationally representative sample of 10th-graders in public and private schools in the United States in 2002. The 2002 sophomore cohort was surveyed again in the spring of 2004 when most of the sample members were high school seniors. The ELS:2002 base-year and first follow-up studies are described briefly below.

Base-Year Design

The ELS:2002 base-year study was carried out in a nationally representative probability sample of about 750 public, Catholic, and other private schools in the spring term of the 2001–02 school year. Of 17,590 eligible selected sophomores, 15,360 completed a base-year questionnaire. The weighted response rate for student questionnaire completion was 87.3 percent. Of the 15,360 student questionnaire completers, 14,540 (95.1 percent, weighted) also completed cognitive assessments in mathematics and reading. A nonresponse bias analysis was performed to ensure that any identified biases were small and the data could be used with confidence. Missing data for key questionnaire and test variables were imputed. Further details of the school-level response rate, bias analysis, and base-year design are provided in appendix A (see also Ingels, Pratt et al. 2005).

First Follow-up Design

The basis for the 2004 first follow-up sample was the sample of schools and students studied in the ELS:2002 base year. Base-year students were surveyed whether they were in the base-year school, in a new school, or out of school (early graduate or dropout). Two additional sets of students were included in the first follow-up survey: freshened and base-year nonrespondents. Freshened students are 2004 seniors who were not sophomores in 2002.[4] To ensure that a nationally representative sample of high school seniors was selected, these students were given a chance for selection in the first follow-up. This analysis focuses on the subset of 2004 respondents who comprise the nationally representative sample of high school seniors in 2004. Similar to the base-year design, the first follow-up included a student questionnaire and cognitive test in mathematics administered to each selected student.[5] High school seniors in the base-year schools were typically surveyed and tested in group sessions at their schools. Seniors who had transferred to another school were usually surveyed outside of the school setting.

[4] In spring term 2002, such students may have been out of the country, been enrolled in school in the United States in a grade other than 10th, had an extended illness or injury, been homeschooled, been institutionalized, or temporarily dropped out of school. These students comprised the first follow-up "freshening sample."
[5] The assessment was administered only to those first follow-up students who remained in their base-year school.

Although seniors who remained in their base-year schools were administered the mathematics assessment, transfer students were not. However, a math test score was imputed for the transfer students. The sample included about 14,250 seniors, of whom 13,420 participated, for a weighted response rate of 94.4 percent. Further details about the first follow-up response rates and data collection procedures are provided in appendix A (see also Ingels, Pratt et al. 2005).

Methodology of the Report

Comparisons drawn in the text of this report have been tested for statistical significance at the .05 level using *t* statistics to ensure that the differences are larger than those that might be expected due to sampling variation. Given large sample sizes, small differences with little or no practical or substantive significance may often be statistically significant. Since not all statistically significant differences are necessarily significant in substantive terms, other metrics, such as effect sizes, are employed in the report as a second criterion for reporting differences. In comparing test scores, the effect size is reported as the standardized difference in test score, which is expressed in terms of standard deviation units. A standardized difference of 0.2 is required for a difference to be reported. For proportions, a 5 percentage point difference between estimates is used to establish substantive significance. Additional information about the ELS:2002 history, purpose, sample design, weighting, and variable definitions is provided in appendix A. Appendix B presents the standard errors for the estimates.

Finally, it is important to note that many of the variables examined in this report are related to one another, and complex interactions and relationships have not been explored here. The purpose of an E.D. TAB is to introduce new NCES surveys and data through the presentation of selected descriptive information in tabular format. More in-depth studies of the first follow-up data, using more sophisticated methodologies and focusing on a range of research questions and policy issues, will follow in the near future and by other researchers whose curiosity to dig deeper has been piqued by the associations reported in this report.

Selected Findings

This E.D. TAB presents national data on high school seniors in 2004. In particular, this report examines 12th-grade senior cohort tested achievement in mathematics, expected educational attainment, factors related to their choice of a postsecondary college (for college-bound seniors), and their life goals and values related to education, work, family, and community. These aspects are further examined by a select number of student characteristics.

Background Characteristics of the High School Senior Class of 2004

Table 1 summarizes selected sociodemographic and educational characteristics of the high school senior class of 2004. Various background characteristics and differences may influence the educational experiences, attainment, and expectations of students as they progress through high school and into postsecondary education and the workforce.

- The ELS:2002 senior cohort consisted of 62 percent White, 15 percent Hispanic, 13 percent Black, 5 percent Asian, and 1 percent American Indian/Alaska Native students (table 1). Another 4 percent of the senior class identified themselves by more than one racial/ethnic group.
- Just over one-half of the senior cohort in 2004 were 18 years old at the time that they were surveyed (54 percent) (table 1).

Mathematics Achievement

The ELS:2002 first follow-up included an assessment of students' performance in mathematics. The test was designed to measure the achievement status of 12th-graders at both the individual and group levels. This E.D. TAB employs a score that allows achievement to be understood in terms of specific levels of skill mastery. The math levels are (1) simple arithmetical operations with whole numbers; (2) simple operations with decimals, fractions, powers, and roots; (3) simple problem solving, requiring the understanding of low-level mathematical concepts; (4) understanding of intermediate-level mathematical concepts and/or multistep solutions to word problems; and (5) complex multistep word problems and/or advanced mathematics material. Table 2 summarizes these findings.

- About 96 percent of the senior cohort in 2004 were able to perform simple arithmetical operations with whole numbers, and 79 percent were able to perform simple operations with decimals, fractions, roots, and powers (table 2 and figure 1). Some 62 percent were capable of simple problem solving in mathematics, and about a third (35 percent) showed an understanding of intermediate-level mathematical concepts. At the highest level, about 4 percent exhibited a mastery of complex multistep word problems and advanced mathematics.

- Among the senior cohort in 2004, higher postsecondary educational expectations were associated with higher levels of math performance (table 2). However, 63 percent of seniors who expected to earn a 4-year college degree and 47 percent of seniors who expected to earn a professional degree did not exhibit a mastery of level 4 (understanding of intermediate-level mathematics concepts). In fact, 32 percent and 20 percent, respectively, had not mastered level 3 (simple problem solving requiring the understanding of low-level mathematical concepts).

Educational Attainment: Seniors' Expectations

The ELS:2002 first follow-up survey asked seniors about their expectations for the amount of education they were likely to attain in their life.

- Overall, about 69 percent of the senior cohort expected to complete college with a 4-year degree or higher (34 percent expected to stop with a 4-year college degree, and 35 percent expected to go on to complete a postbaccalaureate graduate or professional program) (table 3). Another 18 percent expected to complete a 2-year postsecondary program or at least attend college.
- Among the senior cohort in 2004, a greater percentage of seniors with higher math test scores than seniors with lower math test scores expected to earn a graduate or professional degree (58 percent versus 33 and 16 percent) (table 3).

Choosing a College: Importance of Various Institutional Characteristics

The ELS:2002 first follow-up survey asked college-bound seniors (those who expected to go on to postsecondary education) how important various institutional factors were to them when choosing a college. These seniors rated each statement as being not important, somewhat important, or very important. Estimates in the following bullets reflect the percentage of students who rated each item as very important.

- Among the members of the senior cohort in 2004 who expected to go on to postsecondary education, about 75 percent chose the college because it offered a degree in their field of interest; 66 percent because of its course offerings; 59 percent based on its job placement record; 58 percent based on its academic reputation; and 57 percent because of the availability of financial aid (figure 2). Three percent thought it very important to attend the same college one of their parents had attended.
- Among the college-bound senior cohort in 2004, a greater percentage of Blacks (54 percent) than Whites (30 percent) rated low expenses as a very important factor in their postsecondary institutional choice (table 4).

Seniors' Values and Plans

The ELS:2002 first follow-up survey asked seniors about their plans for the future and their values related to education, work, family, and community. Seniors rated each statement as

being not important, somewhat important, or very important to them. Estimates in the following bullets reflect the percentage of students who rated each item as very important.

- Among the senior cohort in 2004, being successful in their line of work (91 percent) and getting a good education (89 percent) were considered very important to them (table 5 and figure 3).
- Among the senior cohort in 2004, having strong friendships was very important to 86 percent and finding the right person to marry and having a happy family life was very important to 81 percent (table 6 and figure 3). Although having children was very important to 49 percent of the cohort, 83 percent said they would like to give their children better opportunities than they had had themselves.
- Having lots of money in their lives was considered very important for 35 percent of the high school senior cohort in 2004 (table 5 and figure 3).
- Around 20 percent of the senior cohort in 2004 felt that working to correct social and economic inequalities was very important (table 7 and figure 3). Some 47 percent of seniors considered being an active and informed citizen to be very important.

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Tables

Table 1. Percentage of high school seniors, by selected student characteristics: 2004

Characteristic	Percent distribution
Total	100.0
Sex	
Male	49.9
Female	50.1
Age	
17 or younger	40.8
18	54.2
19 or older	5.0
Race/ethnicity[1]	
American Indian or Alaska Native	0.9
Asian or Pacific Islander	4.5
Black or African American	13.3
Hispanic or Latino	15.0
More than one race	3.9
White	62.2
Native language[2]	
English	86.4
Non-English	13.6
Family composition	
Mother and father	60.1
Mother or father and guardian	15.3
Single parent (mother or father)	20.7
Other[3]	3.9
Parents' education	
High school or less	25.1
Some college	34.2
College graduation	23.1
Graduate/professional degree	17.6
Socioeconomic status	
Lowest quarter	22.2
Middle two quarters	50.3
Highest quarter	27.5

See notes at end of table.

Table 1. Percentage of high school seniors, by selected student characteristics: 2004—Continued

Characteristic	Percent distribution
Highest mathematics coursework	
Pre-algebra or lower	5.4
Algebra 1	6.0
Geometry	13.2
Algebra 2	30.0
Trigonometry, pre-calculus, or calculus	45.5
Student's educational expectations	
High school or less	5.0
Some college	18.1
College graduation	33.5
Graduate/professional degree	35.0
Don't know	8.4
Postsecondary education plans	
Don't plan to continue	1.7
Don't know if will continue	6.2
Four-year institution	61.6
Two-year community college	22.5
Vocational, technical, or trade school	8.0
School sector	
Public	83.9
Catholic	4.4
Other private	3.1
Transfer[4]	8.6
School urbanicity	
Urban	25.7
Suburban	47.1
Rural	18.6
Transfer[4]	8.6

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
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), “First Follow-up, 2004.”

Table 2. Percentage of high school seniors demonstrating mastery of specific mathematics knowledge and skills, by selected student characteristics: 2004

Characteristic	Level 1[1]	Level 2[2]	Level 3[3]	Level 4[4]	Level 5[5]
Total	96.0	78.5	62.4	35.1	3.9
Sex					
Male	96.0	79.6	64.0	38.0	5.1
Female	96.1	77.5	60.7	32.3	2.7
Age					
17 or younger	97.4	82.6	66.6	37.7	4.3
18	96.1	78.6	62.7	35.6	3.8
19 or older	85.9	48.3	28.0	10.4	0.9
Race/ethnicity[6]					
American Indian or Alaska Native	94.5	66.8	42.9	16.1	1.0
Asian or Pacific Islander	97.7	86.1	73.5	49.6	10.9
Black or African American	92.3	59.1	35.8	12.0	0.5
Hispanic or Latino	92.8	64.7	42.7	18.3	1.1
More than one race	95.1	77.7	61.1	31.8	2.6
White	97.6	85.7	72.4	43.6	4.9
Native language[7]					
English	96.6	80.6	65.0	37.0	3.9
Non-English	92.5	65.5	45.9	23.3	3.5
Family composition					
Mother and father	96.9	82.9	68.6	41.3	5.0
Mother or father and guardian	95.8	75.9	57.1	28.2	2.4
Single parent (mother or father)	94.5	70.6	51.9	26.0	2.3
Other[8]	90.8	62.9	41.9	14.5	0.8
Parents' education					
High school or less	93.4	66.6	45.5	19.5	1.0
Some college	96.0	77.4	58.8	29.3	2.1
College graduation	97.4	84.6	71.8	43.8	5.0
Graduate/professional degree	98.0	89.8	81.0	57.2	9.8
Socioeconomic status					
Lowest quarter	92.5	61.6	39.3	15.7	0.7
Middle two quarters	96.1	78.5	61.1	31.2	2.4
Highest quarter	98.8	92.3	83.3	57.9	9.1

See notes at end of table.

Table 2. Percentage of high school seniors demonstrating mastery of specific mathematics knowledge and skills, by selected student characteristics: 2004—Continued

Characteristic	Level 1[1]	Level 2[2]	Level 3[3]	Level 4[4]	Level 5[5]
Highest mathematics coursework					
Pre-algebra or lower	81.2	36.9	17.1	4.7	#
Algebra 1	89.7	44.5	19.4	3.9	#
Geometry	94.1	62.4	35.8	10.5	0.2
Algebra 2	96.9	78.6	57.2	20.8	0.3
Trigonometry, pre-calculus, or calculus	98.9	93.2	85.1	59.8	8.3
Student's educational expectations					
High school or less	84.0	44.9	24.6	7.8	0.1
Some college	93.1	62.2	37.2	12.5	0.3
College graduation	97.6	83.8	68.3	37.3	3.2
Graduate/professional degree	98.8	90.5	79.7	52.9	7.6
Don't know	91.5	62.8	42.9	17.3	1.0
Postsecondary education plans					
Don't plan to continue	84.7	48.7	25.8	8.1	#
Don't know if will continue	89.8	58.5	38.6	14.9	0.8
Four-year institution	98.3	88.0	75.7	47.5	6.0
Two-year community college	94.1	66.2	43.6	16.9	0.6
Vocational, technical, or trade school	91.6	63.6	40.1	13.2	0.4
School sector					
Public	95.8	77.9	61.6	34.5	3.7
Catholic	99.3	92.9	83.5	55.3	6.4
Other private	98.9	93.1	84.3	59.5	11.4
Transfer[9]	95.2	72.2	50.8	22.0	1.5

See notes at end of table.

Table 2. Percentage of high school seniors demonstrating mastery of specific mathematics knowledge and skills, by selected student characteristics: 2004—Continued

Characteristic	Level 1[1]	Level 2[2]	Level 3[3]	Level 4[4]	Level 5[5]
School urbanicity					
Urban	94.9	75.8	59.1	32.9	4.2
Suburban	96.6	80.5	65.7	38.8	4.3
Rural	96.4	80.3	63.8	34.9	3.3
Transfer[9]	95.2	72.2	50.8	22.0	1.5

Rounds to zero.
[1] Math level 1: Simple arithmetical operations on whole numbers: essentially, single-step operations that rely on rote memory.
[2] Math level 2: Simple operations with decimals, fractions, powers, and roots.
[3] Math level 3: Simple problem solving, requiring the understanding of low-level mathematical concepts.
[4] Math level 4: Understanding of intermediate-level mathematical concepts and/or having the ability to formulate multistep solutions to word problems.
[5] Math level 5: Proficiency in solving complex multistep word problems and/or having the ability to demonstrate knowledge of material found in advanced mathematics courses.
[6] All race categories exclude Hispanic or Latino origin.
[7] The first language students learned to speak when they were children.
[8] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[9] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
NOTE: Mastery is reported at the group level by calculating the mean of the probability scores in the given area. Since the means are on a decimal scale between 0 and 1, they represent the proportions of members of a subgroup falling within a performance level. See Appendix A for a complete description of the probability of proficiency scores.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), “First Follow-up, 2004.”

Table 3. Percentage of high school seniors, by expected level of educational attainment and selected student characteristics: 2004

Characteristic	High school or less	Some college	College graduate (4-year degree)	Graduate/ professional school	Don't know
Total	5.0	18.1	33.5	35.0	8.4
Sex					
Male	6.9	20.6	34.4	28.8	9.4
Female	3.1	15.6	32.7	41.2	7.4
Age					
17 or younger	3.2	17.0	34.8	37.8	7.3
18	5.4	17.9	33.5	34.6	8.6
19 or older	13.7	28.6	22.7	19.3	15.6
Race/ethnicity[1]					
American Indian or Alaska Native	6.8	21.3	26.5	30.9	14.5
Asian or Pacific Islander	2.5	10.4	32.7	47.6	6.9
Black or African American	5.0	18.8	32.1	35.3	8.8
Hispanic or Latino	6.4	23.1	28.2	28.8	13.5
More than one race	6.1	16.3	36.4	30.6	10.7
White	4.7	17.3	35.1	35.9	7.0
Native language[2]					
English	4.9	17.7	34.1	35.3	8.0
Non-English	5.6	20.4	29.8	33.1	11.1
Family composition					
Mother and father	4.2	15.8	34.9	38.2	6.8
Mother or father and guardian	6.7	20.7	32.9	29.1	10.7
Single parent (mother or father)	6.0	20.6	31.2	31.8	10.4
Other[3]	5.3	29.0	26.3	26.2	13.1
Parents' education					
High school or less	9.4	27.2	29.8	22.0	11.5
Some college	5.1	20.9	35.6	29.4	9.0
College graduation	2.6	12.6	38.5	40.1	6.2
Graduate/professional degree	1.5	6.8	28.1	57.9	5.6
Socioeconomic status					
Lowest quarter	9.6	27.4	28.8	22.0	12.1
Middle two quarters	5.0	19.8	35.6	30.8	8.8
Highest quarter	1.3	7.4	33.4	53.2	4.6

See notes at end of table.

Table 3. Percentage of high school seniors, by expected level of educational attainment and selected student characteristics: 2004—Continued

Characteristic	High school or less	Some college	College graduate (4-year degree)	Graduate/ professional school	Don't know
Highest mathematics coursework					
Pre-algebra or lower	18.8	33.1	20.2	9.4	18.4
Algebra 1	14.5	37.8	21.8	9.8	16.1
Geometry	8.8	31.0	26.5	19.7	14.0
Algebra 2	4.2	21.9	38.4	26.4	8.9
Trigonometry, pre-calculus, or calculus	1.2	7.2	35.7	51.9	4.0
Mathematics achievement test					
Lowest quarter	11.9	31.4	26.4	16.2	14.1
Middle two quarters	3.6	18.7	36.5	33.1	8.1
Highest quarter	0.7	3.6	34.5	57.8	3.4
School sector					
Public	5.2	18.8	33.7	33.8	8.4
Catholic	1.0	5.5	38.3	51.3	3.8
Other private	1.0	6.4	32.4	56.2	4.1
Transfer[4]	6.0	21.4	29.7	30.8	12.2
School urbanicity					
Urban	4.2	15.1	32.9	39.4	8.5
Suburban	4.8	17.2	34.5	35.5	8.0
Rural	6.1	22.9	33.5	30.0	7.5
Transfer[4]	6.0	21.4	29.7	30.8	12.2

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
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), “First Follow-up, 2004.”

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part I

Characteristic	Strong academic reputation	Availability of financial aid	Easy admissions standards	Low expenses	Good job placement record for its graduates	Availability of specific courses or curriculum
Total	57.6	57.3	22.9	35.6	59.1	66.5
Sex						
Male	51.8	50.9	22.9	33.3	55.8	62.3
Female	63.1	63.3	22.9	37.7	62.1	70.3
Age						
17 or younger	58.8	57.9	22.1	36.4	59.1	68.3
18	57.1	56.3	21.8	34.2	58.4	65.5
19 or older	53.3	63.6	43.0	44.2	66.6	62.0
Race/ethnicity[1]						
American Indian or Alaska Native	61.3	61.6	26.5	33.9	59.6	65.3
Asian or Pacific Islander	66.2	57.7	20.5	33.1	64.9	64.9
Black or African American	66.3	76.0	40.8	53.8	72.9	74.1
Hispanic or Latino	53.1	69.9	30.6	43.0	63.6	65.3
More than one race	56.8	62.1	27.0	42.2	59.5	68.6
White	56.2	50.0	17.2	29.7	54.6	65.1
Native language[2]						
English	57.8	55.6	21.8	34.3	58.3	66.8
Non-English	56.7	68.3	30.6	43.7	63.9	64.4
Family composition						
Mother and father	59.6	52.2	19.5	32.0	58.3	66.7
Mother or father and guardian	51.7	61.2	24.5	38.5	57.9	66.7
Single parent (mother or father)	57.2	67.2	29.4	41.7	60.9	65.7
Other[3]	52.5	70.9	36.3	47.2	65.2	65.7
Parents' education						
High school or less	51.3	66.9	31.2	44.1	63.1	64.4
Some college	54.2	61.4	25.1	38.4	58.8	68.7
College graduation	61.1	52.5	18.2	31.6	57.5	67.2
Graduate/professional degree	67.4	43.7	14.6	24.7	56.4	64.0

See notes at end of table.

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part I—Continued

Characteristic	Strong academic reputation	Availability of financial aid	Easy admissions standards	Low expenses	Good job placement record for its graduates	Availability of specific courses or curriculum
Socioeconomic status						
Lowest quarter	51.8	72.2	33.4	47.6	63.9	65.2
Middle two quarters	55.2	60.3	24.6	37.6	59.1	68.1
Highest quarter	66.0	41.4	12.4	23.3	55.6	64.5
Highest mathematics coursework						
Pre-algebra or lower	44.1	59.3	34.5	39.7	55.1	56.1
Algebra 1	43.6	62.7	37.9	44.3	61.9	60.0
Geometry	46.0	60.8	33.2	40.8	60.8	62.4
Algebra 2	51.5	58.6	28.6	38.7	57.9	66.5
Trigonometry, pre-calculus, or calculus	67.3	54.7	14.1	30.9	59.3	69.1
Student's educational expectations						
High school or less	37.7	45.7	33.4	36.0	50.9	46.4
Some college	38.2	59.2	35.4	42.8	58.1	61.5
College graduation	54.0	56.9	22.8	35.6	55.8	64.8
Graduate/professional degree	74.0	57.3	15.3	31.0	63.6	73.0
Don't know	42.4	58.3	30.6	41.2	56.3	58.0
Postsecondary education plans						
Don't plan to continue	†	†	†	†	†	†
Don't know if will continue	33.3	56.0	19.5	40.6	48.1	54.0
Four-year institution	65.4	55.8	17.2	31.4	60.5	69.1
Two-year community college	43.3	62.5	35.7	47.3	54.8	61.4
Vocational, technical, or trade school	39.8	54.3	31.4	34.4	61.5	61.5
Mathematics achievement test						
Lowest quarter	49.9	67.1	41.1	45.6	63.8	61.0
Middle two quarters	55.5	58.0	23.3	36.7	60.3	68.1
Highest quarter	68.3	47.7	6.9	24.9	52.7	68.0

See notes at end of table.

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part I—Continued

Characteristic	Strong academic reputation	Availability of financial aid	Easy admissions standards	Low expenses	Good job placement record for its graduates	Availability of specific courses or curriculum
School sector						
Public	56.7	57.9	23.0	36.0	58.4	66.3
Catholic	66.1	48.6	12.0	23.8	59.4	66.1
Other private	64.0	37.3	13.0	22.8	49.3	59.3
Transfer[4]	59.9	63.9	32.2	42.3	69.5	71.0
School urbanicity						
Urban	59.9	61.5	24.8	39.1	59.7	66.7
Suburban	57.6	54.0	20.5	32.3	58.1	65.9
Rural	53.4	56.8	22.1	35.6	55.8	65.5
Transfer[4]	59.9	63.9	32.2	42.3	69.5	71.0

† Not applicable.
[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part II

Characteristic	Athletic program	Active social life	Living at home	Away from home	Low crime	Good graduate school placement
Total	14.8	30.0	23.2	29.4	36.0	42.8
Sex						
Male	19.0	33.4	21.4	26.8	30.4	38.2
Female	10.9	26.9	24.9	31.8	41.1	47.0
Age						
17 or younger	13.9	31.0	23.1	29.9	36.4	43.2
18	14.8	28.8	21.6	28.8	34.8	41.4
19 or older	22.4	36.0	41.8	31.7	46.6	53.6
Race/ethnicity[1]						
American Indian or Alaska Native	20.0	29.3	27.6	28.9	44.3	46.6
Asian or Pacific Islander	10.8	27.7	21.2	26.6	42.4	54.2
Black or African American	26.4	35.4	29.1	40.3	53.5	60.3
Hispanic or Latino	15.2	27.6	35.6	21.7	40.1	47.5
More than one race	17.5	34.1	19.9	31.8	36.3	40.6
White	12.3	29.4	19.3	28.9	30.6	37.1
Native language[2]						
English	14.9	30.2	21.3	30.7	35.0	41.2
Non-English	14.4	29.1	35.5	20.8	42.1	53.0
Family composition						
Mother and father	14.2	30.8	21.3	29.0	33.9	41.9
Mother or father and guardian	14.2	24.9	23.2	26.8	35.0	40.1
Single parent (mother or father)	15.8	31.1	27.8	31.1	41.0	45.7
Other[3]	21.1	32.8	29.3	36.6	45.5	51.8
Parents' education						
High school or less	15.7	25.5	33.1	23.6	40.1	43.5
Some college	14.6	28.0	25.8	27.1	37.0	41.6
College graduation	15.1	32.8	18.2	31.7	32.5	39.9
Graduate/professional degree	13.6	35.9	12.4	37.8	33.5	47.6

See notes at end of table.

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part II—Continued

Characteristic	Athletic program	Active social life	Living at home	Away from home	Low crime	Good graduate school placement
Socioeconomic status						
Lowest quarter	15.3	25.7	35.0	23.4	42.5	46.9
Middle two quarters	15.2	28.7	25.4	27.8	36.7	40.7
Highest quarter	13.7	35.5	11.0	36.5	30.0	43.3
Highest mathematics coursework						
Pre-algebra or lower	17.4	27.1	36.6	26.2	38.7	41.1
Algebra 1	16.6	29.1	36.2	28.0	42.0	43.7
Geometry	16.6	27.2	31.8	25.1	40.1	41.2
Algebra 2	14.7	27.9	27.5	26.7	37.9	39.0
Trigonometry, pre-calculus, or calculus	13.9	32.4	15.6	32.5	32.7	45.5
Student's educational expectations						
High school or less	17.3	33.3	31.0	23.7	44.1	38.2
Some college	13.9	22.9	35.5	20.3	35.4	30.2
College graduation	16.5	30.0	22.1	29.2	34.9	33.7
Graduate/professional degree	13.7	33.6	16.3	35.0	36.2	58.0
Don't know	12.9	28.1	32.8	24.4	39.2	39.3
Postsecondary education plans						
Don't plan to continue	†	†	†	†	†	†
Don't know if will continue	11.4	21.1	27.4	19.9	41.3	34.2
Four-year institution	15.3	33.4	16.5	34.3	35.3	45.9
Two-year community college	15.4	24.3	39.6	20.1	38.5	39.3
Vocational, technical, or trade school	9.4	20.8	29.4	18.5	34.0	28.7
Mathematics achievement test						
Lowest quarter	22.0	33.3	38.5	30.6	47.5	49.3
Middle two quarters	13.7	27.7	23.2	26.9	36.7	41.0
Highest quarter	10.8	31.8	10.3	32.9	25.0	40.6

See notes at end of table.

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part II—Continued

Characteristic	Athletic program	Active social life	Living at home	Away from home	Low crime	Good graduate school placement
School sector						
Public	14.9	29.4	23.0	28.7	35.3	41.8
Catholic	12.4	38.2	12.2	36.9	27.5	45.0
Other private	12.4	36.8	13.1	35.1	27.1	42.3
Transfer[4]	16.2	28.8	35.5	29.5	51.1	50.9
School urbanicity						
Urban	16.6	31.8	23.9	31.7	38.0	46.8
Suburban	14.1	30.5	20.9	29.2	33.0	41.8
Rural	13.4	27.0	22.4	26.5	33.7	35.8
Transfer[4]	16.2	28.8	35.5	29.5	51.1	50.9

† Not applicable.
[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part III

Characteristic	Degree in chosen field	Racial/ethnic makeup	School size	Geographic location	Same school as one parent attended	Acceptance of college credit
Total	75.1	14.0	16.3	23.2	3.3	23.8
Sex						
Male	71.5	14.0	14.2	21.5	4.1	21.4
Female	78.4	14.0	18.3	24.7	2.5	26.0
Age						
17 or younger	76.4	13.6	16.3	23.5	3.0	22.3
18	74.1	13.2	16.0	22.6	3.0	23.7
19 or older	76.0	26.0	19.2	24.9	8.9	37.6
Race/ethnicity[1]						
American Indian or Alaska Native	72.9	14.8	16.5	25.3	1.6	16.1
Asian or Pacific Islander	73.5	19.1	17.4	22.9	1.9	24.0
Black or African American	83.5	31.0	24.3	28.9	7.9	35.8
Hispanic or Latino	75.3	18.7	13.8	20.1	4.2	31.9
More than one race	79.8	19.8	16.5	25.5	3.5	22.0
White	73.1	8.5	15.1	22.5	2.2	19.5
Native language[2]						
English	75.2	12.8	16.4	23.3	3.1	22.7
Non-English	74.9	21.6	15.9	22.4	4.6	30.8
Family composition						
Mother and father	74.9	12.3	16.6	23.4	2.6	22.1
Mother or father and guardian	71.9	13.1	11.6	21.1	3.3	22.1
Single parent (mother or father)	77.9	18.2	18.4	23.6	4.7	28.9
Other[3]	75.7	22.1	19.0	25.0	5.7	29.2
Parents' education						
High school or less	75.9	17.2	15.5	21.3	4.2	27.3
Some college	76.5	13.7	14.4	21.6	3.1	24.9
College graduation	74.5	11.9	16.6	23.6	2.8	22.2
Graduate/professional degree	72.4	13.2	20.6	27.8	3.0	19.4

See notes at end of table.

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part III—Continued

Characteristic	Degree in chosen field	Racial/ethnic makeup	School size	Geographic location	Same school as one parent attended	Acceptance of college credit
Socioeconomic status						
Lowest quarter	77.0	19.7	16.5	21.6	5.0	29.7
Middle two quarters	75.8	13.7	15.2	22.2	3.3	25.1
Highest quarter	72.5	10.4	18.1	26.0	2.1	17.3
Highest mathematics coursework						
Pre-algebra or lower	64.6	22.3	16.9	21.6	8.4	27.8
Algebra 1	74.7	18.8	13.5	19.0	3.9	27.3
Geometry	71.9	17.8	15.9	20.8	4.8	28.1
Algebra 2	75.1	15.1	14.9	21.2	3.6	23.8
Trigonometry, pre-calculus, or calculus	77.2	11.0	17.5	25.7	2.1	21.9
Student's educational expectations						
High school or less	57.1	23.9	22.0	18.7	12.9	33.8
Some college	68.9	17.5	11.4	19.2	4.6	22.7
College graduation	74.3	13.0	15.6	23.0	3.0	22.3
Graduate/professional degree	80.7	12.5	19.4	26.0	2.2	24.8
Don't know	69.9	15.5	13.6	19.9	4.5	26.1
Postsecondary education plans						
Don't plan to continue	†	†	†	†	†	†
Don't know if will continue	68.2	15.1	4.3	11.9	0.7	17.3
Four-year institution	77.6	12.7	18.5	25.3	2.7	22.9
Two-year community college	70.1	17.2	12.4	20.0	4.5	27.8
Vocational, technical, or trade school	70.4	15.1	10.4	16.4	4.2	19.6
Mathematics achievement test						
Lowest quarter	73.1	24.6	20.2	24.0	8.7	35.0
Middle two quarters	76.2	13.0	14.7	21.9	2.0	21.3
Highest quarter	74.7	7.0	16.0	24.9	1.1	19.1

See notes at end of table.

Table 4. Percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics: 2004—Part III—Continued

Characteristic	Degree in chosen field	Racial/ethnic makeup	School size	Geographic location	Same school as one parent attended	Acceptance of college credit
School sector						
Public	74.4	13.5	16.5	23.0	3.6	23.8
Catholic	74.9	8.9	18.4	28.1	1.4	13.4
Other private	68.8	10.4	20.7	29.5	1.8	13.0
Transfer[4]	84.6	22.6	11.5	19.5	2.1	33.2
School urbanicity						
Urban	75.3	16.6	18.8	26.2	4.5	25.1
Suburban	74.0	12.1	16.4	23.8	3.0	22.4
Rural	73.3	11.1	14.8	19.0	2.8	21.1
Transfer[4]	84.6	22.6	11.5	19.5	2.1	33.2

† Not applicable.
[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table 5. Percentage of high school seniors who reported that various life values related to education and work were "very important" to them, by selected student characteristics: 2004

Characteristic	Getting a good education	Being successful in line of work	Becoming an expert in field of work	Having lots of money	Being able to find steady work	Having leisure time to enjoy own interest
Total	89.0	91.3	74.9	35.1	87.3	69.0
Sex						
Male	84.1	89.7	76.8	42.7	85.6	70.2
Female	93.8	92.9	73.0	27.6	89.0	67.8
Age						
17 or younger	89.0	91.4	74.3	34.7	87.5	70.0
18	88.7	91.6	74.9	34.4	87.3	68.4
19 or older	90.5	88.3	79.3	44.8	86.8	66.0
Race/ethnicity[1]						
American Indian or Alaska Native	89.3	90.7	84.1	41.3	87.9	68.0
Asian or Pacific Islander	91.6	89.7	73.3	41.9	84.0	69.0
Black or African American	95.1	95.6	86.1	55.3	90.6	70.1
Hispanic or Latino	91.2	89.4	80.7	40.3	86.1	61.8
More than one race	88.6	89.9	72.2	36.4	87.1	70.1
White	86.9	91.1	71.3	28.9	87.1	70.4
Native language[2]						
English	88.5	91.5	73.9	34.0	87.7	69.7
Non-English	91.8	90.4	81.4	42.2	84.9	64.6
Family composition						
Mother and father	88.6	91.4	73.2	32.5	86.6	69.9
Mother or father and guardian	88.2	92.3	75.8	34.2	86.8	66.7
Single parent (mother or father)	89.7	91.0	78.7	41.6	89.4	69.4
Other[3]	93.4	87.9	77.5	45.1	89.5	61.7
Parents' education						
High school or less	88.7	91.2	78.5	40.4	87.5	62.9
Some college	88.3	91.7	75.7	35.4	88.7	68.7
College graduation	89.1	91.0	71.3	31.3	86.2	72.4
Graduate/professional degree	90.5	91.2	73.1	32.2	85.8	73.6

See notes at end of table.

Table 5. Percentage of high school seniors who reported that various life values related to education and work were "very important" to them, by selected student characteristics: 2004—Continued

Characteristic	Getting a good education	Being successful in line of work	Becoming an expert in field of work	Having lots of money	Being able to find steady work	Having leisure time to enjoy own interest
Socioeconomic status						
Lowest quarter	90.0	90.3	78.6	41.0	86.4	61.0
Middle two quarters	88.5	91.8	75.1	35.6	89.1	69.0
Highest quarter	89.0	91.4	71.6	29.6	84.7	75.3
Highest mathematics coursework						
Pre-algebra or lower	85.2	88.0	71.4	41.9	85.6	60.0
Algebra 1	83.3	88.2	76.6	39.5	88.4	64.3
Geometry	84.8	89.9	76.9	39.2	88.2	64.9
Algebra 2	88.1	91.2	76.5	38.1	88.0	67.2
Trigonometry, pre-calculus, or calculus	92.0	92.6	73.6	30.4	86.6	72.9
Student's educational expectations						
High school or less	65.4	78.3	65.8	45.2	82.9	57.5
Some college	80.6	88.6	74.7	38.6	88.3	64.9
College graduation	90.5	91.8	71.6	33.9	86.7	70.1
Graduate/professional degree	96.4	95.4	80.2	32.3	88.8	72.9
Don't know	83.2	86.0	71.6	38.2	83.7	63.3
Postsecondary education plans						
Don't plan to continue	53.1	80.5	68.8	50.3	84.0	58.9
Don't know if will continue	74.5	81.8	65.6	42.0	81.1	59.7
Four-year institution	93.3	93.6	75.4	32.7	87.4	71.7
Two-year community college	85.9	89.5	74.7	37.6	88.3	66.7
Vocational, technical, or trade school	81.9	89.0	80.0	38.3	88.8	63.8
Mathematics achievement test						
Lowest quarter	89.6	89.6	78.8	47.3	87.5	63.3
Middle two quarters	88.2	92.6	76.2	34.4	88.9	69.0
Highest quarter	89.9	90.5	68.4	24.6	83.9	74.4

See notes at end of table.

Table 5. Percentage of high school seniors who reported that various life values related to education and work were "very important" to them, by selected student characteristics: 2004—Continued

Characteristic	Getting a good education	Being successful in line of work	Becoming an expert in field of work	Having lots of money	Being able to find steady work	Having leisure time to enjoy own interest
School sector						
Public	88.5	91.6	75.1	35.7	87.5	69.2
Catholic	89.8	91.1	68.5	28.8	87.6	73.5
Other private	89.0	88.9	67.4	26.4	81.1	68.8
Transfer[4]	92.6	89.7	79.3	35.7	87.3	65.0
School urbanicity						
Urban	90.9	91.0	76.7	38.0	87.0	69.8
Suburban	87.4	91.5	74.2	34.6	87.1	69.5
Rural	88.4	92.1	72.3	32.2	88.1	68.3
Transfer[4]	92.6	89.7	79.3	35.7	87.3	65.0

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table 6. Percentage of high school seniors who reported that various life values related to family and friends were "very important" to them, by selected student characteristics: 2004

Characteristic	Finding right person to marry and having happy family life	Having children	Being able to give my children better opportunities than I've had	Having strong friendships
Total	81.0	49.3	82.5	85.5
Sex				
Male	80.1	45.4	82.1	84.9
Female	81.9	53.2	82.9	86.1
Age				
17 or younger	80.4	50.3	82.4	86.2
18	81.4	48.8	82.2	85.5
19 or older	81.4	48.1	87.6	79.8
Race/ethnicity[1]				
American Indian or Alaska Native	65.1	29.2	83.8	82.9
Asian or Pacific Islander	79.7	43.4	84.7	85.1
Black or African American	75.8	41.3	91.9	74.9
Hispanic or Latino	77.0	44.8	89.7	79.0
More than one race	78.5	45.8	81.1	88.3
White	83.5	53.0	78.7	89.2
Native language[2]				
English	81.5	49.8	81.8	86.7
Non-English	77.8	45.9	87.4	77.8
Family composition				
Mother and father	83.2	51.9	80.2	86.4
Mother or father and guardian	78.7	44.9	84.9	85.4
Single parent (mother or father)	76.8	45.6	86.6	84.5
Other[3]	77.7	45.4	87.3	77.0
Parents' education				
High school or less	77.9	46.5	87.0	80.7
Some college	81.4	49.0	85.1	85.2
College graduation	82.6	51.9	79.9	87.8
Graduate/professional degree	82.4	50.4	74.6	90.0
Socioeconomic status				
Lowest quarter	76.8	44.1	88.1	77.5
Middle two quarters	81.5	49.2	84.9	86.6
Highest quarter	83.3	53.6	73.7	90.0

See notes at end of table.

Table 6. Percentage of high school seniors who reported that various life values related to family and friends were "very important" to them, by selected student characteristics: 2004—Continued

Characteristic	Finding right person to marry and having happy family life	Having children	Being able to give my children better opportunities than I've had	Having strong friendships
Highest mathematics coursework				
Pre-algebra or lower	73.4	45.5	82.9	78.2
Algebra 1	79.0	45.5	87.9	84.3
Geometry	79.0	45.4	88.6	83.2
Algebra 2	80.5	49.8	84.9	83.3
Trigonometry, pre-calculus, or calculus	83.1	51.0	78.5	88.7
Student's educational expectations				
High school or less	74.6	43.1	80.6	75.9
Some college	78.3	46.2	85.1	80.6
College graduation	82.3	50.4	82.3	87.4
Graduate/professional degree	84.3	53.5	81.6	88.7
Don't know	71.2	37.3	83.1	80.4
Postsecondary education plans				
Don't plan to continue	74.3	36.7	77.2	72.3
Don't know if will continue	72.8	40.4	79.8	81.4
Four-year institution	83.3	51.9	81.4	88.0
Two-year community college	78.8	47.8	86.2	82.9
Vocational, technical, or trade school	76.6	43.0	83.8	80.0
Mathematics achievement test				
Lowest quarter	77.2	47.0	88.4	78.8
Middle two quarters	80.9	49.3	84.8	86.4
Highest quarter	84.9	51.5	72.3	90.3
School sector				
Public	80.8	49.3	82.5	85.3
Catholic	88.1	60.8	77.2	91.9
Other private	89.0	55.4	70.1	90.6
Transfer[4]	76.2	41.4	89.9	82.7

See notes at end of table.

Table 6. Percentage of high school seniors who reported that various life values related to family and friends were "very important" to them, by selected student characteristics: 2004—Continued

Characteristic	Finding right person to marry and having happy family life	Having children	Being able to give my children better opportunities than I've had	Having strong friendships
School urbanicity				
Urban	80.1	48.3	82.7	83.8
Suburban	81.9	50.6	81.2	86.5
Rural	82.0	51.0	82.4	86.8
Transfer[4]	76.2	41.4	89.9	82.7

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table 7. Percentage of high school seniors who reported that various life values related to community and society were "very important" to them, by selected student characteristics: 2004

Characteristic	Being patriotic	Being an active and informed citizen	Helping other people in my community	Working to correct social and economic inequalities
Total	35.4	47.0	41.7	19.7
Sex				
Male	38.1	44.5	35.2	18.1
Female	32.8	49.5	48.1	21.2
Age				
17 or younger	33.2	46.8	40.9	19.7
18	36.7	46.9	41.3	18.7
19 or older	39.3	52.1	52.1	29.7
Race/ethnicity[1]				
American Indian or Alaska Native	22.9	44.3	36.9	14.2
Asian or Pacific Islander	21.4	47.7	46.3	23.1
Black or African American	26.7	56.4	54.3	31.6
Hispanic or Latino	29.9	53.1	43.6	28.1
More than one race	32.2	42.0	40.5	19.0
White	40.0	43.9	38.3	15.0
Native language[2]				
English	36.9	45.9	40.8	18.5
Non-English	26.1	54.2	47.1	27.4
Family composition				
Mother and father	37.0	46.9	41.7	18.2
Mother or father and guardian	34.3	45.5	38.6	19.7
Single parent (mother or father)	32.2	48.1	43.6	22.9
Other[3]	32.6	49.2	44.0	24.8
Parents' education				
High school or less	35.1	44.8	40.5	21.1
Some college	36.9	46.0	40.0	19.3
College graduation	35.2	47.3	43.0	18.0
Graduate/professional degree	33.2	51.9	44.9	20.6
Socioeconomic status				
Lowest quarter	32.5	48.2	43.5	24.7
Middle two quarters	36.8	45.1	40.2	18.3
Highest quarter	35.2	49.8	42.8	18.2

See notes at end of table.

Table 7. Percentage of high school seniors who reported that various life values related to community and society were "very important" to them, by selected student characteristics: 2004—Continued

Characteristic	Being patriotic	Being an active and informed citizen	Helping other people in my community	Working to correct social and economic inequalities
Highest mathematics coursework				
Pre-algebra or lower	36.0	45.0	40.8	19.6
Algebra 1	35.7	46.1	41.9	21.8
Geometry	38.4	46.6	42.9	22.4
Algebra 2	35.3	44.6	40.5	18.5
Trigonometry, pre-calculus, or calculus	34.5	49.3	42.1	19.3
Student's educational expectations				
High school or less	36.1	34.7	34.6	19.1
Some college	35.2	38.5	35.4	16.9
College graduation	35.6	44.1	39.3	17.0
Graduate/professional degree	36.3	56.5	49.4	23.8
Don't know	31.3	44.6	36.4	19.2
Postsecondary education plans				
Don't plan to continue	36.1	26.2	27.1	11.3
Don't know if will continue	36.6	34.9	30.7	14.6
Four-year institution	35.6	51.2	44.6	20.6
Two-year community college	34.9	42.9	40.9	19.2
Vocational, technical, or trade school	34.8	39.9	32.3	18.7
Mathematics achievement test				
Lowest quarter	35.4	50.9	47.5	24.6
Middle two quarters	36.2	45.1	40.6	19.1
Highest quarter	33.9	47.2	38.2	16.0
School sector				
Public	34.6	46.1	40.8	19.0
Catholic	37.9	46.3	41.0	17.8
Other private	39.4	47.5	43.4	16.9
Transfer[4]	40.7	56.7	50.2	28.4

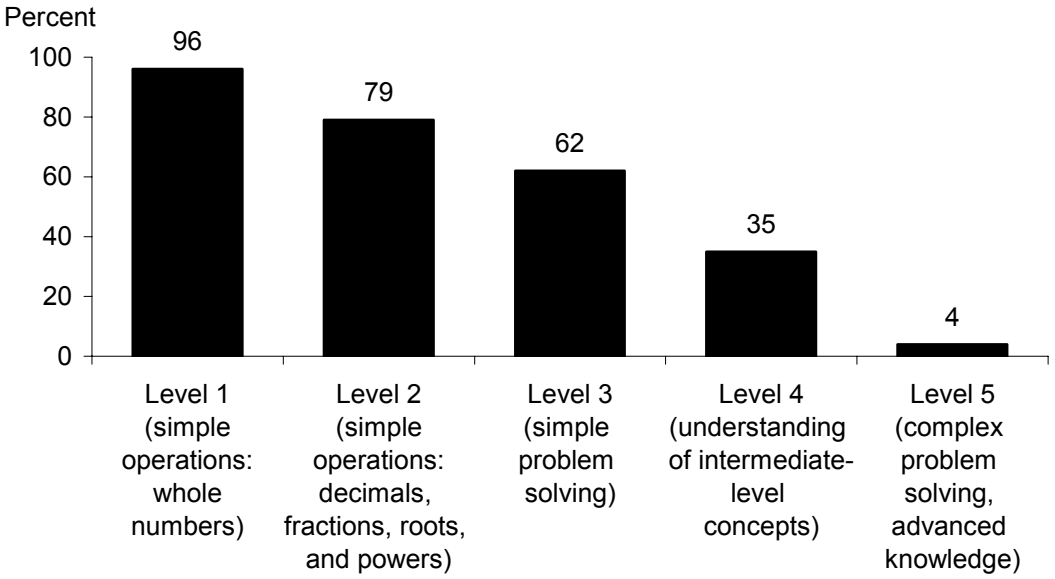
See notes at end of table.

Table 7. Percentage of high school seniors who reported that various life values related to community and society were "very important" to them, by selected student characteristics: 2004—Continued

Characteristic	Being patriotic	Being an active and informed citizen	Helping other people in my community	Working to correct social and economic inequalities
School urbanicity				
Urban	30.4	52.3	46.2	23.4
Suburban	35.3	43.8	38.8	17.5
Rural	40.4	43.4	38.8	16.1
Transfer[4]	40.7	56.7	50.2	28.4

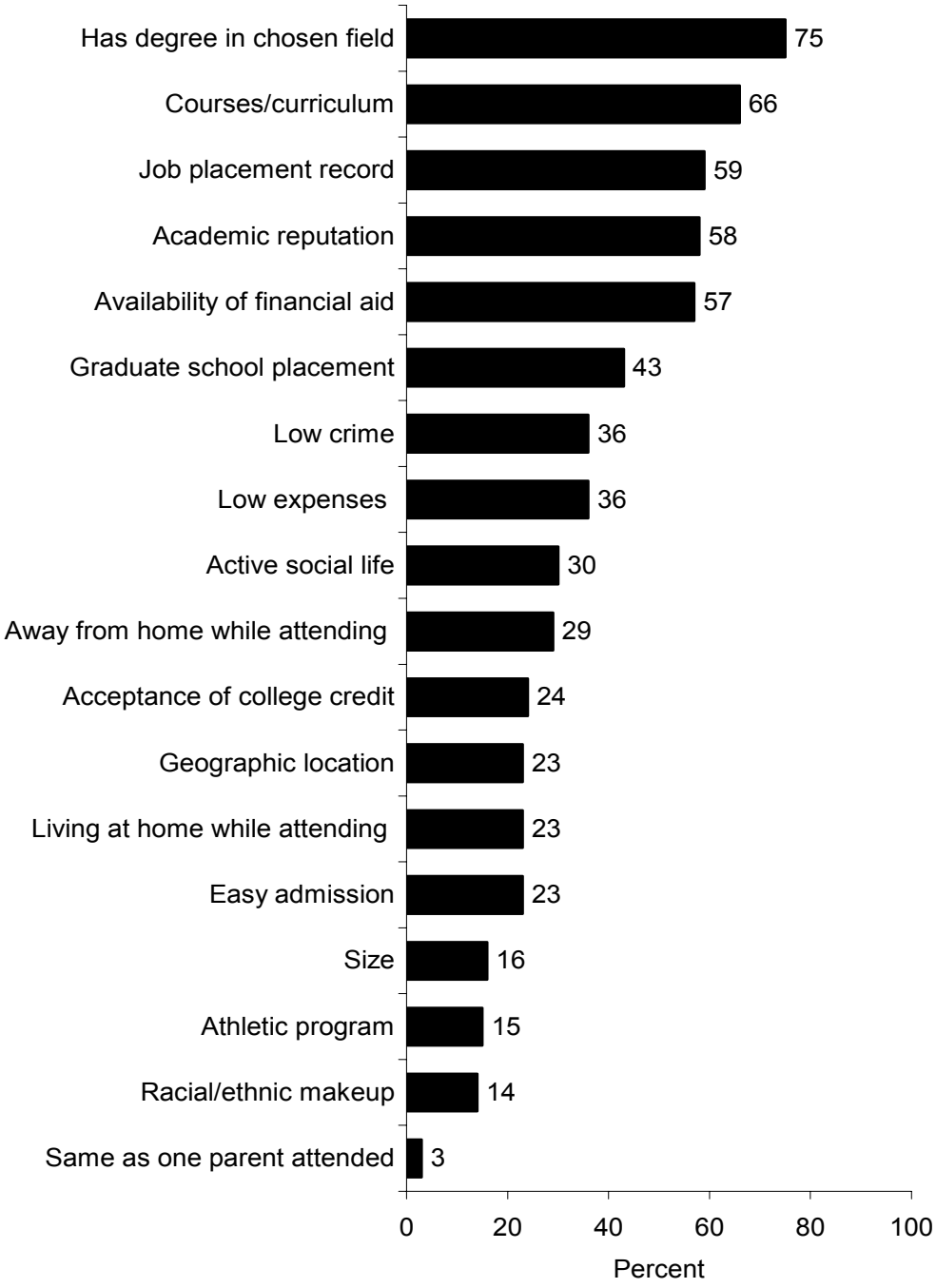
[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Figure 1. Percentage of high school seniors, by mathematics mastery level: 2004



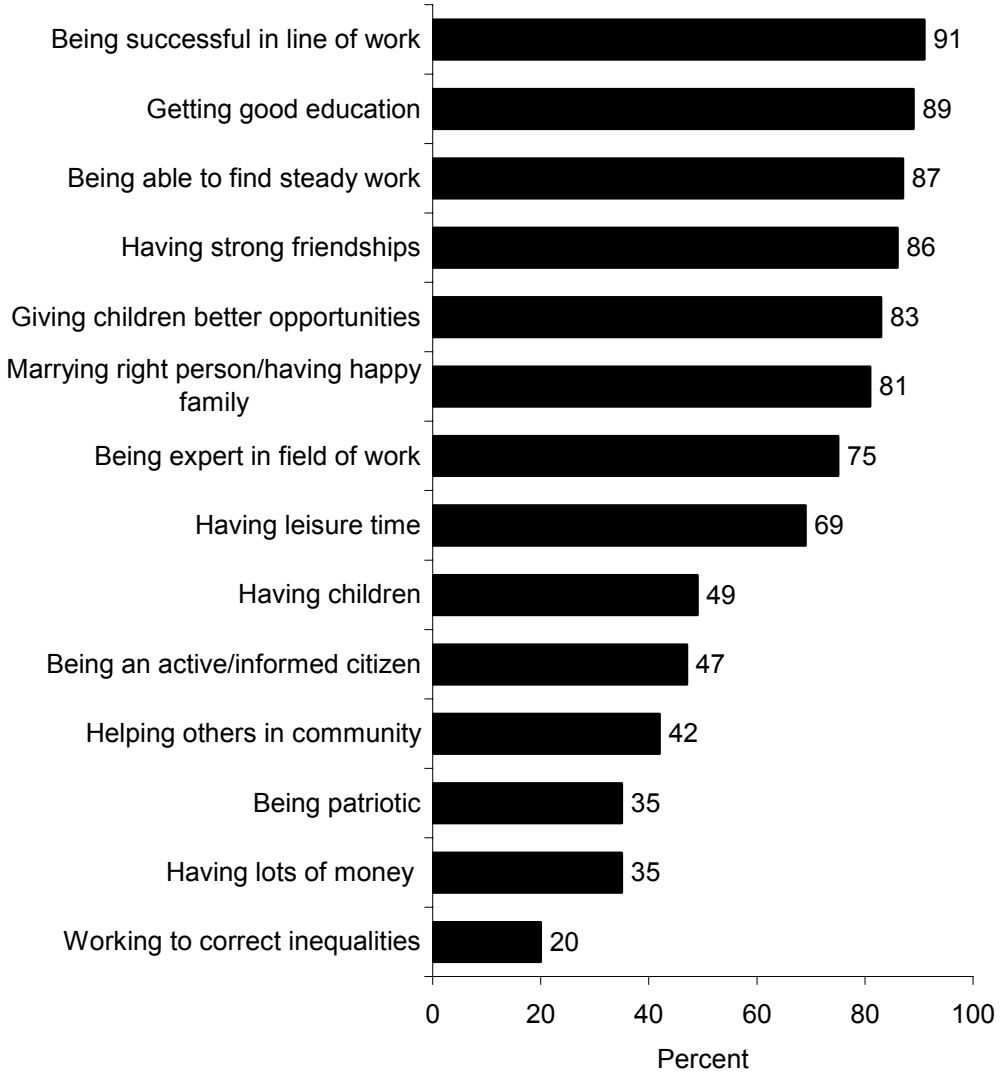
Note: Mastery is reported at the group level by calculating the mean of the probability scores in the given area. Since the means are on a decimal scale between 0 and 1, they represent the proportions of members of a subgroup falling within a performance level.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Figure 2. Percentage of college-bound high school seniors, by various features of postsecondary institutions rated "very important" to their choice of a college: 2004



SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Figure 3. Percentage of high school seniors, by various life values rated "very important" to them: 2004



SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Appendix A
Technical Notes and Glossary

Appendix A
Technical Notes and Glossary

A.1 Overview of the Technical Appendix

The National Center for Education Statistics (NCES) of the U.S. Department of Education has collected longitudinal data for more than 30 years. Starting in 1972 with the National Longitudinal Study of the High School Class of 1972 (NLS-72) and continuing to the most recent study, the Education Longitudinal Study of 2002 (ELS:2002), NCES has provided longitudinal and trend data to education policymakers and researchers who link secondary school educational achievement and experiences with important downstream outcomes, such as entry into the labor market and postsecondary educational access and attainment.

The base year of ELS:2002 was the first stage of a major new effort designed to provide data about critical transitions experienced by students as they proceed through high school and into postsecondary education or their careers. The 2002 sophomore cohort was surveyed again in 2004 and the sample freshened to make it fully representative of spring term 2004 high school seniors. Future follow-ups will collect policy-relevant data about postsecondary access and choices, postsecondary attainment, entry into the work force, family formation, voting, volunteerism, and life goals and values.

The first section of this appendix details ELS:2002 study objectives; lists some of the major research and policy issues that the study addresses; explains the four levels of analysis—cross-sectional, longitudinal, cross-cohort, and international comparison—that can be conducted with ELS:2002 data; and supplies an overview of the base-year and first follow-up study design and methodology.

This section is followed by discussions of base-year and first follow-up sampling, weighting and imputation, response rates, quality of estimates, standard errors, and electronic codebooks. Next, an account is provided of the statistical procedures employed. Finally, a glossary documents the analysis variables used in this report.

A.2 Overview of ELS:2002

A.2.1 Study Objectives

ELS:2002 is a longitudinal study, in which the same individuals are surveyed repeatedly over time. Individual students are expected to be followed until about age 30; the base-year schools have been surveyed twice (they were surveyed in 2002 and again in 2004). In the high school years, ELS:2002 is an integrated multilevel study, involving multiple respondent populations, including students, their parents, their teachers, and their schools (from which data are collected at three levels: from the principal, the librarian, and a facilities checklist). This multilevel focus supplies researchers with a comprehensive picture of the home, community, and

school environments and their influences on the student. This multiple-respondent perspective is unified by the fact that, for most purposes, the student is the basic unit of analysis.[6]

Key elements in the ELS:2002 longitudinal design are summarized by wave below.

Base Year (2002)

- Baseline survey of high school sophomores completed in spring term 2002.
- Cognitive tests in reading and mathematics completed.
- Surveys of parents, English teachers, and math teachers completed. School administrators' responses to questionnaires also collected.
- Additional components for this study included a school facilities checklist and a media center (library) questionnaire.
- Sample sizes of approximately 750 schools and over 17,000 students (of whom 15,362 participated). Schools were the first-stage unit of selection, with sophomores randomly selected within schools.
- Oversampling of Asians and private schools.
- Design linkages (test score equating in reading and mathematics, some questionnaire items in common) with the Program for International Student Assessment (PISA) and score reporting linkages to the prior longitudinal studies (the High School and Beyond longitudinal study [HS&B] and the National Education Longitudinal Study of 1988 [NELS:88]).

First Follow-up (2004)

- Follow-up in 2004, when most sample members were seniors but some were dropouts or in other grades.
- Student questionnaire, dropout questionnaire, assessment in mathematics, and school administrator questionnaire administered; special tailored instruments for early graduates and homeschooled students.
- Returned to the same schools but separately followed transfer students, as well as dropouts, early graduates, and sample members who went into a homeschool setting.
- Freshened to ensure a nationally representative 2004 senior cohort.
- High school transcript component with data collection late 2004 through early 2005 (coursetaking records for grades 9–12).

[6] Base-year school administrator, library media center, and facilities data can be used to report on the nation's schools with 10th grades in the 2001–02 school year. (First follow-up school administrator data, on the other hand, does not properly generalize to the nation's school with a senior class in 2004.) However, the primary use of the school-level data (and the purpose of parent and teacher surveys) is to provide further contextual information on the student.

Second Follow-up (2006)

- Post-high-school follow-ups using a single questionnaire with branching of questions to accommodate the diverse pathways followed by the cohort.
- Questionnaire will be available as a single application in three electronic modalities: web for self-administration, computer-assisted telephone interview, and computer-assisted personal interview.

Further Follow-ups

- Number of (and dates for) further follow-ups to be determined.

A.2.2 ELS:2002 Research and Policy Issues

Apart from helping to describe the status of high school students and their schools, ELS:2002 will provide information to help address a number of key policy and research questions. The study is intended to produce a comprehensive dataset for the development and evaluation of education policy. Part of its aim is to inform decisionmakers, education practitioners, and parents about the changes in the operation of the education system over time and the effects of various elements of the system on the lives of the individuals who pass through it. Issues that can be addressed with data collected in the high school years include the following:

- students' academic growth in mathematics;
- the process of dropping out of high school;
- the relationship between family background and students' educational success;
- the association between coursetaking choices and academic success in the high school years;
- the equitable distribution of educational opportunities as registered in the distinctive school experiences and performance of students from various policy-relevant subgroups, such as
  - students in public and private high schools;
  - language minority students;
  - students with disabilities;
  - students in urban, suburban, and rural settings;
  - students in different regions of the country;
  - students from upper, middle, and lower socioeconomic status levels;
  - male and female students; and
  - students from different racial or ethnic groups; and
- steps taken to facilitate the transition from high school to postsecondary education or the world of work.

After ELS:2002 students have completed high school, a new set of issues can be examined. These issues include

- the later educational and labor market activities of high school dropouts;
- the transition of those who do not go directly on to postsecondary education or to the world of work;
- access to, and choice of, undergraduate and graduate educational institutions;
- persistence in attaining postsecondary education goals;
- entry of new postsecondary graduates into the workforce;
- social and economic rates of return on education to both the individual and society; and
- adult roles, such as family formation and civic participation.

A.2.3 Analytic Levels

These research and policy issues can be investigated at several distinct levels of analysis. The overall scope and design of the study provide for the following four analytical levels:

- cross-sectional profiles of the nation's high school sophomores and seniors (as well as dropouts after spring of the sophomore year);
- longitudinal analysis (including examination of life-course changes);
- intercohort comparisons with American high school students of earlier decades; and
- international comparisons (U.S. 15-year-olds compared with 15-year-olds in other nations).

Cross-sectional profiles. ELS:2002 cross-sectional data permit characterization of the nation's high school sophomores in the spring of the 2001–02 school year and seniors in the spring of the 2003–04 school year.

Longitudinal analysis. Longitudinal analysis is now possible with release of data from the 2004 first follow-up. ELS:2002 provides the basis for within-cohort comparison by following the same individuals over time to measure achievement growth in mathematics; monitor enrollment status and school completion over the high school years and thereafter; and record such key outcomes as postsecondary entry and attainment, labor market experiences, civic participation, and family formation. These outcomes, in turn, can be related to antecedents identified in earlier rounds, including individual, home, school, and community factors.

Intercohort comparisons. As part of an important historical series of studies that repeats a core of key items each decade, ELS:2002 offers the opportunity for the analysis of trends in areas of fundamental importance, such as patterns of coursetaking, rates of participation in extracurricular activities, academic performance, and changes in goals and aspirations. A 1980–2002 NCES high school sophomore trend report is currently in preparation. With completion of the first follow-up in 2004, researchers can now compare ELS:2002 high school seniors'

experience, attitudes, and achievement with that of NELS:88 seniors in 1992, HS&B seniors in 1980 and 1982, and NLS-72 seniors in 1972.

Starting with the ELS:2002 first follow-up academic transcript component, trend comparisons can also be made with transcript data containing students' high school course histories and sequences, since comparable transcript studies have been conducted, starting with HS&B (1982) and including NELS:88 (1992) and the National Assessment of Educational Progress (NAEP) (1987, 1990, 1994, 1998, and 2000).

International comparisons. The Organization for Economic Cooperation and Development's (OECD's) Program for International Student Assessment (PISA) is an internationally standardized assessment, jointly developed by the 32 participating countries (including the United States) and administered to 15-year-olds in groups in their schools (see Lemke et al. [2001]). PISA covers three domains: reading literacy, numeracy, and scientific literacy; a subset of the PISA reading literacy and numeracy items have been included on ELS:2002. PISA aims to define each domain not merely in terms of mastery of the school curriculum, but also in terms of important knowledge and skills needed in adult life. A special feature of ELS:2002 is that it can be linked to PISA. Specifically, ELS:2002 base-year reading results have been put on the PISA:2000 literacy scale, and base-year results are also being put on the PISA:2003 mathematics scale. It will thus be possible to relate PISA scale scores in the two areas to longitudinal outcomes, through ELS:2002 results from the first follow-up onward.

A.2.4 Overview of the Base-Year and First Follow-up Study Design and Content

Base-year study design. ELS:2002 was conducted in a national probability sample of about 750 participating (of 1,220 eligible contacted) public, Catholic, and other private schools in the spring term of the 2001–02 school year. Of 17,590 eligible selected sophomores, 15,360 completed a base-year questionnaire, as did 13,480 of their parents and 7,140 of their teachers.[7] Of the 750 participating schools, 740 principals and 720 librarians completed questionnaires.

Seven study components comprised the base-year design: assessments of students (achievement tests in mathematics and reading); a survey of students; surveys of parents, teachers, school administrators, and librarians; and a facilities checklist (completed by survey administrators, based on their observations at the school). The student assessments measured achievement in mathematics and reading; the baseline scores can serve as a covariate or control variable for later analyses. Mathematics achievement was reassessed in the first follow-up, so that achievement gain over the last 2 years of high school can be measured and related to school processes and mathematics coursetaking. The student questionnaire gathered information about the student's background, school experiences and activities, plans and goals for the future, employment and out-of-school experiences, language background, and psychological orientation toward learning.

One parent of each participating sophomore was asked to respond to a parent survey. The parent questionnaire was designed to gauge parental aspirations for the child, home background and the home education support system, the child's educational history prior to 10th grade, and

[7] Note that the participating student sample defines the eligible parent and teacher samples. The 7,140 teacher completions are those linked to student respondents. Of the 15,360 student participants, 14,080 had at least one associated teacher-provided student report.

parental interactions with and opinions about the student's school. For each student enrolled in English or mathematics, a teacher was also selected to participate in a teacher survey. Teachers typically (but not invariably) reported on multiple ELS:2002 sophomores. The teacher questionnaire collected the teacher's evaluation of the student and provided information about the teacher's background and activities. The head librarian or media center director at each school was asked to complete a library media center questionnaire, which inquired into the school's library media center facility, its staffing, its technological resources, collection and expenditures, and scheduling and transactions. Finally, the facilities checklist was a brief observational form completed for each school. The form collected information about the condition of school buildings and facilities.

First follow-up study design. In the first follow-up, the base-year schools were surveyed by means of an administrator questionnaire. Base-year students were surveyed whether in the base-year school, in a new school, or out of school. Additional seniors were added in a freshening process, and a mathematics assessment was administered to first follow-up students in the original (base-year) sample of schools. Information about coursetaking (covering all years of high school and including the sequence in which courses were taken and grades earned) was collected at the end of high school, through the high school transcript component of the ELS:2002 first follow-up study. The transcript data are not yet available.

The basis for the sampling frame for the first follow-up was the sample of schools and students studied in the ELS:2002 base year. There were two overlapping but conceptually different target student populations, or populations of inferential interest, for the first follow-up. One population (the ELS:2002 sophomore cohort) consists of students who were enrolled in the 10th grade in the spring term of 2002. The other population (the ELS:2002 senior cohort) comprises students who were enrolled in the 12th grade in the spring term of 2004. The former population includes students who dropped out of school between 10th and 12th grades, students who graduated early, students who went from a school setting to a homeschool setting, and students who fell behind the modal grade progression of their peers (e.g., students who repeated a grade and were 11th-graders in spring 2004). This latter population includes students in the sophomore cohort who were seniors in 2004, plus samples of students in the baseline schools from each of these missing groups who were seniors in 2004. The inclusion of representatives of these missing groups who were seniors in 2004 to the first follow-up data makes the entire sample of 2004 high school seniors nationally representative. This additional group of high school seniors is called the "freshening sample."

Because of these two target populations and the major analytical subgroups, the full-scale sample encompasses the following types of students from the spring of 2004:

- ELS:2002 base-year student sample members enrolled (in either the 12th grade or some other grade) in the school in which they were originally sampled;
- ELS:2002 base-year sophomores who dropped out of school prior to first follow-up (2004) data collection;
- ELS:2002 base-year student respondents who finished high school early, including those who graduated from high school early, as well as those who did not graduate

but achieved alternative certification (e.g., exam-certified equivalency such as a General Educational Development [GED] diploma);

- ELS:2002 base-year student respondents who transferred out of the school in which they were originally sampled (including homeschooled students);
- ELS:2002 base-year sample students who were deemed unable to participate directly during the base year owing to severe disability or insufficient command of the English language such that they could not complete a questionnaire; and
- Students at the base-year sample school who were enrolled in the 12th grade in spring of 2004 but were not in 10th grade in the United States during the 2001–02 school year. In spring term 2002, such students may have been out of the country, been enrolled in school in the United States in a grade other than 10th, had an extended illness or injury, been homeschooled, been institutionalized, or temporarily dropped out of school. These students comprised the first follow-up freshening sample.

Although all groups in the sample as categorized above were eligible to complete a questionnaire, different instruments were tailored to different study populations. The practice followed was to provide a core set of items to which sample members would respond, supplemented by items specific to the circumstances of a particular group (such as dropouts, for whom questions about their current school situation would not be relevant).

For some classifications of the sample, a first follow-up test score in mathematics has either been collected (students still in the base-year school who participated in the in-school administration) or imputed (students who had transferred to a new school or those still in the base-year school but who were unable to participate during the in-school sessions). For the senior cohort of 2004, the analysis population of this report, test data in mathematics are available. For out-of-high-school categories of sample members, such as dropouts, early graduates, and the homeschooled, a test score has neither been collected nor imputed. (It should also be noted that missing test score data have been imputed for base-year nonrespondents who became respondents in the first follow-up. With these scores, this group can be assimilated into a sophomore cohort panel analysis.)

For all classifications of sample members, information about student coursetaking (covering all years of high school and including the sequence in which courses were taken and grades earned) will be collected late in 2004 and early 2005 through the high school transcript component of the ELS:2002 first follow-up study.

Further details of the instrumentation, sample design, data collection results, data processing, weighting and imputation, and data files available for analysis may be found in the *Education Longitudinal Study of 2002: Base-Year to First Follow-up Data File Documentation* (Ingels et al. 2005).[8]

[8] See appendix reference list (section A.6) for full citation. The manual can be downloaded from the NCES website: http://nces.ed.gov/pubsearch. For more comprehensive information about the base year, see Ingels et al. 2004.

A.3 Sample Design, Weighting, Response Rates, Quality of Estimates, Standard Errors, and the Electronic Codebook

A.3.1 Sampling

The ELS:2002 base-year sample design began with a nationally representative, two-stage stratified probability sample. The first stage of selection was schools; schools were selected with probability proportional to size (PPS). The public school sample was stratified by the nine U.S. Census divisions and by urbanicity (metropolitan status of urban, suburban, or rural). Private schools (Catholic and other private) were stratified by four levels of geography (Census region) and urbanicity; private schools were oversampled. The target sample size was 800 schools. Cooperation was sought from 1,220 eligible selections. The realized sample comprised 750 participating 10th-grade schools (67.8 participation rate). The second stage of selection was students. Of 17,590 sampled students in the schools, 15,360 students participated. Some groups (e.g., Asians, students in nonpublic schools) were oversampled. The weighted student response rate was 87.3 percent; detailed base-year response rates are reported in section A.3.3.

The first follow-up returned to the same schools to seek their cooperation, and to base-year sophomore respondents and a sample of base-year nonrespondents, regardless of whether they had remained in the base-year school. In addition, at participating base-year schools in the first follow-up, a sample freshening procedure was implemented so that spring term 2004 seniors who had not had a chance of selection into the sophomore cohort 2 years before would have a chance of selection into ELS:2002 as seniors. Although 5 of the 750 base-year schools were ineligible because they no longer enrolled ELS:2002 sample members or seniors, of the eligible schools, 700 (93.4 percent) participated. Overall, there were 16,520 sample members (students, dropouts, homeschooled, or early graduates), of whom 14,990 participated. The sample included 14,250 seniors, of whom 13,420 participated. The weighted response rate for the analysis sample in this report, high school seniors, was 94.4 percent. Detailed first follow-up response rates are reported in section A.3.3.

A.3.2 Weighting and Imputation

Weighting. The general purpose of the weighting scheme was to compensate for unequal probabilities of selection of schools and students into the base-year sample and to adjust for the fact that not all schools and students selected into the sample actually participated. Three sets of weights were computed in the base year: a school weight, a weight for student questionnaire completion, and a contextual data weight for the "expanded" sample of questionnaire-eligible and questionnaire-ineligible students.[9] School and student weights were adjusted for nonresponse, and these adjustments were designed to significantly reduce or eliminate nonresponse bias for data elements known for most respondents and nonrespondents. In addition, base-year school weights were poststratified to known population totals.

[9] The base-year expanded sample weight generalizes to the population of all sophomores, regardless of whether they were capable of completing the questionnaire. The base-year student questionnaire weight (BYSTUWT) generalizes only to the population of students who were eligible to complete the student questionnaire, that is, those who were not judged incapable of participation by virtue of a severe disability or lack of proficiency in the English language.

In the first follow-up, three individual-level weights were generated, to accommodate the 2002 sophomore cohort 2 years later and the freshened senior cohort of 2004: a cross-sectional weight based on 2004 questionnaire completion, an expanded sample weight that extended the weighting to encompass questionnaire-ineligible sample members, and a panel weight for sophomore cohort members with data at both points in time.[10] The estimates in this report were produced using F1QWT, a cross-sectional weight that generalizes to the population of 12th-graders in regular U.S. high schools in the spring term of the 2003–04 school year when used in conjunction with the senior cohort flag.

Imputation. For key classification variables, missing data were replaced with imputed values. Single imputation (by means of a weighted sequential hot deck procedure) was implemented for missing key questionnaire variables. Multiple imputation of the ability estimate (*theta*) was used to treat missing assessment data. Table A-1 lists variables subject to imputation and proportions missing. The dataset was also subject to disclosure risk analysis and disclosure avoidance editing, including, among other measures, such perturbation techniques as data swapping.

Table A-1. ELS:2002 imputation variables: 2002

Variable	Number of cases imputed	Weighted percent imputed[1]
Student sex	#	0.04
Student race/ethnicity	20	0.14
Student language minority status	120	0.93
Student Hispanic subgroup	820	5.65
Student Asian subgroup	820	7.21
School program type	650	5.09
Student postsecondary attainment: educational expectations	90	0.67
Parental aspirations for student postsecondary attainment	720	5.52
Family composition	130	0.96
Mother's educational attainment[2]	180	1.42
Mother's occupation[2]	240	2.02
Father's educational attainment[2]	250	2.17
Father's occupation[2]	290	2.50
Family income (2001)[2]	940	7.42
Enrollment status (in-school vs. out, grade)	430	2.42
12th-grade student ability estimates (theta) for mathematics[3]	2,710	18.23
10th-grade student ability estimates (theta) for mathematics[3]	650	5.09
10th-grade student ability estimates (theta) for reading[3]	650	5.09

Rounds to zero.
[1] The denominator used in calculating the weighted percent missing varies by variable due to restrictions on eligibility for imputation.
[2] Used to construct socioeconomic status (SES).
[3] Used to construct scale, quartile, and proficiency scores.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002).

[10] There are two different cases in which a respondent can have data at two points in time. Both cases are covered by the panel weight: (1) by virtue of completing a questionnaire both in the base year and first follow-up; and (2) for base-year nonrespondents, by virtue of completing both a first follow-up questionnaire and a New Participant Supplement from which missing key base-year classification variables could be filled in. In addition, for base-year nonparticipants participating in the first follow-up, a base-year reading and mathematics score was imputed.

A.3.3 Base-Year and First Follow-up Response Rates

Base-year response rates. Of 1,220 eligible contacted schools, 750 participated in the study, for an overall weighted school participation rate of approximately 68 percent (62 percent unweighted). Of 17,590 selected eligible students, 15,360 participated, for a weighted student response rate of approximately 87 percent.[11] (School and student weighted response rates reflect use of the base weight [design weight] and do not include nonresponse adjustments.) School and student unit nonresponse bias analyses were performed, as well as an item nonresponse bias analysis for the questionnaires. The school-level bias due to nonresponse prior to and after computing weights was estimated based on the data collected from both respondents and nonrespondents, as well as sampling frame data. At the unit level (but not the item level), weighting techniques were employed to reduce detected bias; after final nonresponse adjustments, the remaining relative bias ranged from 0 percent to 0.2 percent for schools and from 0 percent to 0.07 percent for students. For details of the bias analyses, see the *Education Longitudinal Study of 2002: Base Year Data File User's Manual* (Ingels et al. 2004). Unweighted and weighted school-level response by stratum is summarized in table A-2. Second-stage unit response rates by component are summarized in table A-3.

First follow-up response rates. First follow-up weighted response rates are reported at the student level only (the school sample was not strictly representative of the nation's high schools with 12th grades in 2003–04). Overall, 14,990 of 16,520 sample members participated, for a weighted response rate of 88.7 percent. However, for the analysis population for this report, the senior cohort, the weighted response rate was 94.4 percent, with 13,420 seniors (of a possible 14,250) participating. Further details of first follow-up coverage and completion rates are provided in tables A-4 and A-5. In addition, weighted item response rates for the variables used in this report are provided in table A-6.

Table A-2. Unweighted school sampling and eligibility, and unweighted and weighted participation, by sampling stratum: 2002

School sampling stratum	Sampled schools		Eligible schools		Participating schools		
	Number	Unweighted percent[1]	Number	Unweighted percent[2]	Number	Unweighted percent[3]	Weighted percent
Total	1,270	100.00	1,220	96.29	750	61.59	67.80
School sector							
Public	950	75.16	930	97.17	580	62.63	69.09
Catholic	140	11.04	140	100.00	100	67.86	74.04
Other private	180	13.80	160	88.57	80	49.68	62.94
School urbanicity							
Urban	430	34.23	410	95.39	250	60.39	67.27
Suburban	630	49.68	610	96.67	360	59.28	59.81
Rural	200	16.09	200	97.06	140	71.21	79.32

[1] Percent is based on overall total within column. Details may not sum to totals due to rounding.
[2] Percent is based on number sampled within row.
[3] Percent is based on number eligible within row.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002).

[11] Stage 1 (school) response rates can be multiplied by stage 2 (student) response rates for a combined two-stage response rate: 68 percent * 87 percent = 59 percent.

Table A-3. Summary of ELS:2002 base-year completion and coverage rates: 2002

Instrument	Selected	Participated	Weighted percent	Unweighted percent
Student questionnaire	17,590	15,360	87.28	87.33
Student assessment[1]	15,360	14,540	95.08	94.67
Parent questionnaire[2]	15,360	13,490	87.45	87.80
Teacher ratings of students[3]	15,360	14,080	91.64	91.66
School administrator questionnaire	750	740	98.53	98.80
Library media center questionnaire	750	720	95.93	95.48
Facilities checklist	750	750	100.00	100.00

[1] Percentage of cases for which a student questionnaire was obtained and for which a cognitive test was also obtained. Note that test scores have been imputed where missing so that test scores are available for all 15,362 questionnaire completers.
[2] Indicates a coverage rate: percentage of participating students with a parent report. More parents participated; these completion rates reflect the number of records in the public-use data file, where parent (and teacher) data were excluded for students who did not complete a base-year student questionnaire.
[3] Indicates a coverage rate: ratings obtained from at least one teacher.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002).

Table A-4. Summary of ELS:2002 first follow-up completion and coverage rates: 2004

Instrument	Selected	Participated	Weighted percent	Unweighted percent
Total sample for public-use file	16,520	14,990	88.70	90.76
Student questionnaire	13,090	12,430	93.39	94.92
Student math assessment[1]	12,430	11,000	87.40	88.48
School administrator questionnaire[2]	12,430	11,860	95.90	95.41
Transfer questionnaire	1,800	1,280	68.36	70.87
Dropout questionnaire	880	690	73.20	78.31
Early graduate questionnaire	690	560	80.64	81.51
Homeschooled questionnaire	60	40	61.46	67.21

[1] Indicates a coverage rate: percentage of cases for which a student questionnaire was obtained and for which a cognitive test was also obtained. When a test was not obtained, test results were imputed.
[2] Indicates a coverage rate: percentage of students affiliated with base-year (2002) schools in 2004 (student questionnaire completers) for whom a school administrator report was obtained.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002).

Table A-5. Questionnaire completion rate for ELS:2002 senior cohort: 2004

	Completed student questionnaire		Completed transfer questionnaire		Completion rate	
Characteristic	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted
Total (2004 seniors)	96.84	96.78	74.32	73.79	94.42	94.25
Participated (n)		12,270		1,160		13,420
Sampled (n)		12,680		1,570		14,250
School sector						
Public	96.77	96.57	73.63	72.07	94.30	93.89
Catholic	97.69	97.61	83.91	80.77	96.45	96.04
Other private	97.66	97.29	79.47	77.89	94.86	94.59

See notes at end of table.

Table A-5. Questionnaire completion rate for ELS:2002 senior cohort: 2004—Continued

Characteristic	Completed student questionnaire		Completed transfer questionnaire		Completion rate	
	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted
School urbanicity						
Urban	96.87	96.78	74.23	73.27	93.78	93.63
Suburban	96.58	96.72	75.03	74.52	94.44	94.52
Rural	97.46	96.94	72.55	73.09	95.25	94.66
School region						
Midwest	97.54	97.53	69.40	70.36	94.44	94.41
Northeast	96.11	96.14	80.92	77.60	95.17	94.80
South	97.14	97.14	75.61	74.60	94.71	94.63
West	96.28	95.84	74.62	74.38	93.37	92.92
Race/ethnicity						
American Indian or Alaska Native	96.86	95.79	83.78	83.33	93.79	93.81
Asian or Pacific Islander	97.10	96.86	72.86	74.03	94.40	94.51
Black or African American	97.13	96.90	77.37	76.47	93.72	93.40
Hispanic or Latino	96.94	96.86	74.22	73.08	93.77	93.36
More than one race	96.60	95.19	67.61	63.74	93.19	91.07
White	96.77	96.87	73.48	73.91	94.82	94.87

NOTE: School-level variables, that is, school type, urbanicity, and region, are based on the base-year school in 2002 for sophomore cohort members. For freshened students, the variable is based on the base-year school in 2004, the time point at which freshened seniors entered the sample.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002).

Table A-6. Weighted senior cohort response rates for unimputed variables used in this report: 2004

Source	Variable label	Variable	Response rate
Student	Years of general math coursework	F1S17A	97.78
Student	Years of pre-algebra coursework	F1S17B	97.81
Student	Years of algebra 1 coursework	F1S17C	98.68
Student	Years of geometry coursework	F1S17D	98.71
Student	Years of algebra 2 coursework	F1S17E	98.36
Student	Years of trigonometry coursework	F1S17F	97.63
Student	Years of pre-calculus coursework	F1S17G	97.66
Student	Years of calculus coursework	F1S17H	97.07
Student	Years of consumer/business math coursework	F1S17I	97.08
Student	Importance of being successful in line work	F1S40A	99.38
Student	Importance of marrying right person/having happy family	F1S40B	99.29
Student	Importance of having lots of money	F1S40C	99.27
Student	Importance of having strong friendships	F1S40D	99.18
Student	Importance of being able to find steady work	F1S40E	98.99
Student	Importance of helping others in community	F1S40F	98.78
Student	Importance of giving children better opportunities	F1S40G	98.96
Student	Importance of working to correct inequalities	F1S40J	98.70
Student	Importance of having children	F1S40K	98.89
Student	Importance of having leisure time	F1S40L	99.01
Student	Importance of being expert in field of work	F1S40M	99.03
Student	Importance of getting good education	F1S40N	99.07
Student	Importance of being an active/informed citizen	F1S40P	98.83

See notes at end of table.

Table A–6. Weighted senior cohort response rates for unimputed variables used in this report: 2004—Continued

Source	Variable label	Variable	Response rate
Student	Importance of being patriotic	F1S40R	98.52
Student	How far in school respondent thinks will get	F1S42	99.38
Student	Plans to go on to school right after high school	F1S45	99.75
Student	Type of school plans to attend	F1S49	99.11
Student	Postsecondary school's courses/curriculum important to respondent	F1S52C	97.99
Student	Postsecondary school's athletic program important to respondent	F1S52D	98.21
Student	Postsecondary school's active social life important to respondent	F1S52E	98.17
Student	Living at home while attending postsecondary school important to respondent	F1S52F	98.12
Student	Away from home while attending postsecondary school important to respondent	F1S52G	98.34
Student	Postsecondary school's low crime important to respondent	F1S52H	98.38
Student	Postsecondary school's job placement record important to respondent	F1S52I	98.17
Student	Postsecondary school's graduate school placement important to respondent	F1S52J	97.99
Student	Postsecondary school's academic reputation important to respondent	F1S52K	98.06
Student	Postsecondary school's easy admission important to respondent	F1S52L	98.05
Student	Postsecondary school has degree in chosen field important to respondent	F1S52M	98.06
Student	Postsecondary school's racial/ethnic makeup important to respondent	F1S52N	97.86
Student	Postsecondary school's size important to respondent	F1S52O	98.10
Student	Postsecondary school's geographic location important to respondent	F1S52P	97.77
Student	Postsecondary school same as one parent attended important to respondent	F1S52Q	97.82
Student	Postsecondary school's acceptance of college credit important to respondent	F1S52R	97.99
	Plans to work right after high school		99.65
Student	Month and year of birth	F1DOB_P	99.40

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

A.3.4 Quality of Estimates: Reliability and Validity of ELS:2002 Data

Most of the items used in the ELS:2002 questionnaires were taken from prior studies, particularly HS&B and NELS:88. Given their past use with large, nationally representative samples, their measurement characteristics are well established. A number of data quality studies have been conducted using these items. Interested readers should see, in particular, Fetters, Stowe, and Owings (1984), Kaufman and Rasinski (1991), and McLaughlin and Cohen (1997). Data quality analyses for the subset of new questionnaire items used in ELS:2002 (as well as the reading and mathematics assessments) can be found in the base-year field test report (Burns et al. 2003). The base-year and base-year to first follow-up data manuals (Ingels et al. 2004, 2005) also address issues of questionnaire and assessment data quality for both the ELS:2002 baseline and its first follow-up.

A.3.5 Survey Standard Errors

Because the ELS:2002 sample design involved stratification, the disproportionate sampling of certain strata, and clustered (i.e., multistage) probability sampling, the resulting statistics are more variable than they would have been if they had been based on data from a simple random sample of the same size.

The calculation of exact standard errors for survey estimates can be difficult. Several procedures are available for calculating precise estimates of sampling errors for complex samples. Procedures such as Taylor Series approximations, Balanced Repeated Replication (BRR), and Jackknife Repeated Replication (JRR), which can be found in advanced statistical programs such as SUDAAN, AM, or WESVAR, produce similar results. The ELS:2002 analyses included in this report used SUDAAN and the Taylor Series procedure to calculate standard errors.

A.3.6 Electronic Codebooks

An electronic codebook (ECB)[12] for the ELS:2002 base-year and first follow-up combined data (NCES 2006–346) is available from NCES. The ECB system is primarily an electronic version of a fully documented survey codebook. It allows the data user to browse through all interview or instrument items (variables) contained in the ELS:2002 data files, to search variable and value labels for key words related to particular research questions, to review the actual wording of these items along with notes and other pertinent information related to them, to examine the definitions and programs used to develop derived variables, and importantly, to output the data for statistical analysis. The ECB also provides an electronic display of the distribution of counts and percentages for each variable in the dataset.

Analysts can use the ECB to select or "tag" variables of interest, print hardcopy codebooks that display the distributions of the tagged variables, and generate SAS and SPSS program syntax (including variable and value labels) that can be used with the analyst's own statistical software.

Further details of the instrumentation, sample design, data collection results, data processing, and data files available for analysis may be found in the *Education Longitudinal Study of 2002: Base-Year to First Follow-up Data File Documentation* (Ingels et al. 2005).[13]

A.4 Statistical Procedures

A.4.1 Statistical Significance: Student *t* Statistics

Comparisons that have been drawn in the text of this report have been tested for statistical significance (set at a probability of .05) to ensure that the differences are larger than those that might be expected due to sampling variation. The statistical comparisons in this report were based largely on the *t* statistic. Whether the statistical test is considered significant is determined by calculating a *t* value for the difference between a pair of means or proportions and comparing this value to published tables of values, called critical values (cv). The alpha level is an a priori statement of the probability that a difference exists in fact rather than by chance.

The *t* statistic between estimates from various subgroups presented in the tables can be computed by using the following formula:

[12] Information on obtaining electronic codebooks for ELS:2002 and other NCES datasets can be found by reviewing the data products for the study at http://nces.ed.gov/pubsearch.
[13] See appendix reference list (section A.6) for full citation. The manual can be downloaded from the NCES website: http://nces.ed.gov/pubsearch.

$$t = \frac{x_1 - x_2}{\sqrt{\left(SE_1^2 + SE_2^2\right)}},$$

where x_1 and x_2 are the estimates to be compared (e.g., the means of sample members in two groups), and SE_1 and SE_2 are their corresponding standard errors. This formula is valid only for independent estimates.

A.4.2 Substantive Significance: Magnitude of Effect Measures

For means (specifically, scores from the ELS:2002 mathematics assessment), an effect size (or standardized mean difference) has been calculated. The effect size stands as a measure, expressed in standard deviation units, of the substantive significance or practical effect of a difference. When differences in the means of two distributions are compared and an effect size derived, in some circumstances, one distribution may be considered dominant. (For example, in an experiment one might employ the standard deviation from the control group.) However, where population variances of two groups are highly similar, a pooled standard deviation is commonly preferred. For purposes of comparisons drawn in this report, effect sizes were calculated as the change in mean test scores divided by their pooled standard deviation. A criterion of one-fifth (0.20) of a standard deviation was set as the minimum effect size for substantive significance. In other words, differences were not reported in the text unless this effect size criterion was met. (To be reported, comparisons also had to meet a criterion of statistical significance, set at .05.) With large samples, a level of statistical significance (here set at .05) can be reached based on differences that may be quite small and of no likely substantive significance. For example, in this report, at level 4 of mathematics achievement, males (38 percent) were more likely to be represented than were females (32 percent). Here, the *t* value is 4.73, well in excess of the required 1.96. However, the effect size is only 0.08 (0.20 is required in this report for just a small effect size).

While 0.20 is seen as a minimum threshold for substantive significance, it also defines a small effect. An effect size of half a standard deviation (0.50) or more is typically thought of as a medium effect. The threshold for large effects is generally thought to begin with an effect size of 0.80.[14] While tables of effect sizes are not provided in the report, standard deviations are reported for mathematics test scores, should readers wish to calculate an effect size. Because some readers may choose a pooled standard deviation approach, sample sizes are also reported.

For proportions, this report has adopted a simple convention of reporting differences only if they are 5 percentage points or more.

A.5 Glossary—Description of Variables Used

Each variable used in analysis for this report is described below. Variables are alphabetized within topics. The topic headings are student demographic characteristics, family

[14] For more information about these cutoffs and effect sizes, see Cohen (1988), Murphy and Myers (2004), and Seastrom (2003, Guideline 5-1-4F). Although there are recognized strength-of-effect conventions for small, medium, and large effect sizes, magnitude of effect is also to a degree relative to context. Size boundaries may vary somewhat according to the literature and findings associated with the specific research inquiry at hand (see, for example, Wainer and Robinson [2003]).

characteristics, student educational characteristics, mathematics achievement, expectations for the future, postsecondary choice factors, and life values or goals. Some readers may wish to consult the original questionnaires to obtain specific item wording and information about the context in which particular questions were posed. Web-published PDF files containing the base-year and first follow-up questionnaires are available at http://www.nces.ed.gov/surveys/els2002/index.asp. Some readers may desire to have further information about the construction of composite variables (such as socioeconomic status [SES]). The code used to construct these variables can be found in the ECB (NCES 2006–346). For users who would like to consult codebooks of hardcopy frequencies (including both percent and weighted percent) for the variables listed in this glossary, codebooks are also available as an appendix of the base-year to first follow-up data manual (Ingels et al. 2005; http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006344).

When the variable is available in the ELS:2002 base-year to first follow-up data file (see the public-use ECB, NCES 2006–346), the variable name appears in parentheses after the bold entry name. ELS:2002 variables used to construct a variable that is not provided in the ELS:2002 base-year data file are named in all capital letters within the descriptive text.

STUDENT DEMOGRAPHIC CHARACTERISTICS

NATIVE LANGUAGE (F1STLANG): The data for F1STLANG are taken directly from the base-year student questionnaire for base-year respondents or from the first follow-up new participant supplement. Otherwise, they are imputed. The native language of the student is classified as either English or a language other than English.

RACE/ETHNICITY (F1RACE): The race/ethnicity variable for this report includes six categories: (1) American Indian or Alaska Native; (2) Asian or Pacific Islander, including Native Hawaiian; (3) Black, including African American; (4) Hispanic or Latino; (5) More than one race; and (6) White. All race categories exclude individuals of Hispanic or Latino origin.

The ELS:2002 race variables reflect new federal standards for collecting race and ethnicity data that allow respondents to mark more than one choice for race. For base-year respondents, information on race/ethnicity was obtained from the base-year student questionnaire when available or from (in order of preference) the sampling roster, the parent questionnaire if the parent respondent was a biological parent, or logical imputation based on other questionnaire items (e.g., surname, native language). The base-year race/ethnicity questions were asked in the first follow-up for newly participating students (i.e., base-year nonrespondents).

SEX (F1SEX): For base-year respondents, this variable was constructed from the base-year student questionnaire or, where missing, from (in order of preference) the school roster, logical imputation based on first name, or statistical imputation. In the first follow-up, students new to the study were asked whether their sex was male or female.

AGE (F1DOB_P): Age as of April 2004. This variable was constructed from the variable F1DOB_P, which indicates the year and month of birth as reported by the student. From this information, students are classified as being 17 years of age or younger, 18 years of age, or 19 years of age or older. Students born in April 1986 or later were classified as 17 years of age or

younger. Students born between April 1985 and March 1986 were classified as 18 years of age. Students born in March 1985 or earlier were classified as 19 years of age or older. Students with missing birth month information in the years 1985 or 1986 were set to missing because their age in April 2004 cannot be determined. See table A-6 for weighted response rates.

SOPHOMORE ENROLLMENT STATUSES TWO YEARS LATER

FINAL ENROLLMENT STATUS SPRING TERM 2004 (F1ENRFIN): The data for the composite variable F1ENRFIN were taken from all available sources, including school reports, and reflect first follow-up questionnaire assignments. Sample members are characterized as to whether they were spring term 2004 dropouts, early graduates (by virtue of high school completion or obtaining a GED, prior to March 15, 2004), spring 2002 sophomores in a homeschooled status in spring 2004, students still in their base-year school (regardless of grade), or students in another school (i.e., transfers from the base-year school, regardless of grade). For purposes of calculating spring term 2002–04 statuses, the base-year to first follow-up panel weight (F1PNLWT) was used. The grade 10 cohort flag was used to exclude spring term 2004 freshened seniors.

FAMILY CHARACTERISTICS

FAMILY COMPOSITION/CONFIGURATION (F1FCOMP): F1FCOMP is based on BYFCOMP for base-year respondents and a surrogate for first follow-up new participants. New participants were asked to answer questions about family composition that were asked of parents in the base year. Because family composition can change over time, the variable is only an approximation, in that information was gathered at either of two time points (2002 or 2004) before combining into one measure. The nine response options include (1) Mother and father, (2) Mother and male guardian, (3) Father and female 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. These categories were collapsed into four: Mother and father (1), Mother or father and guardian (2 and 3), Single parent—mother or father (5 and 6), and Other (4, 7, 8, and 9).

FATHER'S EDUCATION (F1FATHED): The variables F1FATHED and F1MOTHED were used to create F1SES1 as well as F1PARED. Father's highest level of education completed is taken from the parent questionnaire (BYP34A or BYP34B, depending on the sex of the respondent) or, where missing, from (in order of preference) the student questionnaire (BYS83B) or imputation. Eight distinct levels of education were identified: (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. Note that for about 1 percent of cases, a respondent classified under mother's education could be a male spouse/partner of a 10th-grader's biological or adoptive father and vice versa, that is, a respondent classified under father's education could be a female spouse/partner of a 10th-grader's biological or adoptive mother.

MOTHER'S EDUCATION (F1MOTHED): Mother's highest level of education completed is taken from the parent questionnaire or, where missing, from (in order of preference)

the student questionnaire (base year for base-year respondents, first follow-up for base-year nonrespondents) or imputation. Eight distinct levels of education are identified: (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. (Also see note on father's education, above.)

PARENTS' EDUCATION (F1PARED): F1PARED is equivalent to either F1MOTHED or F1FATHED, whichever is the highest level of education. For base-year respondents, mother's/father's highest level of education completed is taken from the parent questionnaire or, where missing, from (in order of preference) the base-year student questionnaire or imputation. For base-year nonrespondents who were first follow-up respondents, this information was taken from the new participant supplement. Eight distinct levels of education are identified: (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, the eight levels of PARED were collapsed into four: High school or less (1 and 2); Some college (3, 4, 5); College graduation (6); and Graduate/professional degree (7 and 8). For this report, the categories were collapsed as follows: High school or less (categories 1 and 2 above); Some college (categories 3, 4, and 5 above); College graduation (category 6 above); and graduate/ professional degree (categories 7 and 8 above).

SOCIOECONOMIC STATUS (F1SES1QU): Socioeconomic status exists as both a continuous variable and as a categorical variable based on weighted quarters. The categorical form of the variable (F1SES1Q) divides SES1 into quarters based on the weighted marginal distribution. It was recoded to combine the middle two categories of the SES1QU variable. Three categories result: (1) lowest quarter of SES1 (i.e., students below the 25th percentile rank for SES); (2) middle two quarters of SES1 (i.e., students whose SES percentile rank was at least 25th and below 75th); and (3) highest quarter of SES1 (i.e., students whose SES percentile rank was at least 75th).

F1SES1 is a NLS-72/HS&B/NELS:88-comparable composite variable constructed from parent questionnaire data when available and from imputation or student substitutions when not. SES is based on five equally weighted, standardized components: father's/guardian's education (F1FATHED), mother's/guardian's education (F1MOTHED), family income (BYINCOME), father's/guardian's occupational prestige score (from F1OCCUFATH), and mother's/guardian's occupational prestige score (from F1OCCUMOTH).

For a description of how F1FATHED and F1MOTHED were constructed, see above. Income was based on parent questionnaire information or imputed otherwise. The parent questionnaire was the preferred source of data for OCCUFATH and OCCUMOTH. Parent questionnaire respondents were asked to describe the father's and mother's occupations and subsequently code each into one of 17 categories. If the respondent provided only text, project staff coded the occupation. In the absence of parent questionnaire occupation data, student-supplied parent occupation text from the base year (for base-year respondents) or first follow-up (for base-year nonrespondents who responded in the first follow-up) was coded by project staff,

if possible. Missing occupations were imputed. An occupation prestige value was determined for F1OCCUM and F1OCCUF based on the 1961 Duncan SEI index.

STUDENT EDUCATIONAL CHARACTERISTICS

HIGHEST MATHEMATICS COURSEWORK (F1HIMATH): This variable indicates the highest mathematics for which at least one term of work was completed. F1HIMATH was created from 10 variables (F1S17A–F1S17J) and includes five categories: pre-algebra or lower (includes general math and consumer math), algebra 1, geometry, algebra 2, and trigonometry/ pre-calculus/calculus (all combined into one category). "Other math" is not used, because it is relatively uninterpretable in terms of its place in the mathematics course hierarchy.

SCHOOL SECTOR (BYSCTRL; F1QSTAT): This variable indicates the type of school attended by the respondent in the base-year interview. Because school administrator data were not collected in the first follow-up, it is not possible to classify the sector of the school attended by students who transferred out of their base-year school. Information from F1QSTAT (type of questionnaire, if any, administered to F1 respondent) was used to identify these students. The resulting variable includes four categories: public school, Catholic school, other private school, and transfer student.

SCHOOL URBANICITY (BYURBAN; F1QSTAT): This variable indicates the location of the school attended by the respondent in the base-year interview, taken from the source data for school sampling: the Common Core of Data (CCD) 1999–2000 and the Private School Survey (PSS) 1999–2000. For this report, the three levels were as follows: Urban—large or mid-size central city; Suburban—large or small town or urban fringe of a large or mid-size city; and Rural—school in a rural area. Because school administrator data were not collected in the first follow-up, it is not possible to classify the location of the school attended by students who transferred out of their base-year school. Information from F1QSTAT (type of questionnaire, if any, administered to F1 respondent) was used to identify these students. The resulting variable includes four categories: urban school, suburban school, rural school, and transfer student.

MATHEMATICS ACHIEVEMENT

PROBABILITY OF PROFICIENCY SCORES IN MATHEMATICS (F1TX1MPP, F1TX2MPP, F1TX3MPP, F1TX4MPP, F1TX5MPP): In their senior year, mathematics achievement tests were administered to students who remained in their base-year school. From these tests, criterion-referenced proficiency probability scores were created. These scores are based on clusters of items that mark different levels on the mathematics scale developed in NELS:88.

Mathematics levels:

1. Simple arithmetical operations on whole numbers;
2. Simple operations with decimals, fractions, powers, and roots;
3. Simple problem solving, requiring the understanding of low-level mathematical concepts;

4. Understanding of intermediate-level mathematical concepts and/or multistep solutions to word problems; and
5. Complex multistep word problems and/or advanced mathematics material.

The proficiency levels are hierarchical in the sense that mastery of a higher level typically implies proficiency at lower levels. The proficiency probabilities were computed using item response theory (IRT)-estimated item parameters calibrated in NELS:88. Each proficiency probability represents the likelihood that a student would pass a given proficiency level defined as above in the NELS:88 sample. It should be remembered that probability of proficiency scores are IRT-derived estimates based on overall performance rather than counts of actual item responses. Owing to the two-stage adaptive format of the ELS:2002 base-year assessments, and to assignment of forms of varying difficulty in the first follow-up based on the prior round ability estimate, not all students received all test items. Nevertheless, the IRT model permits proficiency probabilities to be estimated, even for those sophomores who were not administered a particular proficiency cluster. Table A-7 shows variable names, descriptions, and summary statistics for the five ELS:2002 proficiency probability scores.

Table A-7. ELS:2002 item response theory (IRT) NELS:88-equated estimated number-right score and proficiency probability scores: 2004

Variable name	Description	Range	Weighted mean	Weighted standard deviation
F1NELS2M	Mathematics—NELS-equated estimated number right (1992 scale)	0–81	50.1	14.2
F1TX1MPP	Mathematics—level 1	0–1	0.96	0.12
F1TX2MPP	Mathematics—level 2	0–1	0.78	0.37
F1TX3MPP	Mathematics—level 3	0–1	0.62	0.45
F1TX4MPP	Mathematics—level 4	0–1	0.35	0.41
F1TX5MPP	Mathematics—level 5	0–1	0.04	0.14

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

This report illustrates a cross-sectional use of the probability of proficiency scores: proficiency probabilities are averaged to produce estimates of mastery rates, both overall and within population subgroups. (Note that dichotomous proficiency scores [as appeared on the NELS:88 dataset], indicating in yes/no fashion whether a given student is proficient at a particular level, have not been produced for the ELS:2002 data.) Because the range of the scores is zero to one, means can be expressed in percentage form. For example, the weighted mean for mastery of math level 1 is 0.96, which is equivalent to saying that 96 percent of test takers achieved mastery at this level (simple arithmetical operations on whole numbers). Although the continuous probability of proficiency scores can be used to measure status, they are perhaps most useful for measuring change. A sophomore trend report (currently in preparation) will illustrate the use of the proficiency probabilities in measuring intercohort change (essentially, because NELS:88 and ELS:2002 have been equated and are on the same scale, mean gain or loss across cohorts at any proficiency level can be measured by subtracting the NELS:88 score from the ELS:2002 score). With the addition of the ELS:2002 first follow-up data, the probability of proficiency scores can also be used longitudinally to measure achievement gain. Because base-year and first follow-up data are on the same vertical scale, mean gain (or loss) can be determined by subtracting the base-year probability score from the first follow-up probability score. Measuring gains in probability of proficiency at each mastery level permits researchers to

investigate not only the amount of gain in total scale score points but also where (that is, what proficiency level) along the score scale different students are making their largest gains in achievement between sophomore and senior year. In turn, it is possible to relate gains in specific skills to specific school processes or curricular experiences.

NELS:88-EQUATED IRT NUMBER-RIGHT SCORES (F1NELS2M): The NELS:88-equated IRT-estimated number-right scores for mathematics are estimates of the number of items students would have answered correctly had they taken the NELS:88 exam and responded to all items in the mathematics items pool. The NELS:88 item pool contained 81 mathematics items in all test forms administered in grades 8, 10, and 12. Table A-7 shows the range, weighted mean, and standard deviation for these scores.

Information about test development, administration, and test reliabilities and characteristics may be found in Ingels et al. (2005). Basic score reporting conventions follow those of NELS:88 (see Rock and Pollack [1995]).

MATHEMATICS ACHIEVEMENT TEST SCORES (F1TXMQU): In addition to the criterion-referenced proficiency probability scores, the senior-year mathematics achievement tests were used to create a single measure of mathematics achievement. Test scores were restandardized to a national mean of 50.0 and standard deviation of 10.0. Test scores were imputed for students who had transferred out of their base-year school. They exist as both a continuous variable and as a categorical variable based on weighted quarters. The categorical form of the variable (F1TXMQU) divides test scores into quarters based on the weighted marginal distribution. It was recoded to combine the middle two categories. Three categories result: (1) lowest quarter (i.e., students below the 25th percentile of the test score distribution); (2) middle two quarters (i.e., students whose test score was at least the 25th percentile and below the 75th percentile); and (3) highest quarter (i.e., students whose test score was at least the 75th percentile).

EDUCATIONAL ATTAINMENT: EXPECTATIONS FOR THE FUTURE

EDUCATIONAL EXPECTATIONS (F1STEXP): This variable is taken directly from the student questionnaire when available and imputed otherwise. Students were asked, "As things stand now, how far in school do you think you will get?"[15] The eight response options were (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) Don't know. These categories were collapsed into five: High school diploma or less (1 and 2), Some college (3 and 4), College graduate (5), Graduate/professional degree (6 and 7), and Don't know (8).

[15] While the expectations for educational attainment variable is subject to the limitations of single-item measures, it is repeated over time, that is, asked on a cross-round basis. It has been one of the most frequently employed variables in analyses of both HS&B data and NELS:88, showing expected relationships with related variables when incorporated into multivariate models (see, for example, Kao and Tienda [1998]; Plank and Jordan [2001]; Smith-Maddox [1999, 2000]). Cross-round analyses in NELS:88 show that the expectation question behaves the way it "should" (in relation to what is theoretically expected) over time, with diminishing expectations as students accumulate a more realistic picture of their capacities and the world (see McLaughlin and Cohen [1997]).

POSTSECONDARY PLANS (F1PSEPLN): This variable is constructed from student questionnaire variables F1S47 and F1S49 and includes five categories: (1) Don't plan to continue; (2) Don't know if will continue; (3) Plan to attend a 4-year college or university; (4) Plan to attend a 2-year college or university; and (5) Plan to attend a vocational, technical, or trade school. Early graduates already enrolled in a postsecondary institution are set to missing. See table A-6 for the weighted response rates of the two constituent questions.

POSTSECONDARY CHOICE FACTORS

CHOOSING A COLLEGE (F1S52A-R): These variables are taken directly from the student questionnaire. Students rated a series of factors in their selection of a postsecondary institution as either very important, somewhat important, or not important. See table A-6 for the weighted response rates.

LIFE VALUES OR GOALS

LIFE VALUES (F1S54A-G, F1S40J-P, F1S4OR): These variables are taken directly from the student questionnaire. Students rated a series of life values related to work and education, family and friends, and community as either very important, somewhat important, or not important. See table A-6 for weighted response rates.

A.6 Appendix A References

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Appendix B
Standard Error Tables

Table B-1. Standard errors for table 1 estimates (percentage of high school seniors, by selected student characteristics): 2004

Characteristic	Percent
Sex	
Male	0.55
Female	0.55
Age	
17 or younger	0.57
18	0.59
19 or older	0.26
Race/ethnicity[1]	
American Indian or Alaska Native	0.22
Asian or Pacific Islander	0.29
Black or African American	0.65
Hispanic or Latino	0.78
More than one race	0.23
White	0.97
Native language[2]	
English	0.56
Non-English	0.56
Family composition	
Mother and father	0.60
Mother or father and guardian	0.40
Single parent (mother or father)	0.46
Other[3]	0.22
Parents' education	
High school or less	0.63
Some college	0.57
College graduation	0.50
Graduate/professional degree	0.57
Socioeconomic status	
Lowest quarter	0.66
Middle two quarters	0.66
Highest quarter	0.80

See notes at end of table.

Table B-1. Standard errors for table 1 estimates (percentage of high school seniors, by selected student characteristics): 2004—Continued

Characteristic	Percent
Highest mathematics coursework	
Pre-algebra or lower	0.32
Algebra 1	0.35
Geometry	0.49
Algebra 2	0.66
Trigonometry, pre-calculus, or calculus	0.77
Student's educational expectations	
High school or less	0.25
Some college	0.48
College graduation	0.50
Graduate/professional degree	0.59
Don't know	0.33
Postsecondary education plans	
Don't plan to continue	0.14
Don't know if will continue	0.27
Four-year institution	0.71
Two-year community college	0.55
Vocational, technical, or trade school	0.31
School sector	
Public	0.45
Catholic	0.19
Other private	0.25
Transfer[4]	0.35
School urbanicity	
Urban	0.72
Suburban	0.81
Rural	0.69
Transfer[4]	0.35

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), “First Follow-up, 2004.”

Table B-2. Standard errors for table 2 estimates (percentage of high school seniors demonstrating mastery of specific mathematics knowledge and skills, by selected student characteristics): 2004

Characteristic	Sample (n)	Level 1[1]		Level 2[2]		Level 3[3]		Level 4[4]		Level 5[5]	
		SE	SD	SE	SD	SE	SD	SE	SD	SE	SD
Total	13,420	0.16	12.32	0.59	36.42	0.77	44.83	0.72	40.64	0.20	14.10
Sex											
Male	6,650	0.22	12.72	0.71	35.91	0.88	44.48	0.81	41.77	0.29	16.32
Female	6,770	0.19	11.91	0.72	36.88	0.91	45.12	0.86	39.28	0.21	11.33
Age											
17 or younger	5,490	0.16	9.19	0.68	32.99	0.94	43.34	0.92	40.88	0.31	15.15
18	7,190	0.19	11.89	0.69	36.46	0.85	44.80	0.78	40.88	0.22	13.76
19 or older	670	1.05	23.55	2.00	44.39	1.91	41.06	1.21	25.51	0.23	7.76
Race/ethnicity[6]											
American Indian or Alaska Native	110	1.72	12.40	5.28	41.02	5.94	44.66	3.39	29.05	0.73	6.84
Asian or Pacific Islander	1,410	0.33	9.31	1.38	30.70	1.97	40.67	2.42	43.46	1.42	25.07
Black or African American	1,670	0.51	16.28	1.55	42.55	1.56	43.48	0.90	25.87	0.15	4.81
Hispanic or Latino	1,840	0.48	16.45	1.32	41.85	1.51	45.22	1.13	32.33	0.19	7.71
More than one race	590	0.81	14.77	2.03	37.08	2.51	45.34	2.16	39.58	0.43	10.45
White	7,810	0.14	9.55	0.52	30.90	0.73	41.12	0.80	41.66	0.26	15.42
Native language[7]											
English	11,160	0.15	11.29	0.57	35.02	0.75	44.05	0.73	40.94	0.21	14.02
Non-English	2,260	0.53	17.12	1.46	42.02	1.68	46.21	1.39	36.55	0.50	14.58

See notes at end of table.

Table B-2. Standard errors for table 2 estimates (percentage of high school seniors demonstrating mastery of specific mathematics knowledge and skills, by selected student characteristics): 2004—Continued

Characteristic	Sample (n)	Level 1[1]		Level 2[2]		Level 3[3]		Level 4[4]		Level 5[5]	
		SE	SD	SE	SD	SE	SD	SE	SD	SE	SD
Family composition											
Mother and father	8,400	0.17	10.72	0.60	33.39	0.80	42.92	0.80	41.85	0.28	15.91
Mother or father and guardian	1,890	0.34	12.39	1.04	37.23	1.31	45.51	1.16	37.68	0.30	11.12
Single parent (mother or father)	2,640	0.36	14.24	1.07	40.42	1.22	46.17	0.99	37.32	0.25	10.66
Other[8]	500	1.07	19.80	2.27	42.75	2.34	44.86	1.32	27.57	0.35	7.53
Parents' education											
High school or less	3,190	0.32	15.80	0.96	41.32	1.15	45.67	0.79	32.63	0.15	6.73
Some college	4,330	0.23	11.89	0.77	36.71	1.00	45.17	0.79	37.89	0.18	9.87
College graduation	3,190	0.23	9.94	0.77	32.04	0.99	41.66	1.13	41.82	0.36	15.75
Graduate/professional degree	2,720	0.27	9.31	0.84	27.49	1.12	36.20	1.30	42.23	0.66	22.27
Socioeconomic status											
Lowest quarter	2,840	0.36	16.36	1.10	42.52	1.19	44.61	0.80	29.75	0.11	5.18
Middle two quarters	6,480	0.20	12.13	0.66	36.21	0.82	44.84	0.70	38.66	0.16	10.60
Highest quarter	4,110	0.17	7.05	0.52	23.29	0.77	34.00	1.04	41.30	0.51	21.34
Highest mathematics coursework											
Pre-algebra or lower	580	1.32	25.08	2.33	42.12	1.86	33.83	0.81	15.93	†	†
Algebra 1	690	0.85	17.05	2.03	41.94	1.61	34.46	0.65	14.21	†	†
Geometry	1,550	0.41	13.66	1.50	41.08	1.52	42.99	0.91	23.48	0.06	2.16
Algebra 2	3,840	0.23	9.94	0.91	35.17	1.17	44.27	0.81	30.81	0.05	2.36
Trigonometry, pre-calculus, or calculus	6,650	0.11	6.42	0.45	22.03	0.69	32.57	0.93	40.53	0.41	19.95

See notes at end of table.

Table B-2. Standard errors for table 2 estimates (percentage of high school seniors demonstrating mastery of specific mathematics knowledge and skills, by selected student characteristics): 2004—Continued

Characteristic	Sample (n)	Level 1[1]		Level 2[2]		Level 3[3]		Level 4[4]		Level 5[5]	
		SE	SD	SE	SD	SE	SD	SE	SD	SE	SD
Student's educational expectations											
High school or less	600	1.13	24.24	2.14	44.50	1.93	39.03	0.98	21.32	0.05	1.27
Some college	2,160	0.43	15.10	1.20	41.87	1.23	43.58	0.69	25.63	0.09	3.64
College graduation	4,510	0.17	8.80	0.66	32.07	0.89	42.55	0.86	40.23	0.23	12.02
Graduate/professional degree	5,120	0.12	6.36	0.55	25.23	0.85	36.97	0.99	42.01	0.43	19.62
Don't know	1,040	0.68	18.04	1.69	43.46	1.75	45.18	1.22	31.20	0.24	7.15
Postsecondary education plans											
Don't plan to continue	190	1.92	24.24	3.77	44.40	3.29	39.12	1.60	21.44	†	†
Don't know if will continue	740	0.90	19.82	2.03	44.29	2.02	44.66	1.29	29.11	0.28	6.81
Four-year institution	8,800	0.11	7.37	0.49	28.35	0.74	39.41	0.81	42.03	0.30	17.30
Two-year community college	2,750	0.32	14.17	1.04	41.20	1.06	45.11	0.77	30.26	0.09	4.25
Vocational, technical, or trade school	910	0.73	18.26	1.79	42.10	1.78	44.30	1.05	25.93	0.17	3.53
School sector											
Public	9,400	0.18	12.69	0.65	36.85	0.84	45.02	0.79	40.52	0.23	13.68
Catholic	1,720	0.11	3.67	0.72	21.85	1.19	33.74	1.87	41.00	0.68	17.18
Other private	1,140	0.24	6.54	1.05	21.95	1.98	33.19	2.72	41.24	1.48	24.58
Transfer[9]	1,160	0.46	12.77	1.48	39.18	1.80	45.61	1.29	33.38	0.29	9.19

See notes at end of table.

Table B-2. Standard errors for table 2 estimates (percentage of high school seniors demonstrating mastery of specific mathematics knowledge and skills, by selected student characteristics): 2004—Continued

Characteristic	Sample (n)	Level 1[1]		Level 2[2]		Level 3[3]		Level 4[4]		Level 5[5]	
		SE	SD	SE	SD	SE	SD	SE	SD	SE	SD
School urbanicity											
Urban	3,970	0.40	14.26	1.42	38.08	1.73	45.66	1.54	40.46	0.44	15.00
Suburban	6,010	0.21	11.37	0.76	35.16	1.03	44.12	1.06	41.40	0.32	14.83
Rural	2,280	0.25	11.39	0.98	35.32	1.41	43.95	1.28	40.53	0.32	12.56
Transfer[9]	1,160	0.46	12.77	1.48	39.18	1.80	45.61	1.29	33.38	0.29	9.19

† Not applicable.
[1] Math level 1: Simple arithmetical operations on whole numbers: essentially, single-step operations that rely on rote memory.
[2] Math level 2: Simple operations with decimals, fractions, powers, and roots.
[3] Math level 3: Simple problem solving, requiring the understanding of low-level mathematical concepts.
[4] Math level 4: Understanding of intermediate-level mathematical concepts and/or having the ability to formulate multistep solutions to word problems.
[5] Math level 5: Proficiency in solving complex multistep word problems and/or having the ability to demonstrate knowledge of material found in advanced mathematics courses.
[6] All race categories exclude Hispanic or Latino origin.
[7] The first language students learned to speak when they were children.
[8] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[9] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
NOTE: Details may not sum to totals due to rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), “First Follow-up, 2004.”

Table B-3. Standard errors for table 3 estimates (percentage of high school seniors, by expected level of educational attainment and selected student characteristics): 2004

Characteristic	High school or less	Some college	College graduate (4-year degree)	Graduate/ professional school	Don't know
Total	0.25	0.48	0.50	0.59	0.33
Sex					
Male	0.40	0.66	0.71	0.75	0.45
Female	0.26	0.60	0.69	0.81	0.42
Age					
17 or younger	0.29	0.66	0.74	0.91	0.50
18	0.34	0.62	0.67	0.74	0.40
19 or older	1.74	2.07	1.85	1.91	1.70
Race/ethnicity[1]					
American Indian or Alaska Native	3.04	4.24	6.06	6.33	3.12
Asian or Pacific Islander	0.50	1.34	1.65	1.99	0.80
Black or African American	0.64	1.22	1.33	1.56	0.79
Hispanic or Latino	0.74	1.35	1.32	1.24	1.03
More than one race	1.33	1.83	2.56	2.29	1.70
White	0.29	0.58	0.62	0.74	0.37
Native language[2]					
English	0.26	0.49	0.53	0.63	0.33
Non-English	0.67	1.34	1.32	1.33	0.88
Family composition					
Mother and father	0.29	0.53	0.64	0.75	0.36
Mother or father and guardian	0.64	1.00	1.31	1.23	0.77
Single parent (mother or father)	0.54	1.04	1.06	1.07	0.74
Other[3]	1.19	2.53	2.10	2.42	2.05
Parents' education					
High school or less	0.62	1.01	1.00	0.83	0.65
Some college	0.40	0.70	0.83	0.81	0.54
College graduation	0.36	0.73	1.13	1.16	0.57
Graduate/professional degree	0.32	0.64	1.03	1.21	0.63
Socioeconomic status					
Lowest quarter	0.65	1.03	1.05	0.85	0.69
Middle two quarters	0.33	0.57	0.65	0.69	0.47
Highest quarter	0.22	0.57	0.96	1.05	0.46

See notes at end of table.

Table B-3. Standard errors for table 3 estimates (percentage of high school seniors, by expected level of educational attainment and selected student characteristics): 2004—Continued

Characteristic	High school or less	Some college	College graduate (4-year degree)	Graduate/ professional school	Don't know
Highest mathematics coursework					
Pre-algebra or lower	1.86	2.15	1.96	1.57	2.09
Algebra 1	1.58	1.89	1.96	1.27	1.74
Geometry	0.87	1.34	1.34	1.22	1.05
Algebra 2	0.39	0.88	0.94	0.84	0.56
Trigonometry, pre-calculus, or calculus	0.16	0.46	0.75	0.82	0.31
Mathematics achievement test					
Lowest quarter	0.73	0.99	1.01	0.83	0.80
Middle two quarters	0.29	0.64	0.70	0.73	0.43
Highest quarter	0.16	0.42	1.00	1.10	0.38
School sector					
Public	0.29	0.54	0.56	0.64	0.36
Catholic	0.25	0.63	1.40	1.68	0.46
Other private	0.35	1.03	2.04	2.56	0.77
Transfer[4]	0.93	1.56	1.67	1.66	1.21
School urbanicity					
Urban	0.45	1.01	1.01	1.18	0.65
Suburban	0.37	0.63	0.74	0.88	0.47
Rural	0.65	1.28	1.05	1.16	0.68
Transfer[4]	0.93	1.56	1.67	1.66	1.21

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part I

Characteristic	Strong academic reputation	Availability of financial aid	Easy admissions standards	Low expenses	Good job placement record for its graduates	Availability of specific courses or curriculum
Total	0.60	0.69	0.54	0.63	0.65	0.58
Sex						
Male	0.84	0.87	0.71	0.81	0.86	0.79
Female	0.78	0.88	0.71	0.84	0.75	0.75
Age						
17 or younger	0.92	1.01	0.79	0.89	0.91	0.88
18	0.78	0.82	0.66	0.79	0.80	0.74
19 or older	2.50	2.49	2.41	2.42	2.46	2.59
Race/ethnicity[1]						
American Indian or Alaska Native	7.01	4.97	6.31	4.88	6.09	5.73
Asian or Pacific Islander	1.78	2.14	1.62	1.91	1.89	1.93
Black or African American	1.45	1.36	1.67	1.58	1.53	1.21
Hispanic or Latino	1.32	1.50	1.29	1.37	1.38	1.53
More than one race	2.92	2.87	2.46	2.86	2.74	2.89
White	0.77	0.81	0.55	0.76	0.77	0.74
Native language[2]						
English	0.66	0.73	0.58	0.67	0.71	0.63
Non-English	1.52	1.55	1.30	1.43	1.34	1.53
Family composition						
Mother and father	0.76	0.84	0.64	0.74	0.78	0.72
Mother or father and guardian	1.44	1.38	1.28	1.42	1.44	1.34
Single parent (mother or father)	1.30	1.22	1.13	1.29	1.26	1.16
Other[3]	2.83	2.51	2.82	2.67	2.78	2.69
Parents' education						
High school or less	1.15	1.10	1.08	1.17	1.09	1.18
Some college	0.99	0.93	0.79	0.94	1.00	0.94
College graduation	1.07	1.14	0.90	1.15	1.20	1.11
Graduate/professional degree	1.14	1.45	1.06	1.13	1.39	1.22

See notes at end of table.

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part I—Continued

Characteristic	Strong academic reputation	Availability of financial aid	Easy admissions standards	Low expenses	Good job placement record for its graduates	Availability of specific courses or curriculum
Socioeconomic status						
Lowest quarter	1.25	1.11	1.14	1.23	1.11	1.24
Middle two quarters	0.80	0.84	0.74	0.84	0.81	0.73
Highest quarter	1.01	1.12	0.68	0.88	1.13	1.03
Highest mathematics coursework						
Pre-algebra or lower	2.94	2.77	2.50	2.72	2.44	2.42
Algebra 1	2.23	2.57	2.20	2.28	2.31	2.58
Geometry	1.62	1.65	1.49	1.54	1.55	1.70
Algebra 2	0.99	1.15	1.01	1.12	1.04	1.00
Trigonometry, pre-calculus, or calculus	0.80	0.93	0.59	0.85	0.92	0.78
Student's educational expectations						
High school or less	3.46	3.70	3.75	3.43	3.74	3.62
Some college	1.29	1.30	1.31	1.32	1.26	1.37
College graduation	0.90	1.03	0.79	0.93	1.02	0.91
Graduate/professional degree	0.77	1.04	0.65	0.86	0.99	0.88
Don't know	2.23	1.90	1.94	2.24	2.25	2.25
Postsecondary education plans						
Don't plan to continue	†	†	†	†	†	†
Don't know if will continue	7.80	7.80	5.99	7.71	7.82	8.21
Four-year institution	0.68	0.85	0.59	0.70	0.81	0.68
Two-year community college	1.24	1.18	1.07	1.17	1.20	1.22
Vocational, technical, or trade school	1.76	1.94	1.83	1.79	1.84	1.89
Mathematics achievement test						
Lowest quarter	1.25	1.18	1.16	1.19	1.16	1.18
Middle two quarters	0.79	0.92	0.67	0.76	0.79	0.75
Highest quarter	1.06	1.22	0.51	0.94	1.19	1.05

See notes at end of table.

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part I—Continued

Characteristic	Strong academic reputation	Availability of financial aid	Easy admissions standards	Low expenses	Good job placement record for its graduates	Availability of specific courses or curriculum
School sector						
Public	0.67	0.79	0.59	0.71	0.74	0.64
Catholic	1.65	1.62	1.12	1.27	1.64	1.45
Other private	2.41	2.20	1.49	2.35	2.20	1.90
Transfer[4]	1.78	1.67	1.70	1.64	1.59	1.71
School urbanicity						
Urban	1.14	1.44	1.17	1.22	1.32	1.04
Suburban	0.86	1.07	0.75	0.92	0.98	0.89
Rural	1.48	1.30	1.02	1.44	1.37	1.19
Transfer[4]	1.78	1.67	1.70	1.64	1.59	1.71

† Not applicable.
[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part II

Characteristic	Athletic program	Active social life	Living at home	Away from home	Low crime	Good graduate school placement
Total	0.40	0.55	0.61	0.55	0.57	0.61
Sex						
Male	0.65	0.81	0.75	0.76	0.77	0.78
Female	0.46	0.70	0.78	0.75	0.77	0.80
Age						
17 or younger	0.63	0.91	0.82	0.84	0.91	0.85
18	0.51	0.68	0.72	0.72	0.74	0.76
19 or older	1.94	2.57	2.47	2.36	2.46	2.70
Race/ethnicity[1]						
American Indian or Alaska Native	5.97	6.53	5.83	5.60	7.89	6.85
Asian or Pacific Islander	1.00	1.52	1.63	1.84	2.18	1.72
Black or African American	1.41	1.41	1.35	1.63	1.55	1.40
Hispanic or Latino	1.07	1.29	1.65	1.26	1.38	1.58
More than one race	2.22	2.74	2.28	2.53	2.74	2.63
White	0.43	0.70	0.70	0.71	0.69	0.72
Native language[2]						
English	0.43	0.59	0.59	0.61	0.64	0.66
Non-English	0.96	1.46	1.58	1.17	1.34	1.40
Family composition						
Mother and father	0.48	0.69	0.72	0.65	0.71	0.72
Mother or father and guardian	0.95	1.21	1.28	1.32	1.44	1.44
Single parent (mother or father)	0.91	1.15	1.17	1.08	1.17	1.30
Other[3]	2.19	2.91	2.71	3.01	2.62	3.00
Parents' education						
High school or less	0.80	0.97	1.09	0.98	1.14	1.12
Some college	0.71	0.83	0.87	0.85	0.89	1.00
College graduation	0.78	1.14	1.02	1.06	1.07	1.11
Graduate/professional degree	0.96	1.28	0.96	1.30	1.25	1.19

See notes at end of table.

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part II—Continued

Characteristic	Athletic program	Active social life	Living at home	Away from home	Low crime	Good graduate school placement
Socioeconomic status						
Lowest quarter	0.83	1.02	1.15	0.98	1.16	1.19
Middle two quarters	0.61	0.75	0.76	0.76	0.80	0.83
Highest quarter	0.72	1.09	0.70	1.01	0.88	0.97
Highest mathematics coursework						
Pre-algebra or lower	1.94	2.27	2.59	2.28	2.84	2.52
Algebra 1	1.87	2.11	2.60	2.36	2.48	2.52
Geometry	1.28	1.53	1.48	1.36	1.44	1.62
Algebra 2	0.75	0.94	1.12	0.94	0.96	1.07
Trigonometry, pre-calculus, or calculus	0.54	0.85	0.69	0.77	0.77	0.85
Student's educational expectations						
High school or less	2.84	3.91	3.62	3.42	4.03	3.78
Some college	1.01	1.07	1.29	1.13	1.35	1.27
College graduation	0.69	0.91	0.86	0.88	0.89	0.94
Graduate/professional degree	0.62	0.83	0.77	0.81	0.93	0.89
Don't know	1.31	1.83	1.95	1.69	2.00	1.95
Postsecondary education plans						
Don't plan to continue	†	†	†	†	†	†
Don't know if will continue	4.98	6.20	7.15	6.88	8.10	7.81
Four-year institution	0.49	0.73	0.63	0.69	0.70	0.76
Two-year community college	0.82	0.93	1.08	0.96	1.10	1.12
Vocational, technical, or trade school	1.10	1.60	1.92	1.48	1.83	1.70
Mathematics achievement test						
Lowest quarter	1.05	1.03	1.16	1.26	1.23	1.25
Middle two quarters	0.58	0.72	0.74	0.68	0.75	0.77
Highest quarter	0.61	1.15	0.73	1.09	1.01	1.12

See notes at end of table.

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part II—Continued

Characteristic	Athletic program	Active social life	Living at home	Away from home	Low crime	Good graduate school placement
School sector						
Public	0.45	0.64	0.68	0.60	0.64	0.67
Catholic	0.91	1.66	1.25	1.86	1.00	1.61
Other private	1.25	1.81	2.34	2.80	1.93	2.10
Transfer[4]	1.38	1.61	1.82	1.75	1.80	1.78
School urbanicity						
Urban	0.81	1.10	1.32	1.15	1.12	1.19
Suburban	0.60	0.81	0.84	0.78	0.83	0.87
Rural	0.77	1.42	1.32	1.12	1.20	1.25
Transfer[4]	1.38	1.61	1.82	1.75	1.80	1.78

† Not applicable.
[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part III

Characteristic	Degree in chosen field	Racial/ethnic makeup	School size	Geographic location	Same school as one parent attended	Acceptance of college credit
Total	0.54	0.42	0.41	0.50	0.21	0.55
Sex						
Male	0.80	0.57	0.53	0.64	0.31	0.68
Female	0.64	0.55	0.54	0.72	0.26	0.75
Age						
17 or younger	0.81	0.58	0.64	0.78	0.30	0.78
18	0.70	0.52	0.54	0.70	0.26	0.66
19 or older	2.18	2.23	1.92	2.14	1.41	2.56
Race/ethnicity[1]						
American Indian or Alaska Native	5.11	4.73	4.34	5.80	1.02	4.02
Asian or Pacific Islander	1.79	1.46	1.41	1.61	0.44	1.82
Black or African American	1.02	1.40	1.15	1.11	0.76	1.60
Hispanic or Latino	1.24	1.19	0.86	1.12	0.54	1.34
More than one race	2.41	2.40	1.93	2.27	1.04	2.29
White	0.71	0.41	0.53	0.64	0.22	0.60
Native language[2]						
English	0.58	0.43	0.45	0.53	0.22	0.56
Non-English	1.32	1.36	1.06	1.35	0.65	1.46
Family composition						
Mother and father	0.68	0.47	0.53	0.64	0.22	0.67
Mother or father and guardian	1.30	0.99	0.91	1.22	0.52	1.18
Single parent (mother or father)	0.97	0.97	0.91	0.96	0.51	1.14
Other[3]	2.42	2.23	2.10	2.43	1.28	2.48
Parents' education						
High school or less	0.89	0.92	0.87	1.01	0.49	1.10
Some college	0.84	0.74	0.63	0.73	0.37	0.85
College graduation	1.02	0.78	0.86	0.99	0.36	1.00
Graduate/professional degree	1.27	0.90	1.15	1.21	0.47	1.17

See notes at end of table.

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part III—Continued

Characteristic	Degree in chosen field	Racial/ethnic makeup	School size	Geographic location	Same school as one parent attended	Acceptance of college credit
Socioeconomic status						
Lowest quarter	0.89	0.93	0.86	1.00	0.53	1.15
Middle two quarters	0.73	0.56	0.53	0.68	0.30	0.74
Highest quarter	1.03	0.65	0.84	1.02	0.27	0.85
Highest mathematics coursework						
Pre-algebra or lower	2.61	2.22	1.81	2.19	1.43	2.65
Algebra 1	2.32	1.98	1.52	1.89	0.85	2.33
Geometry	1.58	1.35	1.20	1.47	0.75	1.44
Algebra 2	0.87	0.74	0.73	0.88	0.38	0.98
Trigonometry, pre-calculus, or calculus	0.76	0.55	0.62	0.74	0.24	0.74
Student's educational expectations						
High school or less	3.71	3.23	3.17	3.28	2.52	3.79
Some college	1.37	1.06	0.82	1.03	0.57	1.13
College graduation	0.84	0.64	0.66	0.87	0.33	0.85
Graduate/professional degree	0.80	0.63	0.67	0.80	0.26	0.88
Don't know	2.03	1.55	1.42	1.61	0.89	1.94
Postsecondary education plans						
Don't plan to continue	†	†	†	†	†	†
Don't know if will continue	7.53	6.19	2.46	4.89	0.66	6.32
Four-year institution	0.66	0.49	0.52	0.64	0.22	0.67
Two-year community college	1.09	0.84	0.75	0.84	0.46	1.07
Vocational, technical, or trade school	1.84	1.29	1.17	1.52	0.79	1.42
Mathematics achievement test						
Lowest quarter	1.03	1.00	0.88	0.95	0.65	1.17
Middle two quarters	0.71	0.53	0.52	0.68	0.22	0.73
Highest quarter	1.03	0.53	0.81	0.95	0.23	0.95

See notes at end of table.

Table B-4. Standard errors for table 4 estimates (percentage of college-bound high school seniors who reported various features of postsecondary institutions were "very important" to their choice of a college, by selected student characteristics): 2004—Part III—Continued

Characteristic	Degree in chosen field	Racial/ethnic makeup	School size	Geographic location	Same school as one parent attended	Acceptance of college credit
School sector						
Public	0.62	0.45	0.45	0.56	0.25	0.62
Catholic	1.47	1.05	1.16	1.60	0.27	1.02
Other private	1.61	1.15	1.81	1.98	0.47	1.89
Transfer[4]	1.33	1.64	1.09	1.52	0.54	1.81
School urbanicity						
Urban	1.16	0.89	0.73	1.03	0.46	1.17
Suburban	0.77	0.55	0.61	0.69	0.30	0.77
Rural	1.29	0.80	0.93	1.16	0.45	1.15
Transfer[4]	1.33	1.64	1.09	1.52	0.54	1.81

† Not applicable.
[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table B-5. Standard errors for table 5 estimates (percentage of high school seniors who reported that various life values related to education and work were "very important" to them, by selected student characteristics): 2004

Characteristic	Getting a good education	Being successful in line of work	Becoming an expert in field of work	Having lots of money	Being able to find steady work	Having leisure time to enjoy own interest
Total	0.37	0.33	0.47	0.58	0.40	0.55
Sex						
Male	0.63	0.49	0.66	0.80	0.55	0.69
Female	0.37	0.40	0.66	0.69	0.49	0.74
Age						
17 or younger	0.52	0.48	0.68	0.87	0.60	0.83
18	0.50	0.43	0.65	0.77	0.50	0.71
19 or older	1.35	1.40	1.84	2.40	1.61	2.22
Race/ethnicity[1]						
American Indian or Alaska Native	3.69	4.14	4.37	5.13	3.05	4.38
Asian or Pacific Islander	0.92	0.99	1.61	1.94	1.37	1.62
Black or African American	0.60	0.56	0.97	1.38	0.89	1.32
Hispanic or Latino	0.75	0.97	1.15	1.43	0.87	1.38
More than one race	1.93	1.57	2.34	2.50	1.80	2.46
White	0.48	0.41	0.58	0.68	0.52	0.68
Native language[2]						
English	0.40	0.34	0.50	0.61	0.42	0.60
Non-English	0.74	0.86	1.12	1.28	1.03	1.34
Family composition						
Mother and father	0.45	0.38	0.60	0.70	0.52	0.64
Mother or father and guardian	0.91	0.73	1.31	1.27	0.99	1.28
Single parent (mother or father)	0.84	0.69	0.94	1.19	0.71	1.11
Other[3]	1.19	1.91	2.26	2.74	1.56	2.75
Parents' education						
High school or less	0.70	0.61	0.91	1.02	0.68	1.03
Some college	0.59	0.57	0.76	0.91	0.62	0.89
College graduation	0.74	0.64	1.07	1.08	0.75	0.98
Graduate/professional degree	0.69	0.68	1.19	1.25	0.98	1.05

See notes at end of table.

Table B-5. Standard errors for table 5 estimates (percentage of high school seniors who reported that various life values related to education and work were "very important" to them, by selected student characteristics): 2004—Continued

Characteristic	Getting a good education	Being successful in line of work	Becoming an expert in field of work	Having lots of money	Being able to find steady work	Having leisure time to enjoy own interest
Socioeconomic status						
Lowest quarter	0.72	0.68	0.98	1.06	0.79	1.01
Middle two quarters	0.48	0.46	0.62	0.80	0.48	0.75
Highest quarter	0.61	0.52	0.99	0.96	0.82	0.78
Highest mathematics coursework						
Pre-algebra or lower	1.68	1.56	2.13	2.66	1.65	2.46
Algebra 1	1.58	1.53	1.74	2.32	1.34	2.18
Geometry	1.16	0.90	1.29	1.57	0.93	1.41
Algebra 2	0.67	0.57	0.82	1.02	0.65	0.90
Trigonometry, pre-calculus, or calculus	0.48	0.40	0.71	0.77	0.63	0.73
Student's educational expectations						
High school or less	2.27	1.90	2.27	2.49	1.64	2.27
Some college	0.96	0.80	1.04	1.20	0.84	1.21
College graduation	0.62	0.52	0.81	0.93	0.65	0.87
Graduate/professional degree	0.32	0.33	0.78	0.86	0.60	0.84
Don't know	1.28	1.25	1.65	1.80	1.37	1.74
Postsecondary education plans						
Don't plan to continue	3.82	3.32	3.68	4.34	3.02	3.82
Don't know if will continue	1.83	1.77	2.08	2.13	1.57	2.07
Four-year institution	0.34	0.34	0.58	0.72	0.52	0.63
Two-year community college	0.82	0.74	1.04	1.18	0.88	1.12
Vocational, technical, or trade school	1.41	1.21	1.48	1.60	1.23	1.77
Mathematics achievement test						
Lowest quarter	0.67	0.67	0.89	1.22	0.72	1.04
Middle two quarters	0.57	0.40	0.62	0.75	0.52	0.74
Highest quarter	0.74	0.60	1.02	1.00	0.81	0.90

See notes at end of table.

Table B-5. Standard errors for table 5 estimates (percentage of high school seniors who reported that various life values related to education and work were "very important" to them, by selected student characteristics): 2004—Continued

Characteristic	Getting a good education	Being successful in line of work	Becoming an expert in field of work	Having lots of money	Being able to find steady work	Having leisure time to enjoy own interest
School sector						
Public	0.42	0.36	0.51	0.67	0.45	0.59
Catholic	0.86	0.68	1.24	1.71	0.97	1.54
Other private	1.19	1.12	1.59	1.87	1.70	2.72
Transfer[4]	0.92	1.20	1.46	1.65	1.18	1.66
School urbanicity						
Urban	0.65	0.66	0.97	1.18	0.84	1.01
Suburban	0.59	0.43	0.63	0.89	0.59	0.75
Rural	0.79	0.78	1.11	1.29	0.85	1.37
Transfer[4]	0.92	1.20	1.46	1.65	1.18	1.66

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table B-6. Standard errors for table 6 estimates (percentage of high school seniors who reported that various life values related to family and friends were "very important" to them, by selected student characteristics): 2004

Characteristic	Finding right person to marry and having happy family life	Having children	Being able to give my children better opportunities than I've had	Having strong friendships
Total	0.46	0.55	0.45	0.41
Sex				
Male	0.63	0.75	0.64	0.56
Female	0.64	0.78	0.58	0.57
Age				
17 or younger	0.74	0.90	0.66	0.59
18	0.57	0.72	0.61	0.55
19 or older	1.67	2.21	1.49	1.98
Race/ethnicity[1]				
American Indian or Alaska Native	6.94	5.68	4.96	6.46
Asian or Pacific Islander	1.38	1.97	1.24	1.32
Black or African American	1.28	1.33	0.79	1.31
Hispanic or Latino	1.20	1.47	0.86	1.13
More than one race	2.08	2.43	2.04	1.56
White	0.55	0.73	0.61	0.43
Native language[2]				
English	0.48	0.60	0.49	0.41
Non-English	1.07	1.35	0.95	1.17
Family composition				
Mother and father	0.54	0.72	0.57	0.47
Mother or father and guardian	1.21	1.46	0.97	1.00
Single parent (mother or father)	1.01	1.19	0.80	0.86
Other[3]	2.19	2.76	1.88	2.11
Parents' education				
High school or less	0.85	1.00	0.67	0.81
Some college	0.74	0.97	0.76	0.67
College graduation	0.89	1.04	0.89	0.73
Graduate/professional degree	1.00	1.32	1.12	0.75
Socioeconomic status				
Lowest quarter	0.95	1.02	0.68	0.92
Middle two quarters	0.65	0.78	0.59	0.54
Highest quarter	0.81	1.01	0.94	0.62

See notes at end of table.

Table B-6. Standard errors for table 6 estimates (percentage of high school seniors who reported that various life values related to family and friends were "very important" to them, by selected student characteristics): 2004—Continued

Characteristic	Finding right person to marry and having happy family life	Having children	Being able to give my children better opportunities than I've had	Having strong friendships
Highest mathematics coursework				
Pre-algebra or lower	2.15	2.47	1.82	2.21
Algebra 1	1.64	2.19	1.52	1.67
Geometry	1.14	1.49	1.00	1.05
Algebra 2	0.81	1.01	0.71	0.83
Trigonometry, pre-calculus, or calculus	0.61	0.80	0.69	0.51
Student's educational expectations				
High school or less	2.11	2.34	1.90	2.00
Some college	1.09	1.25	0.90	1.04
College graduation	0.72	0.94	0.79	0.64
Graduate/professional degree	0.65	0.84	0.72	0.59
Don't know	1.63	1.70	1.37	1.43
Postsecondary education plans				
Don't plan to continue	3.55	3.87	3.59	3.67
Don't know if will continue	2.00	2.22	1.79	1.59
Four-year institution	0.53	0.69	0.60	0.50
Two-year community college	0.98	1.10	0.82	0.84
Vocational, technical, or trade school	1.89	1.90	1.42	1.48
Mathematics achievement test				
Lowest quarter	0.91	1.12	0.65	0.87
Middle two quarters	0.65	0.74	0.56	0.53
Highest quarter	0.74	1.10	0.98	0.62
School sector				
Public	0.51	0.63	0.50	0.45
Catholic	0.90	1.27	1.30	0.78
Other private	0.81	1.95	2.06	1.07
Transfer[4]	1.59	1.70	1.07	1.39

See notes at end of table.

Table B-6. Standard errors for table 6 estimates (percentage of high school seniors who reported that various life values related to family and friends were "very important" to them, by selected student characteristics): 2004—Continued

Characteristic	Finding right person to marry and having happy family life	Having children	Being able to give my children better opportunities than I've had	Having strong friendships
School urbanicity				
Urban	0.92	1.14	0.93	0.84
Suburban	0.68	0.83	0.68	0.59
Rural	0.96	1.17	0.89	0.79
Transfer[4]	1.59	1.70	1.07	1.39

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table B-7. Standard errors for table 7 estimates (percentage of high school seniors who reported that various life values related to community and society were "very important" to them, by selected student characteristics): 2004

Characteristic	Being patriotic	Being an active and informed citizen	Helping other people in my community	Working to correct social and economic inequalities
Total	0.60	0.56	0.57	0.46
Sex				
Male	0.83	0.78	0.77	0.60
Female	0.74	0.76	0.74	0.67
Age				
17 or younger	0.82	0.83	0.86	0.68
18	0.77	0.73	0.75	0.58
19 or older	2.39	2.38	2.25	2.23
Race/ethnicity[1]				
American Indian or Alaska Native	4.57	6.21	5.66	3.09
Asian or Pacific Islander	1.58	1.63	1.73	1.63
Black or African American	1.29	1.46	1.58	1.30
Hispanic or Latino	1.27	1.49	1.39	1.28
More than one race	2.45	2.57	2.68	2.32
White	0.77	0.68	0.69	0.53
Native language[2]				
English	0.64	0.59	0.61	0.48
Non-English	1.39	1.40	1.39	1.19
Family composition				
Mother and father	0.73	0.72	0.70	0.56
Mother or father and guardian	1.39	1.35	1.29	1.05
Single parent (mother or father)	1.19	1.13	1.19	0.91
Other[3]	2.49	2.62	2.62	2.28
Parents' education				
High school or less	1.07	1.14	1.13	0.88
Some college	0.96	0.88	0.94	0.74
College graduation	1.07	1.20	1.17	0.86
Graduate/professional degree	1.29	1.22	1.21	1.07
Socioeconomic status				
Lowest quarter	1.04	1.17	1.18	0.99
Middle two quarters	0.79	0.75	0.84	0.61
Highest quarter	1.04	1.14	0.97	0.81

See notes at end of table.

Table B-7. Standard errors for table 7 estimates (percentage of high school seniors who reported that various life values related to community and society were "very important" to them, by selected student characteristics): 2004—Continued

Characteristic	Being patriotic	Being an active and informed citizen	Helping other people in my community	Working to correct social and economic inequalities
Highest mathematics coursework				
Pre-algebra or lower	2.26	2.70	2.53	2.19
Algebra 1	2.14	2.20	2.42	1.85
Geometry	1.56	1.61	1.52	1.43
Algebra 2	0.92	1.02	1.04	0.75
Trigonometry, pre-calculus, or calculus	0.80	0.80	0.74	0.64
Student's educational expectations				
High school or less	2.31	2.21	2.27	2.04
Some college	1.18	1.27	1.25	0.95
College graduation	0.98	1.00	0.91	0.68
Graduate/professional degree	0.91	0.92	0.90	0.80
Don't know	1.85	1.85	1.77	1.50
Postsecondary education plans				
Don't plan to continue	3.74	3.68	3.50	2.56
Don't know if will continue	2.07	2.14	1.93	1.41
Four-year institution	0.73	0.71	0.71	0.59
Two-year community college	1.08	1.16	1.12	0.90
Vocational, technical, or trade school	1.70	1.87	1.81	1.46
Mathematics achievement test				
Lowest quarter	1.10	1.14	1.10	0.95
Middle two quarters	0.81	0.75	0.78	0.60
Highest quarter	1.05	1.04	1.01	0.79
School sector				
Public	0.66	0.63	0.65	0.50
Catholic	1.24	1.55	1.59	1.07
Other private	2.55	2.33	2.66	1.36
Transfer[4]	1.90	1.70	1.71	1.65

See notes at end of table.

Table B-7. Standard errors for table 7 estimates (percentage of high school seniors who reported that various life values related to community and society were "very important" to them, by selected student characteristics): 2004—Continued

Characteristic	Being patriotic	Being an active and informed citizen	Helping other people in my community	Working to correct social and economic inequalities
School urbanicity				
Urban	1.25	1.17	1.31	0.99
Suburban	0.89	0.81	0.77	0.60
Rural	1.03	1.20	1.26	0.94
Transfer[4]	1.90	1.70	1.71	1.65

[1] All race categories exclude Hispanic or Latino origin.
[2] The first language students learned to speak when they were children.
[3] Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.
[4] Principals for students transferring out of their ELS 10th-grade base-year school were not surveyed in the first follow-up survey, limiting the school-level data available in 12th grade.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."

Table B-8. Standard errors for figure 2 estimates (percentage of college-bound high school seniors, by various features of postsecondary institutions rated "very important" to their choice of a college): 2004

Characteristic	Percent
Has degree in chosen field	0.54
Courses/curriculum	0.58
Job placement record	0.65
Academic reputation	0.60
Availability of financial aid	0.69
Graduate school placement	0.61
Low crime	0.58
Low expenses	0.63
Active social life	0.56
Away from home while attending	0.55
Acceptance of college credit	0.54
Geographic location	0.50
Living at home while attending	0.61
Easy admission	0.54
Size	0.41
Athletic program	0.40
Racial/ethnic makeup	0.42
Same as one parent attended	0.21

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "First Follow-up, 2004."