

Appendix A

Technical Notes and Glossary

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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 that 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 represents the first stage of a major 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 will be followed, initially at 2-year intervals, to collect policy-relevant data about education processes and outcomes, especially as such data pertain to student learning, predictors of dropping out, and students' access to, and success in, postsecondary education and the work force.

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 study design and methodology.

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

A.2 Overview of ELS:2002

A.2.1 Study Objectives

ELS:2002 is a longitudinal study, in which the same units are surveyed repeatedly over time. Individual students will be followed until about age 30; the base-year schools will be surveyed twice (they were surveyed in 2002 and will be surveyed 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 will supply researchers with a comprehensive picture of the home, community,

and school environments. This multiple-respondent perspective is unified by the fact that, for most purposes, the student is the basic unit of analysis.¹

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 administrator 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. 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 are seniors, but some are dropouts or in other grades.
- Student questionnaire, dropout questionnaire, assessment in mathematics, and school administrator questionnaire to be administered.
- Return to the same schools, but separately follow transfer students.
- Freshening for a 2004 senior cohort.
- High school transcript component in 2004 (coursetaking records for grades 9–12).
- Design linkages (test equating in mathematics) with the National Assessment of Educational Progress (NAEP) and NELS:88.

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 in multiple electronic modalities: web for self-administration, computer-assisted telephone interview, computer-assisted personal interview.

¹ 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. 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.

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. 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, the home education support system, and students' educational success;
- the relationship between coursetaking choices and success in the high school years (and thereafter);
- the distinctive school experiences and performance of students from various subgroups, including
 - 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 (SES) levels;
 - male and female high school 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;

- rate of progress through the postsecondary curriculum;
- degree attainment;
- barriers to persistence and attainment;
- entry of new postsecondary graduates into the workforce;
- social and economic rate 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 four following 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 to 15-year-olds in other nations.

Cross-Sectional Profiles. Cross-sectional data will permit characterization of the nation's high school sophomores in the spring of the 2001–02 school year. Initial cross-sectional findings from the base year are presented in this report. Because of sample freshening, the results 2 years later will provide a basis for profiling the nation's high school seniors in the spring term of the 2003–04 school year.

Longitudinal Analysis. Longitudinal analysis will become possible when data are available from the 2004 first follow-up. The primary research objectives of ELS:2002 are longitudinal in nature. The study provides the basis for within-cohort comparison by following the same individuals over time to measure achievement growth in mathematics, monitor enrollment status over the high school years, and record such key outcomes as postsecondary entry and attainment, labor market experiences, 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 will be able to 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. Such cross-cohort comparisons

are of particular importance to measuring the nation's progress in achieving educational opportunities and in measuring the outcomes of school reform and related initiatives.

Starting with the ELS:2002 first follow-up, trend comparisons can also be made with academic 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 NAEP (1987, 1990, 1994, 1998, and 2000).

International Comparisons. A feature of ELS:2002 that expands the study's power beyond that of the predecessor studies is that it can be linked to international assessments. Specifically, ELS:2002 base-year reading results have been put on the PISA:2000 literacy scale and will be put on the PISA:2003 mathematics scale. The Organization for Economic Cooperation and Development's (OECD's) PISA is an internationally standardized assessment, jointly developed by the 32 participating (2000) 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. Emphasis is placed on the mastery of processes, the understanding of concepts, and the ability to function in various situations within each domain.

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

ELS:2002 was carried out in a national probability sample of 752 participating (of 1,221 eligible contacted) public, Catholic, and other private schools, in the spring term of the 2001–02 school year. Of 17,591 eligible selected sophomores, 15,362 completed a base-year questionnaire, as did 13,481 of their parents and 7,135 of their teachers.² Of the 752 participating schools, 743 principals and 718 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 will be reassessed 2 years hence, 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

² Note that the participating student sample defines the eligible parent and teacher samples. The 7,135 teacher completions are those linked to student respondents. Of the 15,362 student participants, 14,081 had at least one associated teacher-provided student report.

grade, and 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. Information about coursetaking (covering all years of high school and including the sequence in which courses were taken and grades earned) will be collected at the end of high school, through the high school transcript component of the ELS:2002 first follow-up study.

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-4 below lists variables subject to imputation and proportions missing. (Further details may be found in Ingels et al. [2004], section 3.3.) The dataset was also subject to disclosure risk analysis and disclosure avoidance editing, including, among other measures, such perturbation techniques as data swapping. (For details of disclosure risk analysis and protections, see Ingels et al. [2004], section 3.6).

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 Data File User's Manual* (Ingels et al. 2004).³

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 1,221 eligible selections. The realized sample comprised 752 participating 10th-grade schools. The second stage of selection was students. Of 17,591 sampled students in the schools, 15,362 students participated. Some groups (e.g., Asians) were oversampled.

³ See appendix reference list (section A.6) for full citation. The manual can be downloaded from the NCES website: <http://nces.ed.gov/pubsearch>.

A.3.2 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: 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.⁴ 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, school weights were poststratified to known population totals. The estimates in this report were produced using BYSTUWT, a cross-sectional weight that generalizes to the population of 10th-graders in regular U.S. high schools in the spring term of the 2001–02 school year.

A.3.3 Response Rates

Of 1,221 eligible contacted schools, 752 participated in the study, for an overall weighted school participation rate of approximately 68 percent (62 percent unweighted). Of 17,591 selected eligible students, 15,362 participated, for an overall weighted student response rate of approximately 87 percent.⁵ (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 computing weights 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, and after final nonresponse adjustments, the remaining relative bias ranged from 0 to 0.2 percent for schools and from 0 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* (NCES 2004-405). Unweighted and weighted school-level response by stratum is summarized in table A-1. Second-stage unit response rates by component are summarized in table A-2; weighted item response rates for all unimputed analysis variables are shown in table A-3; the weighted proportions for missing data that were imputed are shown in table A-4.

A.3.4 Quality of Estimates: Reliability and Validity Data

Most of the items used in the ELS:2002 base-year 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

⁴ The expanded sample weight generalizes to the population of all sophomores, regardless of whether they were capable of completing the questionnaire. The regular 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.

⁵ 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.

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ELS:2002 (as well as the reading and mathematics assessments) will be found in the base-year field test report (Burns et al. 2003). The base-year data file user's manual (Ingels et al. 2004) also addresses issues of questionnaire and assessment data quality.

Table A–1. 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 | 1,268 | 100.00 | 1,221 | 96.29 | 752 | 61.59 | 67.80 |
| Public | 953 | 75.16 | 926 | 97.17 | 580 | 62.63 | 69.09 |
| Catholic | 140 | 11.04 | 140 | 100.00 | 95 | 67.86 | 74.04 |
| Other private | 175 | 13.80 | 155 | 88.57 | 77 | 49.68 | 62.94 |
| Urban | 434 | 34.23 | 414 | 95.39 | 250 | 60.39 | 67.27 |
| Suburban | 630 | 49.68 | 609 | 96.67 | 361 | 59.28 | 59.81 |
| Rural | 204 | 16.09 | 198 | 97.06 | 141 | 71.21 | 79.32 |

¹ Percent is based on overall total within column. Details may not sum to 100 percent 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).

Table A–2. Summary of ELS:2002 base-year completion and coverage rates: 2002

| Instrument | Selected | Participated | Weighted percent | Unweighted percent |
|--|----------|--------------|------------------|--------------------|
| Student questionnaire | 17,591 | 15,362 | 87.28 | 87.33 |
| Student assessment ¹ | 15,362 | 14,543 | 95.08 | 94.67 |
| Parent questionnaire ² | 15,362 | 13,488 | 87.45 | 87.80 |
| Teacher ratings of students ³ | 15,362 | 14,081 | 91.64 | 91.66 |
| School administrator questionnaire | 752 | 743 | 98.53 | 98.80 |
| Library media center questionnaire | 752 | 718 | 95.93 | 95.48 |
| Facilities checklist | 752 | 752 | 100.00 | 100.00 |

¹Percentage 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.

²Indicates a coverage rate, the proportion 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.

³Indicates 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–3. Weighted response rates for unimputed variables used in this report: 2002

| Source | Variable label | Variable | Response rate, percent ¹ |
|--------------------|---|----------|-------------------------------------|
| Administrator | Baseball offered to males | BYA19AA | 89.8 |
| Administrator | Baseball offered to females | BYA19AB | 89.2 |
| Administrator | Softball offered to males | BYA19BA | 89.8 |
| Administrator | Softball offered to females | BYA19BB | 89.2 |
| Administrator | Basketball offered to males | BYA19CA | 89.8 |
| Administrator | Basketball offered to females | BYA19CB | 89.2 |
| Administrator | Football offered to males | BYA19DA | 89.8 |
| Administrator | Football offered to females | BYA19DB | 89.2 |
| Administrator | Soccer offered to males | BYA19EA | 89.8 |
| Administrator | Soccer offered to females | BYA19EB | 89.2 |
| Administrator | Swim team offered to males | BYA19FA | 89.8 |
| Administrator | Swim team offered to females | BYA19FB | 89.2 |
| Administrator | Ice hockey offered to males | BYA19GA | 89.8 |
| Administrator | Ice hockey offered to females | BYA19GB | 89.2 |
| Administrator | Field hockey offered to males | BYA19HA | 89.8 |
| Administrator | Field hockey offered to females | BYA19HB | 89.2 |
| Administrator | Volleyball offered to males | BYA19IA | 89.8 |
| Administrator | Volleyball offered to females | BYA19IB | 89.2 |
| Administrator | Lacrosse offered to males | BYA19JA | 89.8 |
| Administrator | Lacrosse offered to females | BYA19JB | 89.2 |
| Administrator | Tennis offered to males | BYA19KA | 89.8 |
| Administrator | Tennis offered to females | BYA19KB | 89.2 |
| Administrator | Cross-country offered to males | BYA19LA | 89.8 |
| Administrator | Cross-country offered to females | BYA19LB | 89.2 |
| Administrator | Track offered to males | BYA19MA | 89.8 |
| Administrator | Track offered to females | BYA19MB | 89.2 |
| Administrator | Golf offered to males | BYA19NA | 89.8 |
| Administrator | Golf offered to females | BYA19NB | 89.2 |
| Administrator | Gymnastics offered to males | BYA19OA | 89.8 |
| Administrator | Gymnastics offered to females | BYA19OB | 89.2 |
| Administrator | Wrestling offered to males | BYA19PA | 89.8 |
| Administrator | Wrestling offered to females | BYA19PB | 89.2 |
| Administrator | Cheerleading offered to males | BYA19QA | 89.8 |
| Administrator | Cheerleading offered to females | BYA19QB | 89.2 |
| Administrator | Drill team offered to males | BYA19RA | 89.8 |
| Administrator | Drill team offered to females | BYA19RB | 89.2 |
| Administrator | Other sport offered to males | BYA19SA | 89.8 |
| Administrator | Other sport offered to females | BYA19SB | 89.2 |
| Administrator | No sports offered to males | BYA19TA | 89.6 |
| Administrator | No sports offered to females | BYA19TB | 89.2 |
| Student composites | Student's year and month of birth | DOBIRTHP | 99.6 |
| Student composites | Occupation at age 30—coded | BYOCC30 | 89.0 |
| Student composites | Interscholastic baseball participation | BYBASEBL | 92.2 |
| Student composites | Interscholastic softball participation | BYSOFTBL | 92.1 |
| Student composites | Interscholastic basketball participation | BYBSKTBL | 92.1 |
| Student composites | Interscholastic football participation | BYFOOTBL | 92.4 |
| Student composites | Interscholastic soccer participation | BYSOCCER | 91.4 |
| Student composites | Other interscholastic team participation | BYTEAMSP | 91.6 |
| Student composites | Interscholastic individual sport participation | BYSOLOSP | 91.8 |
| Student composites | Interscholastic cheerleading/drill team participation | BYCHRDRL | 92.1 |

See notes at end of table.

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Table A-3. Weighted response rates for unimputed variables used in this report: 2002—
Continued

| Source | Variable label | Variable | Response rate, ¹ percent |
|--------------------|---|----------|-------------------------------------|
| Student composites | Student held job for pay during 2001–02 school year | BYWORKSY | 84.3 ² |
| Student | Students get along well with teacher | BYS20A | 95.5 |
| Student | There is real school spirit | BYS20B | 95.1 |
| Student | Students friendly with other racial groups | BYS20C | 95.3 |
| Student | The teaching is good | BYS20E | 94.6 |
| Student | Teachers are interested in students | BYS20F | 93.9 |
| Student | Teachers praise effort | BYS20G | 94.8 |
| Student | Does not feel safe at this school | BYS20J | 94.6 |
| Student | There are gangs in school | BYS20M | 94.1 |
| Student | Racial/ethnic groups often fight | BYS20N | 94.8 |
| Student | Everyone knows what school rules are | BYS21A | 95.5 |
| Student | School rules are fair | BYS21B | 94.5 |
| Student | Punishment same no matter who you are | BYS21C | 94.8 |
| Student | School rules are strictly enforced | BYS21AD | 94.8 |
| Student | Students know punishment for broken rules | BYS21E | 95.2 |
| Student | Had something stolen at school | BYS22A | 95.7 |
| Student | Someone offered drugs at school | BYS22B | 95.6 |
| Student | Someone threatened to hurt 10th-grader at school | BYS22C | 95.4 |
| Student | Got into a physical fight at school | BYS22D | 95.5 |
| Student | Someone hit 10th-grader | BYS22E | 95.0 |
| Student | Someone forced money/things from 10th-grader | BYS22F | 95.7 |
| Student | Someone damaged belongings | BYS22G | 95.5 |
| Student | Someone bullied or picked on 10th-grader | BYS22H | 95.5 |
| Student | How many times cut/skip class | BYS24B | 94.9 |
| Student | Classes are interesting and challenging | BYS27A | 95.4 |
| Student | Satisfied by doing what expected in class | BYS27B | 95.2 |
| Student | Has nothing better to do than school | BYS27C | 95.0 |
| Student | Education is important to get a job later | BYS27D | 95.0 |
| Student | School is a place to meet friends | BYS27E | 95.2 |
| Student | Plays on a team or belongs to a club | BYS27F | 95.0 |
| Student | Learns skills for job in school | BYS27G | 95.2 |
| Student | Teachers expect success in school | BYS27H | 95.0 |
| Student | Parents expect success in school | BYS27I | 95.2 |
| Student | How much likes school | BYS28 | 96.1 |
| Student | Hours/week spent on homework in school | BYS34A | 96.0 |
| Student | Hours/week spent on homework out of school | BYS34B | 96.8 |
| Student | Hours/week spent on math homework in school | BYS35A | 95.7 |
| Student | Hours/week spent on math homework out of school | BYS35B | 96.4 |
| Student | Hours/week spent on English homework in school | BYS36A | 95.5 |
| Student | Hours/week spent on English homework out of school | BYS36B | 96.6 |
| Student | Importance of good grades to student | BYS37 | 98.3 |
| Student | How often goes to class without books | BYS38B | 94.4 |
| Student | How often goes to class without homework done | BYS38C | 94.1 |
| Student | Played intramural baseball | BYS39A | 92.6 |
| Student | Played intramural softball | BYS39B | 92.6 |
| Student | Played intramural basketball | BYS39C | 92.8 |
| Student | Played intramural football | BYS39D | 93.0 |
| Student | Played intramural soccer | BYS39E | 92.2 |
| Student | Played other intramural team sport | BYS39F | 92.1 |

See notes at end of table.

**Table A–3. Weighted response rates for unimputed variables used in this report: 2002—
Continued**

| Source | Variable label | Variable | Response rate, ¹ percent |
|---------|---|----------|-------------------------------------|
| Student | Played an individual intramural sport | BYS39G | 92.4 |
| Student | On intramural cheerleading/drill team | BYS39H | 92.3 |
| Student | Participated in school band or chorus | BYS41A | 97.8 |
| Student | Participated in school play or musical | BYS41B | 97.7 |
| Student | Participated in student government | BYS41C | 97.3 |
| Student | Participated in academic honor society | BYS41D | 97.6 |
| Student | Participated in school yearbook or newspaper | BYS41E | 97.6 |
| Student | Participated in school service clubs | BYS41F | 97.4 |
| Student | Participated in school academic clubs | BYS41G | 97.3 |
| Student | Participated in school hobby clubs | BYS41H | 97.3 |
| Student | Participated in school vocational clubs | BYS41I | 97.1 |
| Student | Hours/week spent in extracurricular activities | BYS42 | 94.3 |
| Student | Hours/week spent reading outside of school | BYS43 | 95.3 |
| Student | How often uses computer for fun | BYS45A | 93.6 |
| Student | How often uses computer for schoolwork | BYS45B | 93.5 |
| Student | How often uses computer other than for school | BYS45C | 93.4 |
| Student | Hours/day on computer for school work | BYS46A | 91.7 |
| Student | Hours/day on computer other than for school | BYS46B | 91.9 |
| Student | How often uses computer at home | BYS47A | 93.5 |
| Student | How often uses computer at school | BYS47B | 93.0 |
| Student | How often uses computer at public library | BYS47C | 92.9 |
| Student | How often uses computer at friend's house | BYS47D | 93.5 |
| Student | Importance of being successful in line of work | BYS54A | 96.1 |
| Student | Importance of marrying right person/having happy family | BYS54B | 96.0 |
| Student | Importance of having lots of money | BYS54C | 95.8 |
| Student | Importance of having strong friendships | BYS54D | 95.7 |
| Student | Importance of being able to find steady work | BYS54E | 95.1 |
| Student | Importance of helping others in community | BYS54F | 95.7 |
| Student | Importance of giving children better opportunities | BYS54G | 95.5 |
| Student | Importance of living close to parents/relatives | BYS54H | 95.5 |
| Student | Importance of getting away from this area | BYS54I | 95.4 |
| Student | Importance of working to correct inequalities | BYS54J | 95.3 |
| Student | Importance of having children | BYS54K | 95.3 |
| Student | Importance of having leisure time | BYS54L | 95.3 |
| Student | Importance of being expert in field of work | BYS54N | 95.5 |
| Student | Importance of getting good education | BYS54O | 95.5 |
| Student | How far in school student thinks will get | BYS56 | 97.5 |
| Student | Plans to continue education after high school | BYS57 | 97.8 |
| Student | Mother's desire for 10th-grader after high school | BYS66A | 86.9 |
| Student | Father's desire for 10th-grader after high school | BYS66B | 86.3 |
| Student | School counselor's desire for 10th-grader after high school | BYS66E | 86.2 |
| Student | Favorite teacher's desire for 10th-grader after high school | BYS66F | 86.7 |
| Student | How many hours usually works a week | BYS75 | 81.7 ² |

¹Weighted item response rates, using the base-year student final weight (BYSTUWT).

²Below 85 percent.

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

Table A–4. ELS:2002 imputation variables: 2002

| Variable | Weighted percent missing |
|--|--------------------------|
| Student sex | 0.05 |
| Student race/ethnicity | 0.02 |
| Student language minority status | 2.07 |
| Student Hispanic subgroup | 2.93 |
| Student Asian subgroup | 7.26 |
| School program type | 6.64 |
| Student postsecondary educational expectations | 2.36 |
| Parental aspirations for student postsecondary achievement | 14.53 |
| Family composition | 12.55 |
| Mother's educational attainment ¹ | 3.88 |
| Mother's occupation ¹ | 5.58 |
| Father's educational attainment ¹ | 10.28 |
| Father's occupation ¹ | 15.03 |
| Family income ¹ | 22.40 |
| Student ability estimates (theta) for reading ² | 6.26 |
| Student ability estimates (theta) for mathematics ² | 5.33 |

¹Used to construct socioeconomic status (SES).

²Used to construct normative (quartile) and proficiency scores.

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

A.3.5 Quality of Estimates: The Special Case of Television Viewing and Video Games

Results obtained from analysis of data from the ELS:2002 base year generally conformed to expectations based on external sources and on theoretically established relationships between variables. However, a possible exception that is notable may be seen in the estimates for time spent watching television, videotapes, or DVDs and playing video games. While the general pattern of relationships conforms to past findings, the total number of hours registered was higher than expected. For this reason, estimates of television viewing and time spent in video or computer games were not included in this report. The paragraphs below provide more information about this data quality issue.

Students were asked to report the number of hours per day during the school year that they usually spent watching television, videotapes, or DVDs (question 48) and playing video or computer games (question 49). Students were to write in a numerical value in hours per day within a constrained field, corresponding to the total number of hours watched (or played) per day on weekdays and, separately, on weekends.

Even after topcoding to eliminate implausibly extreme values, high-end estimates (proportion of the population engaged in television viewing over 5 or 6 hours per day) remained substantially higher than estimates from alternative sources, such as NELS:88 or NAEP. There are a number of possible explanations for this discrepancy. The two most important explanations are (1) a lack of full comparability between sources and (2) the possibility that the ELS:2002 item was prone to misinterpretation by respondents who did not read it carefully.

Comparison with the NAEP television item (Campbell, Hombo, and Mazzeo 2000) is compromised by a number of factors. Over time there is fluctuation in estimates for the NAEP

trend sample, which in any case is based on 13- and 17-year-olds (most ELS:2002 sophomores are 15 or 16 years of age). Moreover, the ELS:2002 item is broader, including additional viewing (specifically videotapes and DVDs) beyond television. The ELS:2002 item is open ended and elicits an answer that is continuous in form. In contrast, the NAEP item is categorical, with a tight cap on the highest response.

Comparison with NELS:88 (Rasinski et al. 1993) is also compromised by key differences, including a 12-year time gap and the fact that NELS:88 asked the item in categorical form. ELS:2002 is continuous. Estimates collected in an open-ended continuous format may differ from estimates collected in a constrained categorical format. The open-ended format may be more cognitively taxing, while the categorical format may influence response by implicitly defining the “comfortable” middle ranges as well as both extremes for respondents (Tourangeau, Rips, and Rasinski 2000). (For example, in NELS:88, respondents were asked to choose from response categories such as “less than 1 hour/day, 1–2 hours, 2–3 hours, 3–4 hours, and over 5 hours a day.”) Categorical and open-ended formats are unlikely to produce the same result, since the open-ended format is of course tolerant of extreme high values and therefore prone to produce a higher estimate.

Sudman, Bradburn, and Schwarz (1996, p. 225) extol the open-ended format as superior to the bias-prone categorical format. They note: “Respondents use the range of numeric response alternatives as a frame of reference in estimating their own behavioral frequency, resulting in a systematic bias. To avoid such a bias, we recommend that researchers use open-question formats in assessing reports of behavioral frequencies.” While the same risk of bias portends in a categorical scheme whether one is counting behaviors or estimating hours engaged in a specific activity (Sudman, Bradburn, and Schwarz 1996, p. 219), the inherent difficulty of hour estimation may in this context also pose a difficulty for open formats.

Apart from the caveats that must be entered about the comparability of the ELS:2002 item, it is also important to consider that the ELS:2002 format may have been open to misinterpretation by some respondents. (This observation is speculative; it is not based on cognitive interviews with 10th-graders or re-interviews of ELS:2002 respondents.) In particular, although the question stems say, “how many hours a day,” splitting the response boxes into weekdays and weekends may have abetted some respondents in the error of reporting total weekday and total weekend hours. If some students forgot the definition in the question stem (“how many hours per day”) and misinterpreted “weekdays” as the total number of hours on weekdays in a week, an inflated estimate for high-end use would be the likely consequence. A parallel error could be made for the “on weekends” portion of the question. Estimates from television-viewing items in the past have been quite sensitive to small format differences (see Rasinski et al. 1993, appendix B, pp. 15–18). While reliable comparison sources are not available for the video game item, one may presume that because it was identical in format to the television-viewing item, it would be open to a like degree of respondent error, and that that error would be in the same direction (i.e., somewhat inflated high-end estimates).

A.3.6 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.3.7 Electronic Codebooks

An electronic codebook (ECB)⁶ for the ELS:2002 base-year data (NCES 2004–404) 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 utilized 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 Data File User’s Manual* (Ingels et al. 2004).⁷

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 0.05) 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.

⁶ Information on obtaining electronic codebooks for ELS:2002 and other NCES data collection efforts can be found by reviewing the data products for the study at <http://nces.ed.gov/pubsearch>.

⁷ See appendix reference list (section A.6) for full citation. The manual can be downloaded from the NCES website: <http://nces.ed.gov/pubsearch>.

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

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

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. The analysis of one table (table 16 in chapter 4) involved comparison in which the estimates were not independent. Specifically, a total percentage (all sophomore students) was compared with a subgroup included in the total (high-intensity extracurricular participants). When the estimates are not independent, a covariance term must be added to the denominator of the formula. An adjusted formula was therefore used in computing the t value for comparisons drawn from table 16.

A.4.2 Linear Trends

While most descriptive comparisons in this report were tested using the student's t statistic, some comparisons among categories of an ordered variable with three or more levels involved a test for a linear trend across all categories, rather than a series of tests between pairs of categories. In this report, when differences among percentages were examined relative to a variable with ordered categories, analysis of variance (ANOVA) was used to test for a linear relationship between the two variables. To do this, ANOVA models included orthogonal linear contrasts corresponding to successive levels of the independent variable. The squares of the Taylorized standard errors (i.e., standard errors that were calculated by the Taylor Series method), the variance between the means, and the unweighted sample sizes were used to partition total sum of squares into within- and between-group sums of squares. These were used to create mean squares for the within- and between-group variance components and their corresponding F statistics, which were then compared with published values of F for a significance level of .05.⁸ Significant values of both the overall F and the F associated with the linear contrast term were required as evidence of a linear relationship between the two variables.

A.4.3 Quantified Disparities: Assertions of Magnitude of Difference

In some cases, comparisons are made asserting the magnitude or degree of difference between two estimates. Such comparisons take the following form: some quality is X times (2, 3, 4, etc.) more prevalent in group A than in group B. For example: "At reading level 3 (complex inference), twice as many 10th-graders from intact mother-father families were proficient (11 percent for 10th-graders from intact mother-father families, compared to 5 percent for 10th-graders living in a single-parent household)." In these instances, a difference between two estimates is asserted that is then tested using the t statistic. However, an additional test has been imposed to ensure the propriety of the further assertion about the magnitude or degree of difference (in the example, "twice as many"). Here a confidence interval is generated, into

⁸ More information about ANOVA and significance testing using the F statistic can be found in any standard textbook on statistical methods in the social and behavioral sciences.

which the assertion of degree of difference must fall (in the example of the two groups at level 3 reading above, the confidence interval is 2.462 – 1.783).

A.4.4 Substantive Significance: Magnitude of Effect Measures

For means (specifically, hours spent in various activities, scores from the ELS:2002 reading and mathematics assessments), 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 (.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.) While .20 is seen as a minimum threshold for substantive significance, it also defines a small effect. An effect size of half a standard deviation (.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 .80.⁹ While tables of effect sizes are not provided in the report, standard deviations are reported, should readers wish to calculate an effect size. Since 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.

In some cases involving standard comparisons reported in the research literature, findings reflect an extremely small difference that is neither statistically nor substantively significant on the basis of the criteria sketched above. Such instances are noted with the phrase “no measurable differences were found” or “no difference was detected.”

A.5 Glossary—Description of Variables Used

Each variable used in analyses for this report is described below. Variables are alphabetized within topic. The topics are student demographic characteristics; family characteristics; school characteristics; school experiences and behavior; opinions about school and teachers; extracurricular activities, sports, and work; time use; test scores; and expectations for the future. 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 questionnaires are available at

⁹ For more information about these cutoffs and effect sizes more generally, see Cohen (1988), Seastrom (2003, Guideline 5-1-4F), and Murphy and Myers (2004). While 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]).

<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 SES). The code used to construct these variables can be found in the ECB (NCES 2004-404). 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 on the web as appendix G to the data file user's manual (Ingels et al. 2004, NCES 2004-405) (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004405>).

When the variable is available in the ELS:2002 base-year data file, 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/LANGUAGE MINORITY STATUS (STLANG): The data for STLANG are taken directly from the student questionnaire (BYS67) when available. Otherwise, they are imputed.

[Appears in figure 3, table 4, table 5, table 6, table 8, table 9, table 11, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 31, table 32, table 33, table 34, table 36]

RACE/ETHNICITY (RACE): The race/ethnicity variable for this report is based on RACE with one simplification: "Hispanic/Latino, race specified" and "Hispanic/Latino, no race specified" are combined into one category, "Hispanic or Latino." The resulting categories are (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 or Multiracial; and (6) White. All race categories exclude individuals of Hispanic ethnicity.

RACE reflects new federal standards for collecting race and ethnicity data that allow respondents to mark more than one choice for race. RACE was obtained from the student questionnaire (BYS15, BYS17A, BYS17B, BYS17C, BYS17D, and BYS17E) 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).

[Appears in figure 2, figure 3, figure 7, figure 8, figure 10, figure 13, table 4, figure 18, table 5, table 6, table 8, figure 24, table 9, table 11, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, figure 27, table 25, table 26, figure 28, table 27, figure 29, table 28, figure 30, table 29, figure 31, table 30, figure 32, table 31, table 32, table 33, table 34, figure 34, table 35, table 36, figure 35]

SEX (SEX): This variable was constructed from BYS14 on 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.

[Appears in table 4, table 5, figure 20, table 6, table 8, table 9, table 11, table 12, table 13, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 29, figure 31, table 30, figure 32, table 31, table 32, table 33, table 34, figure 34, table 35, table 36, table 39, figure 35]

YEAR OF BIRTH: Year of birth was “stripped” from DOBIRTHP, month and year of birth. In the construction of DOBIRTHP, the years 1980, 1981, and 1982 were set to 1983. The years 1988 and 1989 were set to 1987. Dates before 1980 or after 1989 were set to missing. See table A-2 for weighted response rates.

[Appears in figure 1]

FAMILY CHARACTERISTICS

FAMILY COMPOSITION/CONFIGURATION (BYFCOMP): BYFCOMP is based on parent questionnaire data or, where data were missing, was imputed. BYFCOMP reflects the relationship of the parent questionnaire respondent and his/her spouse/partner to the 10th-grader (BYP01 and BYP04) with one exception; if the parent questionnaire respondent indicated that the 10th-grader lived with him/her less than half time (BYP05) and the 10th-grader did not attend a boarding school (BYA03O), the family was classified as “Lives with student less than half time.” Apart from these cases, families were classified into one of eight family types: (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; and (8) Male guardian only. For this report, some of BYFCOMP’s categories were combined to form four: Mother and father (1), Mother or father and guardian (2 and 3), Single parent (5 and 6), and Other (4, 7, 8, and “Lives with student less than half time”). Note that “Mother” or “Father” could be either the biological or adoptive mother or father of the ELS:2002 10th-grader. “Guardian” unspecified, as with “Mother and guardian,” “Father and guardian,” or “Two guardians,” could be either a male or female. Approximately 1 percent of the students are in families with a parent and a guardian or two guardians of the same sex.

[Appears in figure 4, table 21, table 22]

FATHER’S EDUCATION (FATHED): 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 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. In figure 6, “Some college” includes the third, fourth, and fifth categories; “Graduate/professional” combines the seventh and eighth categories. 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.

[Appears in figure 6]

MOTHER'S EDUCATION (MOTHEd): Mother'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 (BYS83A) 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. In figure 5, "Some college" includes the third, fourth, and fifth categories; "Graduate/professional" combines the seventh and eighth categories. (Also, see note on father's education, above.)

[Appears in figure 5]

PARENTS' EDUCATION (PARED): PARED is equivalent to either MOTHEd or FATHED, whichever is the highest level of education. Mother's/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 (BYS83A and BYS83B) 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. 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).

[Appears in figure 7, table 4, table 5, table 6, table 8, table 9, table 11, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 31, table 32, table 33, table 34, table 36]

SOCIOECONOMIC STATUS (SES1QU): The socioeconomic status (SES) variable used in this report combines the middle two categories of the SES1QU variable, which divides SES1 into quartiles based on the weighted marginal distribution. Three categories result: (1) lowest quartile of SES1 (i.e., students below the 25th percentile rank for SES); (2) middle two quartiles of SES1 (i.e., students whose SES percentile rank was at least 25th and below 75th); and (3) highest quartile of SES1 (i.e., students whose SES percentile rank was at least 75th).

SES1 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 (FATHED), mother's/guardian's education (MOTHEd), family income (INCOME),

father's/guardian's occupational prestige score (from OCCUFATH), and mother's/guardian's occupational prestige score (from OCCUMOTH).

For a description of how FATHED and MOTHED were constructed, see above. Income was based on parent questionnaire information (primarily BYP85) 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 (BYP39C and BYP43C). If the respondent provided only text, project staff coded the occupation. In the absence of parent questionnaire occupation data, student-supplied parent occupation text (BYS81A, BYS81B, BYS82A, and BYS82B) was coded by project staff if possible. Missing occupations were imputed. An occupation prestige value was determined for OCCUMOTH and OCCUFATH based on the 1961 Duncan SEI index.

[Appears in figure 8, figure 11, figure 14, table 4, table 5, table 6, table 8, table 9, table 11, table 14, table 15 (highest SES quartile), table 16 (highest SES quartile), table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, figure 27, table 25, table 26, figure 28, table 31, table 32, table 33, table 34, table 35, table 36]

SCHOOL CHARACTERISTICS

REGION (BYREGION): Geographic region in which the school is located: Northeast (CT, ME, MA, NH, NJ, NY, PA, RI, and VT); Midwest (IL, IN, IA, KS, MI, MN, MO, ND, NE, OH, SD, and WI); South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, and WV); and West (AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, and WY). This is taken directly from ELS:2002 sampling data.

[Appears in table 1, table 4, figure 19, table 5, table 6, table 7, table 8, table 9, table 11, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 31, table 32, table 33, table 34, table 36]

SCHOOLS OFFERING VARIOUS SPORTS TO MALE AND FEMALE STUDENTS (BYA19AA–BYA19TA and BYA19AB–BYA19TB): These variables, taken directly from the school administrator questionnaire, indicate which sports (if any) the school offers to male students and female students. See table A-2 for weighted response rates.

[Appears in table 12 (school-level file), table 13 (student-level file)]

SECTOR/TYPE (BYSCTRL): Type of school: Public, Catholic, or Other Private. This is taken directly from ELS:2002 sampling data.

[Appears in figure 9, figure 10, figure 11, figure 17, table 4, figure 19, table 5, table 6, figure 21, table 7, table 8, table 9, table 11, table 12, table 13, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 31, table 32, table 33, table 34, table 36]

URBANICITY/LOCATION (BYURBAN): Metropolitan status of the school: Urban, Suburban, or Rural. This is taken directly from ELS:2002 sampling frame data, that is, from the Common Core of Data (CCD) 1999–2000 and the Private School Survey (PSS) 1999–2000.

CCD contains an 8-level locale variable. For this report, the 8-level CCD variable was collapsed into 3 levels as follows: Urban—large or mid-size central city (CCD 1 and 2); Suburban—large or small town or urban fringe of a large or mid-size city (CCD 3, 4, 5, 6); and Rural—school is in a rural area (CCD 7 and 8).

[Appears in figure 12, figure 13, figure 14, table 4, figure 19, table 5, table 6, table 7, table 8, table 9, table 11, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 31, table 32, table 33, table 34, table 36]

SCHOOL EXPERIENCES AND BEHAVIOR

CUTTING/SKIPPING CLASS (BYS24B): This variable, taken directly from the student questionnaire, indicates how many times the student cut or skipped class in the first semester or term of the school year: Never, 1–2 times, 3–6 times, 7–9 times, or 10 or more times. Students who selected “Never cut class” were a subgroup of interest in some analyses. See table A-2 for the weighted response rate.

[Appears in table 15, table 16, table 23, table 24]

EVER COME TO CLASS WITHOUT BOOKS (BYS38B)/HOMEWORK DONE (BYS38C): These variables, taken directly from the student questionnaire, indicate how often the student comes to class without books/homework done: Never, Seldom, Often, or Usually. “Never” and “Seldom” were combined into one category for the purpose of this report. See table A-2 for weighted response rates.

[Appears in table 23, table 24]

HIGH SCHOOL PROGRAM (SCHPROG): Student’s self-report of his/her high school program: General, College Preparatory (academic), or Vocational (including technical or business). This variable is taken directly from the student questionnaire (BYS26) when available and imputed otherwise.

[Appears in table 3, table 4, table 5, table 6, table 8, table 9, table 11, table 14, table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 31, table 32, table 33, table 34, table 36]

SCHOOL CRIME AND BULLYING (BYS22A, BYS22B, BYS22C, BYS22D, BYS22E, BYS22F, BYS22G, BYS22H): These variables, taken directly from the student questionnaire, indicate how often the student experienced various kinds of negative behaviors such as crime, violence, or bullying during the first semester or term of the school year: Never, Once or twice, or More than twice. Students who selected “Once or twice” or “More than twice” for a particular item were classified as having experienced that form of negative behavior. A student is considered to have experienced any crime or bullying if he/she reported experiencing at least one of these forms of behavior. See table A-2 for weighted response rates.

[Appears in figure 20, table 6]

OPINIONS ABOUT SCHOOL AND TEACHERS

IMPORTANCE PLACED ON GOOD GRADES (BYS37): This variable is taken directly from the student questionnaire. Students were asked how important good grades are to them: Not important, Somewhat important, Important, or Very important. Students who rated good grades as very important are a subgroup of interest in some analyses. See table A-2 for the weighted response rate.

[Appears in table 8, table 15, table 16, table 23, table 24]

LIKE SCHOOL A GREAT DEAL (BYS28): This variable is taken directly from the student questionnaire. Students were asked how much they like school: Not at all, Somewhat, or A great deal. See table A-2 for the weighted response rate.

[Appears in table 4, figure 18, table 15, table 16]

REASONS FOR GOING TO SCHOOL (BYS27A, BY27B, BY27C, BY27D, BY27E, BY27F, BY27G, BY27H, BY27I): These variables are taken directly from the student questionnaire. The question stem reads: “How much do you agree or disagree with the following statements about why you go to school?” The response options were as follows: Strongly agree, Agree, Disagree, or Strongly disagree. See table A-2 for weighted response rates.

[Appears in figure 23, figure 24, table 9]

SCHOOL RULES (BYS21A, BY21B, BY21C, BY21D, BY21E): These variables are taken directly from the student questionnaire. Students were asked how much they agreed or disagreed with various statements about school rules in their school over the last year: Strongly agree, Agree, Disagree, or Strongly disagree. See table A-2 for weighted response rates.

[Appears in figure 21, table 7, figure 22]

SCHOOL SAFETY (BYS20J, BY20M, BY20N): These variables are taken directly from the student questionnaire. Students were asked how much they agreed or disagreed with various statements about school safety including feelings of safety at school: Strongly agree, Agree, Disagree, or Strongly disagree. See table A-2 for weighted response rates.

[Appears in figure 19, table 5, figure 22 (BYS20J only)]

SCHOOL AND TEACHERS (BYS20A, BY20B, BY20C, BY20E, BY20F, BY20G): These variables are taken directly from the student questionnaire. Students were asked how much they agreed or disagreed with various statements about their school and teachers: Strongly agree, Agree, Disagree, or Strongly disagree. See table A-2 for weighted response rates.

[Appears in figure 17, table 4]

EXTRACURRICULAR ACTIVITIES, SPORTS, AND WORK

EXTRACURRICULAR ACTIVITIES

CHEERLEADING: Students are defined as cheerleading participants if they indicated that they participated in cheerleading, pompom, or drill team at the intramural (BYS39H) or interscholastic (BYCHRDRL) level.

[Appears in table 11]

EXTRACURRICULAR ACTIVITY PARTICIPATION:

Extracurricular activity participants indicated that they participated in at least one extracurricular activity (BYS41A–BYS41I), including intramural and interscholastic cheerleading/drill team (BYS39H, BYCHRDRL).

[Appears in table 15]

High-intensity extracurricular participants are students whose number of hours spent on school-sponsored extracurricular activities per week (BYS42) fell in the highest quartile of that distribution (i.e., 9 or more hours per week).

[Appears in table 16]

Extracurricular activity nonparticipants are students who indicated that they did not participate in any extracurricular activities (BYS41A–BYS41I), including intramural and interscholastic cheerleading/drill team (BYS39H, BYCHRDRL), either because their school did not offer it or because they chose not to participate.

[Appears in table 15]

SCHOOL-SPONSORED ACTIVITIES (BYS41A, BYS41B, BYS41C, BYS41D, BYS41E, BYS41F, BYS41G, BYS41H, BYS41I): These variables, taken directly from the student questionnaire, indicate whether the student participated in various school-sponsored activities during the 2001–02 school year. See table A-2 for weighted response rates.

[Appears in table 10, table 11 (BYS41A, BYS41G, BYS41H, BYS41I only)]

SPORTS

INTRAMURAL PARTICIPANTS: Intramural participants are responding 10th-graders who reported that they played at least one of the listed sports at the intramural level (BYS39A–BYS39G). Participation in intramural cheerleading (BYS39H) does not qualify a student as an intramural sport participant because cheerleading is considered an extracurricular activity for the purpose of this report. Intramural participants may also be classified as junior varsity participants, varsity participants, and varsity captains.

[Appears in table 14]

JUNIOR VARSITY PARTICIPANTS: Junior varsity participants are responding 10th-graders who reported that the junior varsity level was their highest level of interscholastic participation in at least one of the sports listed (BYBASEBL, BYSOFTBL, BYFOOTBL, BYSOCCER, BYTEAMSP, BYSOLOSP). They may also be classified as varsity participants or varsity captains if they participated at that level in a different sport. They may also be classified as intramural participants.

[Appears in table 14]

VARSITY PARTICIPANTS: These are 10th-graders who reported that the varsity level was their highest level of participation in at least one of the sports listed (BYBASEBL, BYSOFTBL, BYFOOTBL, BYSOCCER, BYTEAMSP, BYSOLOSP). These students may also have been varsity captains if they were captains in a different sport. They may also be classified as intramural participants.

[Appears in table 14]

VARSITY CAPTAINS: These are 10th-graders who reported that the varsity captain level was their highest level of participation in at least one of the sports listed (BYBASEBL, BYSOFTBL, BYFOOTBL, BYSOCCER, BYTEAMSP, BYSOLOSP). They may also be classified as intramural participants.

[Appears in table 14]

SPORTS PARTICIPATION:

Sports participants indicated that they participated in at least one sport at the intramural (BYS39A–BYS39G) or interscholastic level (BYBASEBL, BYSOFTBL, BYBSKTBL, BYFOOTBL, BYSOCCER, BYTEAMSP, BYSOLOSP). Cheerleading, pompon (pompom), and drill team participants were not included in this category.

[Appears in table 10, table 11, table 15]

Sports nonparticipants are students who indicated that they did not play any of the listed intramural (BYS39A–BYS39G) or interscholastic sports (BYBASEBL, BYBSKTBL, BYSOFTBL, BYFOOTBL, BYSOCCER, BYTEAMSP, BYSOLOSP) at any level, either because their school did not offer the sport or because they chose not to participate.

[Appears in table 14, table 15]

WORK

CURRENTLY EMPLOYED (BYS72): This variable is taken directly from the student questionnaire. Students were asked: “Have you ever worked for pay, not counting work around the house?” Three responses were provided: No; Yes, and I am currently employed; and Yes, but I am not currently employed. Students who reported that they were currently employed are the subgroup of interest in this report. See table A-2 for the weighted response rate.

[Appears in table 15, table 16]

TIME USE

COMPUTER USE

COMPUTER USE FOR SCHOOL WORK (BYS46A)/OTHER THAN FOR SCHOOL WORK (BYS46B): These variables are taken directly from the student questionnaire and topcoded at 6 hours or more. Students were asked how many hours a day they usually use a computer for (a) schoolwork, and (b) other than schoolwork. See table A-2 for weighted response rates.

[Appears in table 20]

COMPUTER USE FOR VARIOUS PURPOSES (BYS45A, BYS45B, BYS45C): These variables are taken directly from the student questionnaire. Students were asked how often they used a computer, whether at home, school, or some place else, for various purposes: Never, Rarely, Less than once a week, Once or twice a week, or Every day or almost every day. See table A-2 for weighted response rates.

[Appears in table 19a, table 19b]

EXTRACURRICULAR ACTIVITIES

EXTRACURRICULAR ACTIVITIES (BYS42): This variable is taken directly from the student questionnaire and topcoded at 21 hours or more. Students were asked: “In a typical week, how much time do you spend on school-sponsored extracurricular activities (for example, sports, school clubs)?” Students whose number of hours spent on school-sponsored extracurricular activities fell in the highest quartile of that distribution (i.e., 9 or more hours per week) are defined as high-intensity extracurricular participants. See table A-2 for the weighted response rate.

[Appears in table 17]

HOMEWORK

MATH HOMEWORK PER WEEK IN SCHOOL (BYS35A)/OUT OF SCHOOL (BYS35B): These variables are taken directly from the student questionnaire and topcoded at 21 hours or more. The question stem reads: “In your current math course, about how much time do

you spend on homework each week, both in and out of school?” See table A-2 for weighted response rates.

[Appears in table 18]

TOTAL MATH HOMEWORK PER WEEK: This variable is the sum of BY35A (in school) and BY35B (out of school). BY35A and BY35B are taken directly from the student questionnaire and topcoded at 21 hours or more.

[Appears in table 18, table 24]

ENGLISH HOMEWORK PER WEEK IN SCHOOL (BY36A)/OUT OF SCHOOL (BY36B): These variables are taken directly from the student questionnaire and topcoded at 21 hours or more. The question stem reads: “In your current English course, about how much time do you spend on homework each week, both in and out of school?” See table A-2 for weighted response rates.

[Appears in table 18]

TOTAL ENGLISH HOMEWORK PER WEEK: This variable is the sum of BY36A (in school) and BY36B (out of school). BY36A and BY36B are taken directly from the student questionnaire and topcoded at 21 hours or more.

[Appears in table 18, table 23]

HOMEWORK PER WEEK IN SCHOOL (BY34A)/OUT OF SCHOOL (BY34B): These variables are taken directly from the student questionnaire. BY34A (in school) is topcoded at 21 hours or more; BY34B (out of school) is topcoded at 26 hours or more. The question stem reads: “Overall, about how much time do you spend on homework each week, both in and out of school?” See table A-2 for weighted response rates.

[Appears in table 17 (BY34B only), table 18]

TOTAL HOMEWORK PER WEEK: This variable is the sum of BY34A (in school) and BY34B (out of school). BY34A and BY34B are taken directly from the student questionnaire. BY34A is topcoded at 21 hours or more. BY34B is topcoded at 26 hours or more. See table A-2 for weighted response rates.

[Appears in table 18]

OUTSIDE READING

OUTSIDE READING/ADDITIONAL READING NOT ASSIGNED BY SCHOOL PER WEEK (BY43): This variable is taken directly from the student questionnaire and topcoded at 21 hours or more. See table A-2 for the weighted response rate.

[Appears in table 17, table 23]

WORK

WORKING FOR PAY (BYS75): This variable is taken directly from the student questionnaire and topcoded at 41 hours or more. All students who had ever worked for pay were instructed to report the number of hours they usually work/worked each week. This report's analysis of hours per week spent working for pay is restricted to students who had worked or were working during the 2001–02 school year (BYWORKSY). See table A-2 for weighted response rate.

[Appears in table 17]

TEST SCORES

TESTED ACHIEVEMENT (BYTXCQU): This is the standardized test composite score (reading and mathematics) quartile. The composite score is the average of the math (BYTXMSTD) and reading (BYTXRSTD) standardized scores, restandardized to a national mean of 50.0 and standard deviation of 10.0. Some students had scores for only the math test or reading test, but not both. For students who did not have both scores, the composite is based on the single score that was available. The standardized T score provides a norm-referenced measurement of achievement, that is, an estimate of achievement relative to the population (spring 2002 10th-graders) as a whole. It provides information on status compared to peers (as distinguished from the item response theory (IRT)-estimated number-right score, which represents status with respect to achievement on a particular criterion set of test items). The quartile score divides the weighted (population estimate) achievement distributions into four equal groups.

[Appears in table 4, table 5, table 6, table 8, table 9, table 11, table 14, table 15 (highest test quartile), table 16 (highest test quartile), table 17, table 18, table 19a, table 19b, table 20, table 31, table 32, table 33, table 34, table 36]

PROBABILITY OF PROFICIENCY SCORES IN READING AND MATHEMATICS (BYTX1RPP, BYTX2RPP, BYTX3RPP, BYTX1MPP, BYTX2MPP, BYTX3MPP, BYTX4MPP, BYTX5MPP): Criterion-referenced proficiency probability scores are based on clusters of items that mark different levels on the reading and mathematics scales developed in NELS:88. Clusters of four items each were identified in the NELS:88 tests that marked three hierarchical levels in reading and five in mathematics. While clusters of four items anchor each proficiency level, the probability of proficiency is a continuous score that does not depend on a student answering the actual items in each of the clusters but, rather, on the probability of a correct answer on these items given the overall pattern of response on the items completed.

Reading Levels:

1. Simple reading comprehension, including reproduction of detail, and/or the author's main thought.

2. Simple inferences beyond the author’s main thought and/or understanding and evaluating abstract concepts.
3. Complex inferences or evaluative judgments requiring multiple sources of information.

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.
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 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 assessments, not all sophomores received all 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-5 shows variable names, descriptions, and summary statistics for the ELS:2002 proficiency probability scores.

Table A–5. Reading and mathematics probability of proficiency scores

| Variable name | Description | Range | Weighted mean | Weighted standard deviation |
|---------------|-------------------|-------|---------------|-----------------------------|
| BYTX1RPP | Reading – Level 1 | 0–1 | 0.89 | 0.26 |
| BYTX2RPP | Reading – Level 2 | 0–1 | 0.46 | 0.40 |
| BYTX3RPP | Reading – Level 3 | 0–1 | 0.08 | 0.21 |
| BYTX1MPP | Math – Level 1 | 0–1 | 0.92 | 0.20 |
| BYTX2MPP | Math – Level 2 | 0–1 | 0.67 | 0.42 |
| BYTX3MPP | Math – Level 3 | 0–1 | 0.46 | 0.46 |
| BYTX4MPP | Math – Level 4 | 0–1 | 0.21 | 0.33 |
| BYTX5MPP | Math – Level 5 | 0–1 | 0.01 | 0.07 |

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.) Since 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 0.92, which is equivalent to saying that 92 percent of the sophomore cohort had achieved mastery at this level (simple arithmetical operations on whole numbers). While 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, since 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. Since base year and first follow-up will be 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.

READING PROFICIENCY LEVEL 1, LEVEL 2, AND LEVEL 3 (BYTX1RPP, BYTX2RPP, BYTX3RPP): Data from variables marking probability of proficiency at reading level 1, level 2, and level 3 appear in the figures and tables indicated below.

Reading Proficiency Level 1: simple reading comprehension, including reproduction of detail and/or the author's main thought.

[Appears in figure 25, table 21, table 23, table 25, table 27, table 29]

Reading Proficiency Level 2: simple inferences beyond the author's main thought, and/or understanding and evaluating abstract concepts.

[Appears in figure 25, table 21, table 23, figure 27, table 25, table 27, figure 29, table 29, figure 31]

Reading Proficiency Level 3: complex inferences or evaluative judgments requiring multiple sources of information.

[Appears in figure 25, table 21, table 23, table 25, table 27, table 29]

MATHEMATICS PROFICIENCY LEVEL 1, LEVEL 2, LEVEL 3, LEVEL 4, AND LEVEL 5 (BYTX1MPP, BYTX2MPP, BYTX3MPP, BYTX4MPP, BYTX5MPP): Data from variables marking probability of proficiency at mathematics level 1, level 2, level 3, level 4, and level 5 appear in the figures and tables indicated below.

Mathematics Proficiency Level 1: simple arithmetical operations on whole numbers.

[Appears in figure 26, table 22, table 24, table 26, table 28, table 30]

Mathematics Proficiency Level 2: simple operations with decimals, fractions, powers, and roots.

[Appears in figure 26, table 22, table 24, table 26, table 28, table 30]

Mathematics Proficiency Level 3: simple problem solving, requiring the understanding of low-level mathematical concepts.

[Appears in figure 26, table 22, table 24, table 26, table 28, table 30]

Mathematics Proficiency Level 4: understanding of intermediate-level mathematical concepts and/or multistep solutions to word problems.

[Appears in figure 26, table 22, table 24, table 26, figure 28, table 28, figure 30, table 30, figure 32]

Mathematics Proficiency Level 5: complex multistep word problems and/or advanced mathematics material.

[Appears in figure 26, table 22, table 24, table 28, table 30]

Details about test development can be found in Burns et al. (2003). Information about test administration, and test reliabilities and characteristics, may be found in Ingels et al. (2004). Basic score reporting conventions follow those of NELS:88 (see Rock and Pollack [1995]).

Please note: When this report was in a late stage of preparation, an error was found in the reading scores of a subset of the base-year student sample. An investigation of the impact of the error established that estimates based on the erroneous scores differed by very little from corrected estimates (where there was an effect at all, it was generally in the low tenths of 1 percent range) and affected no conclusions of this or other NCES reports then being drafted or reviewed. Nonetheless, because the base-year error has now been corrected, data users employing the corrected files will find that they cannot replicate precisely the reading score estimates in this report.

EXPECTATIONS FOR THE FUTURE

EDUCATIONAL EXPECTATIONS (STEXPECT): This variable is taken directly from the student questionnaire (BYS56) when available and imputed otherwise. Students were asked, “As things stand now, how far in school do you think you will get?”¹⁰ 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

¹⁰ 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]).

master's degree or equivalent; (7) Obtain a Ph.D., M.D., or other advanced degree; and (8) Don't know. For some (but not all) tables in this report, 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).

[Appears in table 2, table 4, table 5, table 6, table 8, table 9, table 11, table 14, table 15 (expect to earn a 4-year degree or higher), table 16 (expect to earn a 4-year degree or higher), table 17, table 18, table 19a, table 19b, table 20, table 21, table 22, table 27, table 28, figure 29, figure 30, table 31, table 32, table 33, figure 33, table 34, figure 34, table 35, table 36]

PLANS FOR EDUCATION AFTER HIGH SCHOOL (BYS57): This variable is taken directly from the student questionnaire. Students (except those who thought they would not finish high school and those who thought they would not advance beyond high school as reported in BY556) were asked: "Do you plan to continue your education right after high school or at some time in the future?" The response options were as follows: Yes, right after high school; Yes, after staying out of school for one year; Yes, after staying out of school for over a year; Yes, but I don't know when; No, I don't plan to continue my education after high school; and I don't know if I will continue my education after high school. For this report, students who expect to go directly to college are those who answered "Yes, right after high school." See table A-2 for the weighted response rate.

[Appears in table 15, table 16, table 36]

WANT TO PARTICIPATE IN COLLEGE SPORTS (BYS60): This variable is taken directly from the student questionnaire. Students who indicated that they planned to continue their education after high school (BYS57) were asked if they would like to participate in athletics (not intramural) at the collegiate level. See table A-2 for the weighted response rate.

[Appears in table 15]

HOPE TO GET AN ATHLETIC SCHOLARSHIP (BYS61): This variable is taken directly from the student questionnaire. Students who indicated that they planned to continue their education after high school (BYS57) and would like to participate in athletics at the collegiate level (BYS60) were asked if they hoped to receive an athletic scholarship to pay for all or part of their college expenses. See table A-2 for the weighted response rate.

[Appears in table 15]

LIFE VALUES (BYS54A-L, BY54N, BY54O): These variables are taken directly from the student questionnaire. Students rated the importance of a series of life values related to work and education, family and friends, and community: Not important, Somewhat important, or Very important. See table A-2 for weighted response rates.

[Appears in table 31 (BYS54O, BY54A, BY54N, BY54C, BY54E, BY54L), table 32 (BYS54B, BY54K, BY54G, BY54D), table 33 (BYS54H, BY54I, BY54F, BY54J)]

MOST IMPORTANT THING TO DO RIGHT AFTER HIGH SCHOOL (BYS66A, BY566B, BY566E, BY566F): These variables are taken directly from the student

questionnaire. Students were asked what their mother, father, school counselor, and favorite teacher thought was the most important thing for them to do after high school: Go to college, Get a full-time job, Enter a trade school or an apprenticeship, Enter military service, Get married, They think I should do what I want, or I don't know. See table A-2 for weighted response rates.

[Appears in table 37]

OCCUPATION AT AGE 30 (BYOCC30): The occupation 10th-graders expected or planned to have at age 30 was coded into one of 17 categories by project personnel from student-provided text strings (BYS64 in restricted use data). See table A-2 for the weighted response rate.

[Appears in table 38, table 39, figure 35]

A.6 Appendix A References

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Appendix B

Standard Error Tables

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Appendix B Standard Error Tables

NOTE: Some estimates may be correlated with each other. Generating statistical tests for such estimates solely with these standard errors implicitly assumes these covariances are zero and may be different from the actual significance test used in the report.

Table B–1. Standard errors for table 1 estimates (percentage of high school sophomores in each geographic region): 2002

| Region | Standard error |
|------------------------|----------------|
| Northeast ¹ | 0.65 |
| Midwest ² | 0.65 |
| South ³ | 0.66 |
| West ⁴ | 0.81 |

¹ Northeast = CT, ME, MA, NH, NJ, NY, PA, RI, VT.

² Midwest = IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI.

³ South = AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV.

⁴ West = AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY.

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

Table B–2. Standard errors for table 2 estimates (percentage of high school sophomores, by highest level of education expected): 2002

| Level of education | Standard error |
|--|----------------|
| Less than high school | 0.10 |
| High school completion or GED | 0.30 |
| Attend or complete 2-year community college or vocational school | 0.29 |
| Attend 4-year program, but not complete degree | 0.18 |
| Graduate from college | 0.46 |
| Master's degree or equivalent | 0.44 |
| Ph.D., M.D., or other advanced degree | 0.40 |
| Don't know | 0.30 |

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

**Appendix B:
Standard Error Tables**

Table B-3. Standard errors for table 3 estimates (percentage of high school sophomores, by type of academic program): 2002

| Type of program | Standard error |
|---|----------------|
| General | 0.63 |
| College preparatory—academic | 0.68 |
| Vocational, including technical/ business | 0.46 |

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

Table B-4. Standard errors for table 4 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about their school and teachers in their school, and percentage who reported that they liked their school a great deal, by selected student and school characteristics): 2002

| Selected student and school characteristics | There is real school spirit | The teaching is good | Students get along well with teachers | Teachers are interested in students | When I work hard, teachers praise my effort | Students of different racial/ethnic groups make friends | Liked school a great deal |
|---|-----------------------------|----------------------|---------------------------------------|-------------------------------------|---|---|---------------------------|
| Total | 0.71 | 0.50 | 0.60 | 0.54 | 0.55 | 0.34 | 0.45 |
| Sex | | | | | | | |
| Male | 0.91 | 0.67 | 0.71 | 0.75 | 0.77 | 0.47 | 0.61 |
| Female | 0.85 | 0.62 | 0.84 | 0.66 | 0.73 | 0.45 | 0.62 |
| Racial/ethnic group | | | | | | | |
| American Indian or Alaska Native | 4.01 | 4.85 | 6.25 | 5.09 | 5.65 | 3.65 | 3.19 |
| Asian or Pacific Islander | 1.90 | 1.37 | 1.49 | 1.45 | 1.77 | 0.96 | 1.50 |
| Black | 1.40 | 1.29 | 1.37 | 1.39 | 1.34 | 0.77 | 1.19 |
| Hispanic or Latino | 1.68 | 1.02 | 1.42 | 1.24 | 1.30 | 0.80 | 1.23 |
| More than one race | 2.32 | 2.09 | 2.51 | 2.31 | 2.36 | 1.46 | 2.12 |
| White | 0.89 | 0.63 | 0.64 | 0.68 | 0.73 | 0.45 | 0.54 |
| Socioeconomic status | | | | | | | |
| Lowest quartile | 1.08 | 0.84 | 1.14 | 0.97 | 1.04 | 0.65 | 0.87 |
| Middle two quartiles | 0.89 | 0.67 | 0.75 | 0.69 | 0.73 | 0.47 | 0.58 |
| Highest quartile | 1.19 | 0.87 | 0.84 | 0.86 | 1.01 | 0.62 | 0.87 |
| Parents' education | | | | | | | |
| High school or less | 1.07 | 0.79 | 0.98 | 0.94 | 0.95 | 0.65 | 0.86 |
| Some college | 0.92 | 0.79 | 0.89 | 0.81 | 0.84 | 0.51 | 0.67 |
| College graduation | 1.21 | 0.96 | 1.00 | 1.00 | 0.94 | 0.66 | 0.96 |
| Graduate/professional degree | 1.36 | 1.07 | 1.06 | 1.11 | 1.28 | 0.81 | 1.06 |
| Native language¹ | | | | | | | |
| English | 0.74 | 0.56 | 0.62 | 0.57 | 0.59 | 0.38 | 0.47 |
| Non-English | 1.59 | 0.95 | 1.38 | 1.10 | 1.17 | 0.84 | 1.24 |
| Student's educational expectations | | | | | | | |
| High school or less | 1.76 | 1.66 | 1.62 | 1.76 | 1.75 | 1.22 | 1.24 |
| Some college | 1.52 | 1.41 | 1.45 | 1.51 | 1.53 | 0.99 | 1.07 |
| College graduation | 0.94 | 0.74 | 0.81 | 0.79 | 0.87 | 0.46 | 0.72 |
| Graduate/professional degree | 0.95 | 0.66 | 0.82 | 0.73 | 0.77 | 0.54 | 0.77 |
| Don't know | 1.62 | 1.38 | 1.56 | 1.45 | 1.51 | 1.07 | 1.15 |

See notes at end of table.

**Appendix B:
Standard Error Tables**

Table B-4. Standard errors for table 4 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about their school and teachers in their school, and percentage who reported that they liked their school a great deal, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | There is real school spirit | The teaching is good | Students get along well with teachers | Teachers are interested in students | When I work hard, teachers praise my effort | Students of different racial/ethnic groups make friends | Liked school a great deal |
|--|-----------------------------|----------------------|---------------------------------------|-------------------------------------|---|---|---------------------------|
| High school program ² | | | | | | | |
| General | 0.98 | 0.79 | 0.91 | 0.88 | 0.84 | 0.56 | 0.65 |
| College preparatory | 0.84 | 0.57 | 0.69 | 0.61 | 0.72 | 0.41 | 0.63 |
| Vocational | 1.67 | 1.31 | 1.47 | 1.62 | 1.45 | 0.97 | 1.22 |
| Composite achievement test score in sophomore year | | | | | | | |
| Lowest quartile | 1.06 | 0.97 | 1.09 | 1.02 | 0.95 | 0.74 | 0.96 |
| Middle two quartiles | 0.83 | 0.62 | 0.75 | 0.66 | 0.77 | 0.45 | 0.58 |
| Highest quartile | 1.18 | 0.73 | 0.80 | 0.81 | 0.99 | 0.59 | 0.92 |
| Sophomore's school sector | | | | | | | |
| Public | 0.76 | 0.53 | 0.64 | 0.58 | 0.58 | 0.37 | 0.47 |
| Catholic | 1.58 | 0.96 | 1.06 | 1.11 | 1.44 | 0.66 | 1.46 |
| Other private | 2.71 | 1.25 | 1.57 | 1.39 | 1.61 | 1.28 | 2.61 |
| Region of sophomore's school | | | | | | | |
| Northeast | 2.09 | 1.20 | 1.28 | 1.21 | 1.13 | 0.75 | 1.05 |
| Midwest | 1.27 | 1.07 | 1.28 | 1.20 | 1.22 | 0.72 | 0.84 |
| South | 1.00 | 0.76 | 1.00 | 0.90 | 0.86 | 0.56 | 0.77 |
| West | 1.61 | 1.11 | 1.28 | 1.13 | 1.26 | 0.76 | 0.99 |
| Urbanicity of sophomore's school | | | | | | | |
| Urban | 1.16 | 1.11 | 1.32 | 1.01 | 0.96 | 0.56 | 0.91 |
| Suburban | 1.08 | 0.60 | 0.76 | 0.69 | 0.77 | 0.50 | 0.59 |
| Rural | 1.50 | 1.09 | 1.13 | 1.46 | 1.32 | 0.79 | 0.99 |

¹The first language students learned to speak when they were children.

²Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

Table B-5. Standard errors for table 5 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about school safety, by selected student and school characteristics): 2002

| Selected student and school characteristics | I do not feel safe at this school | There are gangs in school | Fights often occur between different racial/ethnic groups |
|---|-----------------------------------|---------------------------|---|
| Total | 0.39 | 0.85 | 0.73 |
| Sex | | | |
| Male | 0.50 | 1.00 | 0.88 |
| Female | 0.51 | 0.98 | 0.89 |
| Racial/ethnic group | | | |
| American Indian or Alaska Native | 3.38 | 7.74 | 6.34 |
| Asian or Pacific Islander | 1.17 | 2.38 | 1.98 |
| Black | 1.15 | 2.08 | 1.41 |
| Hispanic or Latino | 1.08 | 2.11 | 2.11 |
| More than one race | 1.77 | 2.45 | 2.20 |
| White | 0.44 | 0.89 | 0.80 |
| Socioeconomic status | | | |
| Lowest quartile | 0.80 | 1.43 | 1.26 |
| Middle two quartiles | 0.53 | 0.98 | 0.87 |
| Highest quartile | 0.57 | 1.13 | 0.94 |
| Parents' education | | | |
| High school or less | 0.72 | 1.36 | 1.17 |
| Some college | 0.62 | 1.06 | 0.92 |
| College graduation | 0.72 | 1.14 | 1.06 |
| Graduate/professional degree | 0.74 | 1.33 | 1.09 |
| Native language ¹ | | | |
| English | 0.41 | 0.84 | 0.71 |
| Non-English | 1.11 | 1.86 | 1.94 |
| Student's educational expectations | | | |
| High school or less | 1.56 | 2.10 | 2.04 |
| Some college | 1.17 | 1.60 | 1.65 |
| College graduation | 0.53 | 1.12 | 0.93 |
| Graduate/professional degree | 0.49 | 1.00 | 0.89 |
| Don't know | 1.16 | 1.75 | 1.70 |
| High school program ² | | | |
| General | 0.62 | 1.22 | 1.03 |
| College preparatory | 0.48 | 0.95 | 0.80 |
| Vocational | 1.12 | 1.70 | 1.75 |

See notes at end of table.

**Appendix B:
Standard Error Tables**

Table B-5. Standard errors for table 5 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about school safety, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | I do not feel safe at this school | There are gangs in school | Fights often occur between different racial/ethnic groups |
|--|-----------------------------------|---------------------------|---|
| Composite achievement test score in sophomore year | | | |
| Lowest quartile | 0.85 | 1.39 | 1.28 |
| Middle two quartiles | 0.50 | 1.00 | 0.84 |
| Highest quartile | 0.47 | 1.12 | 0.90 |
| Sophomore's school sector | | | |
| Public | 0.41 | 0.90 | 0.78 |
| Catholic | 0.57 | 1.41 | 0.99 |
| Other private | 0.65 | 0.89 | 0.95 |
| Region of sophomore's school | | | |
| Northeast | 0.97 | 1.91 | 2.07 |
| Midwest | 0.68 | 1.69 | 1.31 |
| South | 0.67 | 1.24 | 0.93 |
| West | 0.81 | 2.09 | 1.84 |
| Urbanicity of sophomore's school | | | |
| Urban | 0.81 | 1.51 | 1.48 |
| Suburban | 0.53 | 1.25 | 1.01 |
| Rural | 0.65 | 1.65 | 1.33 |

¹The first language students learned to speak when they were children.

²Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

Table B-6. Standard errors for table 6 estimates (percentage of high school sophomores who experienced various kinds of crime and bullying at school at least once or twice during the first semester/term of the school year, by selected student and school characteristics): 2002

| Selected student and school characteristics | Any crime and bullying | I had something stolen from me | Someone offered to sell me drugs | Someone threatened to hurt me | I got into a physical fight | Someone hit me | Someone used strong-arm or forceful methods to get money or things from me | Someone purposely damaged or destroyed my belongings | Someone bullied me or picked on me |
|---|------------------------|--------------------------------|----------------------------------|-------------------------------|-----------------------------|----------------|--|--|------------------------------------|
| Total | 0.53 | 0.54 | 0.53 | 0.46 | 0.40 | 0.46 | 0.16 | 0.39 | 0.44 |
| Sex | | | | | | | | | |
| Male | 0.67 | 0.75 | 0.74 | 0.71 | 0.59 | 0.71 | 0.25 | 0.58 | 0.61 |
| Female | 0.77 | 0.74 | 0.65 | 0.62 | 0.41 | 0.51 | 0.18 | 0.44 | 0.60 |
| Racial/ethnic group | | | | | | | | | |
| American Indian or Alaska Native | 4.94 | 3.63 | 5.01 | 5.61 | 3.22 | 4.83 | 2.37 | 5.23 | 4.45 |
| Asian or Pacific Islander | 1.98 | 1.92 | 1.47 | 1.45 | 0.95 | 1.34 | 0.48 | 1.13 | 1.35 |
| Black | 1.29 | 1.44 | 1.20 | 1.04 | 1.13 | 1.18 | 0.55 | 1.01 | 0.96 |
| Hispanic or Latino | 1.17 | 1.17 | 1.33 | 1.14 | 0.94 | 1.03 | 0.46 | 0.86 | 1.06 |
| More than one race | 1.95 | 2.54 | 2.23 | 2.27 | 1.79 | 2.13 | 0.96 | 2.00 | 2.04 |
| White | 0.70 | 0.69 | 0.64 | 0.62 | 0.48 | 0.59 | 0.19 | 0.48 | 0.57 |
| Socioeconomic status | | | | | | | | | |
| Lowest quartile | 0.94 | 0.86 | 1.02 | 0.96 | 0.79 | 0.90 | 0.31 | 0.69 | 0.85 |
| Middle two quartiles | 0.69 | 0.77 | 0.70 | 0.65 | 0.56 | 0.62 | 0.23 | 0.53 | 0.57 |
| Highest quartile | 1.03 | 1.01 | 0.91 | 0.77 | 0.64 | 0.77 | 0.28 | 0.71 | 0.80 |
| Parents' education | | | | | | | | | |
| High school or less | 0.96 | 0.85 | 0.95 | 0.96 | 0.76 | 0.86 | 0.28 | 0.69 | 0.82 |
| Some college | 0.83 | 0.92 | 0.87 | 0.78 | 0.67 | 0.75 | 0.28 | 0.62 | 0.67 |
| College graduation | 1.03 | 1.10 | 0.98 | 0.94 | 0.75 | 0.89 | 0.36 | 0.82 | 0.95 |
| Graduate/professional degree | 1.26 | 1.30 | 1.08 | 0.99 | 0.81 | 1.03 | 0.35 | 0.89 | 0.96 |
| Native language ¹ | | | | | | | | | |
| English | 0.58 | 0.61 | 0.55 | 0.52 | 0.42 | 0.51 | 0.17 | 0.42 | 0.48 |
| Non-English | 1.33 | 1.17 | 1.37 | 1.12 | 1.00 | 1.03 | 0.49 | 0.93 | 1.03 |

See notes at end of table.

Table B-6. Standard errors for table 6 estimates (percentage of high school sophomores who experienced various kinds of crime and bullying at school at least once or twice during the first semester/term of the school year, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Any crime and bullying | I had something stolen from me | Someone offered to sell me drugs | Someone threatened to hurt me | I got into a physical fight | Someone hit me | Someone used strong-arm or forceful methods to get money or things from me | Someone purposely damaged or destroyed my belongings | Someone bullied me or picked on me |
|--|------------------------|--------------------------------|----------------------------------|-------------------------------|-----------------------------|----------------|--|--|------------------------------------|
| Student's educational expectations | | | | | | | | | |
| High school or less | 1.49 | 1.83 | 1.73 | 1.62 | 1.65 | 1.84 | 0.95 | 1.35 | 1.48 |
| Some college | 1.43 | 1.53 | 1.60 | 1.32 | 1.48 | 1.63 | 0.56 | 1.21 | 1.34 |
| College graduation | 0.84 | 0.85 | 0.81 | 0.70 | 0.60 | 0.71 | 0.22 | 0.61 | 0.63 |
| Graduate/ professional degree | 0.85 | 0.84 | 0.72 | 0.72 | 0.54 | 0.68 | 0.23 | 0.62 | 0.71 |
| Don't know | 1.42 | 1.72 | 1.47 | 1.36 | 1.16 | 1.37 | 0.58 | 1.22 | 1.34 |
| High school program ² | | | | | | | | | |
| General | 0.80 | 0.83 | 0.88 | 0.77 | 0.61 | 0.74 | 0.31 | 0.62 | 0.72 |
| College preparatory | 0.71 | 0.73 | 0.63 | 0.54 | 0.48 | 0.51 | 0.19 | 0.52 | 0.59 |
| Vocational | 1.46 | 1.57 | 1.35 | 1.44 | 1.34 | 1.41 | 0.53 | 1.06 | 1.25 |
| Composite achievement test score in sophomore year | | | | | | | | | |
| Lowest quartile | 0.98 | 1.06 | 1.03 | 1.01 | 0.86 | 0.93 | 0.41 | 0.78 | 0.88 |
| Middle two quartiles | 0.68 | 0.74 | 0.69 | 0.63 | 0.53 | 0.58 | 0.21 | 0.51 | 0.57 |
| Highest quartile | 0.99 | 1.01 | 0.92 | 0.88 | 0.50 | 0.80 | 0.22 | 0.79 | 0.83 |
| Sophomore's school sector | | | | | | | | | |
| Public | 0.56 | 0.57 | 0.56 | 0.49 | 0.42 | 0.49 | 0.17 | 0.41 | 0.47 |
| Catholic | 1.71 | 1.68 | 1.18 | 1.06 | 1.09 | 1.48 | 0.38 | 1.04 | 0.94 |
| Other private | 2.29 | 2.43 | 1.33 | 1.69 | 0.91 | 1.21 | 0.52 | 1.18 | 1.29 |

See notes at end of table.

Table B-6. Standard errors for table 6 estimates (percentage of high school sophomores who experienced various kinds of crime and bullying at school at least once or twice during the first semester/term of the school year, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Any crime and bullying | I had something stolen from me | Someone offered to sell me drugs | Someone threatened to hurt me | I got into a physical fight | Someone hit me | Someone used strong-arm or forceful methods to get money or things from me | Someone purposely damaged or destroyed my belongings | Someone bullied me or picked on me |
|---|------------------------|--------------------------------|----------------------------------|-------------------------------|-----------------------------|----------------|--|--|------------------------------------|
| Region of sophomore's school | | | | | | | | | |
| Northeast | 1.08 | 1.07 | 1.10 | 1.15 | 0.80 | 1.05 | 0.31 | 0.86 | 0.93 |
| Midwest | 1.06 | 1.13 | 0.99 | 0.97 | 0.84 | 1.10 | 0.35 | 0.79 | 0.96 |
| South | 0.91 | 0.85 | 0.81 | 0.72 | 0.61 | 0.64 | 0.23 | 0.56 | 0.64 |
| West | 1.24 | 1.28 | 1.39 | 1.01 | 0.96 | 0.99 | 0.42 | 0.97 | 1.07 |
| Urbanicity of sophomore's school | | | | | | | | | |
| Urban | 0.94 | 1.06 | 0.90 | 0.83 | 0.76 | 0.78 | 0.33 | 0.68 | 0.64 |
| Suburban | 0.73 | 0.71 | 0.78 | 0.65 | 0.50 | 0.58 | 0.22 | 0.54 | 0.64 |
| Rural | 1.35 | 1.24 | 1.15 | 1.09 | 1.02 | 1.33 | 0.33 | 0.93 | 1.13 |

¹The first language students learned to speak when they were children.

²Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B-7. Standard errors for table 7 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about their school rules, by selected school characteristics): 2002

| Selected school characteristics | Everyone knows what the school rules are | The school rules are fair | Punishment for breaking school rules is the same no matter who you are | The school rules are strictly enforced | If a school rule is broken, students know what kind of punishment will follow |
|----------------------------------|--|---------------------------|--|--|---|
| Total | 0.48 | 0.65 | 0.59 | 0.57 | 0.54 |
| Sophomore's school sector | | | | | |
| Public | 0.52 | 0.69 | 0.63 | 0.61 | 0.57 |
| Catholic | 1.03 | 2.06 | 1.76 | 1.30 | 1.33 |
| Other private | 1.27 | 2.39 | 2.26 | 2.35 | 1.92 |
| Region of sophomore's school | | | | | |
| Northeast | 1.30 | 1.44 | 1.49 | 1.35 | 1.22 |
| Midwest | 0.91 | 1.46 | 1.36 | 1.27 | 1.14 |
| South | 0.76 | 0.96 | 0.88 | 0.89 | 0.82 |
| West | 0.99 | 1.53 | 1.18 | 1.20 | 1.27 |
| Urbanicity of sophomore's school | | | | | |
| Urban | 0.98 | 1.18 | 1.03 | 0.95 | 0.79 |
| Suburban | 0.63 | 0.93 | 0.87 | 0.83 | 0.81 |
| Rural | 1.08 | 1.42 | 1.31 | 1.33 | 1.30 |
| I feel unsafe at school | | | | | |
| Agreed/strongly agreed | 1.45 | 1.55 | 1.64 | 1.52 | 1.54 |
| Disagreed/strongly disagreed | 0.48 | 0.67 | 0.62 | 0.59 | 0.56 |

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

Table B–8. Standard errors for table 8 estimates (percentage distribution of high school sophomores according to their reports on how important good grades were to them, by selected student and school characteristics): 2002

| Selected student and school characteristics | Not important | Somewhat important | Important | Very important |
|--|------------------|-----------------------|-----------|-------------------|
| Total | 0.12 | 0.37 | 0.46 | 0.53 |
| Sex | | | | |
| Male | 0.20 | 0.57 | 0.59 | 0.73 |
| Female | 0.10 | 0.42 | 0.70 | 0.69 |
| Racial/ethnic group | | | | |
| American Indian or Alaska Native | 3.24 | 2.46 | 4.53 | 4.46 |
| Asian or Pacific Islander | 0.26 | 0.68 | 1.84 | 1.92 |
| Black | 0.17 | 0.68 | 1.34 | 1.38 |
| Hispanic or Latino | 0.33 | 0.81 | 1.15 | 1.14 |
| More than one race | 0.56 | 1.66 | 2.19 | 2.29 |
| White | 0.15 | 0.51 | 0.61 | 0.70 |
| Socioeconomic status | | | | |
| Lowest quartile | 0.23 | 0.73 | 0.87 | 1.02 |
| Middle two quartiles | 0.18 | 0.51 | 0.69 | 0.69 |
| Highest quartile | 0.21 | 0.67 | 0.95 | 1.00 |
| Parents' education | | | | |
| High school or less | 0.23 | 0.70 | 0.88 | 0.93 |
| Some college | 0.19 | 0.59 | 0.90 | 0.90 |
| College graduation | 0.29 | 0.60 | 0.99 | 1.05 |
| Graduate/professional degree | 0.20 | 0.84 | 1.14 | 1.25 |
| Native language ¹ | | | | |
| English | 0.12 | 0.41 | 0.52 | 0.60 |
| Non-English | 0.30 | 0.79 | 1.13 | 1.27 |
| Student's educational expectations | | | | |
| High school or less | 0.82 | 1.58 | 1.62 | 1.68 |
| Some college | 0.40 | 1.27 | 1.42 | 1.30 |
| College graduation | 0.12 | 0.60 | 0.83 | 0.89 |
| Graduate/professional degree | 0.11 | 0.34 | 0.69 | 0.78 |
| Don't know | 0.58 | 1.27 | 1.65 | 1.50 |
| High school program ² | | | | |
| General | 0.27 | 0.75 | 0.79 | 0.86 |
| College preparatory | 0.10 | 0.34 | 0.62 | 0.67 |
| Vocational | 0.36 | 1.08 | 1.52 | 1.63 |
| Composite achievement test score in sophomore year | | | | |
| Lowest quartile | 0.30 | 0.75 | 1.01 | 1.11 |
| Middle two quartiles | 0.15 | 0.54 | 0.70 | 0.75 |
| Highest quartile | 0.22 | 0.58 | 0.93 | 0.97 |

See notes at end of table.

**Appendix B:
Standard Error Tables**

Table B–8. Standard errors for table 8 (percentage distribution of high school sophomores according to their reports on how important good grades were to them, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Not important | Somewhat important | Important | Very important |
|---|---------------|--------------------|-----------|----------------|
| Sophomore's school sector | | | | |
| Public | 0.12 | 0.40 | 0.49 | 0.57 |
| Catholic | 0.27 | 0.75 | 1.41 | 1.13 |
| Other private | 0.39 | 1.13 | 2.06 | 2.09 |
| Region of sophomore's school | | | | |
| Northeast | 0.32 | 0.85 | 1.14 | 1.21 |
| Midwest | 0.21 | 0.83 | 0.89 | 1.17 |
| South | 0.17 | 0.47 | 0.73 | 0.83 |
| West | 0.28 | 0.93 | 1.04 | 1.15 |
| Urbanicity of sophomore's school | | | | |
| Urban | 0.21 | 0.55 | 0.87 | 0.90 |
| Suburban | 0.17 | 0.50 | 0.66 | 0.75 |
| Rural | 0.23 | 1.08 | 0.95 | 1.31 |

¹The first language students learned to speak when they were children.

²Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

Table B-9. Standard errors for table 9 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about the reasons for going to school, by selected student and school characteristics): 2002

| Selected student and school characteristics | Education is important for getting a job later on | My parents expect me to succeed | I am learning skills that I will need for a job | School is a place to meet my friends | I get a feeling of satisfaction from doing what I am supposed to do in class | My teachers expect me to succeed | The subjects that I am taking are interesting & challenging | I play on a team or belong to a club | I have nothing better to do |
|---|---|---------------------------------|---|--------------------------------------|--|----------------------------------|---|--------------------------------------|-----------------------------|
| Total | 0.18 | 0.25 | 0.38 | 0.48 | 0.56 | 0.50 | 0.55 | 0.59 | 0.54 |
| Sex | | | | | | | | | |
| Male | 0.29 | 0.39 | 0.54 | 0.64 | 0.76 | 0.69 | 0.81 | 0.78 | 0.73 |
| Female | 0.20 | 0.32 | 0.47 | 0.62 | 0.70 | 0.67 | 0.71 | 0.76 | 0.69 |
| Racial/ethnic group | | | | | | | | | |
| American Indian or Alaska Native | 2.90 | 2.23 | 4.07 | 3.65 | 4.66 | 6.66 | 4.77 | 4.85 | 5.43 |
| Asian or Pacific Islander | 0.38 | 0.55 | 1.12 | 1.26 | 1.69 | 2.02 | 1.77 | 2.18 | 1.80 |
| Black | 0.39 | 0.57 | 0.91 | 1.49 | 1.19 | 1.15 | 1.31 | 1.40 | 1.21 |
| Hispanic or Latino | 0.51 | 0.65 | 0.88 | 1.12 | 1.45 | 1.33 | 1.26 | 1.21 | 1.40 |
| More than one race | 0.64 | 1.32 | 1.64 | 1.55 | 2.25 | 2.51 | 2.38 | 2.47 | 2.19 |
| White | 0.24 | 0.33 | 0.50 | 0.45 | 0.70 | 0.67 | 0.71 | 0.75 | 0.69 |
| Socioeconomic status | | | | | | | | | |
| Lowest quartile | 0.42 | 0.46 | 0.69 | 0.87 | 1.05 | 0.99 | 1.00 | 0.98 | 0.91 |
| Middle two quartiles | 0.25 | 0.33 | 0.55 | 0.65 | 0.75 | 0.66 | 0.75 | 0.81 | 0.72 |
| Highest quartile | 0.30 | 0.50 | 0.74 | 0.67 | 1.02 | 0.95 | 1.06 | 1.05 | 0.98 |
| Parents' education | | | | | | | | | |
| High school or less | 0.41 | 0.47 | 0.70 | 0.79 | 1.01 | 0.96 | 1.02 | 0.96 | 0.98 |
| Some college | 0.31 | 0.41 | 0.64 | 0.79 | 0.90 | 0.82 | 0.83 | 0.88 | 0.79 |
| College graduation | 0.39 | 0.53 | 0.73 | 0.81 | 1.03 | 0.96 | 1.06 | 1.06 | 1.10 |
| Graduate/professional degree | 0.33 | 0.59 | 0.95 | 0.85 | 1.31 | 1.20 | 1.34 | 1.32 | 1.09 |
| Native language ¹ | | | | | | | | | |
| English | 0.19 | 0.27 | 0.41 | 0.52 | 0.59 | 0.53 | 0.59 | 0.64 | 0.57 |
| Non-English | 0.53 | 0.69 | 0.82 | 1.09 | 1.25 | 1.23 | 1.27 | 1.26 | 1.42 |

See notes at end of table.

Table B–9. Standard errors for table 9 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about the reasons for going to school, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Education is important for getting a job later on | My parents expect me to succeed | I am learning skills that I will need for a job | School is a place to meet my friends | I get a feeling of satisfaction from doing what I am supposed to do in class | My teachers expect me to succeed | The subjects that I am taking are interesting & challenging | I play on a team or belong to a club | I have nothing better to do |
|--|---|---------------------------------|---|--------------------------------------|--|----------------------------------|---|--------------------------------------|-----------------------------|
| Student's educational expectations | | | | | | | | | |
| High school or less | 1.26 | 1.16 | 1.75 | 1.45 | 1.80 | 1.79 | 1.89 | 1.58 | 1.71 |
| Some college | 0.72 | 0.70 | 1.20 | 1.22 | 1.65 | 1.58 | 1.67 | 1.39 | 1.53 |
| College graduation | 0.24 | 0.40 | 0.61 | 0.72 | 0.85 | 0.83 | 0.91 | 0.91 | 0.79 |
| Graduate/professional degree | 0.17 | 0.41 | 0.57 | 0.66 | 0.75 | 0.77 | 0.82 | 0.94 | 0.79 |
| Don't know | 0.78 | 0.80 | 1.25 | 1.35 | 1.49 | 1.62 | 1.55 | 1.64 | 1.57 |
| High school program ² | | | | | | | | | |
| General | 0.36 | 0.44 | 0.64 | 0.74 | 0.82 | 0.75 | 0.91 | 0.87 | 0.79 |
| College preparatory | 0.16 | 0.34 | 0.44 | 0.55 | 0.69 | 0.71 | 0.71 | 0.78 | 0.68 |
| Vocational | 0.65 | 0.81 | 1.03 | 1.36 | 1.48 | 1.64 | 1.55 | 1.59 | 1.54 |
| Composite achievement test score in sophomore year | | | | | | | | | |
| Lowest quartile | 0.48 | 0.53 | 0.74 | 1.02 | 0.97 | 0.95 | 1.09 | 0.87 | 0.95 |
| Middle two quartiles | 0.24 | 0.33 | 0.56 | 0.57 | 0.76 | 0.70 | 0.68 | 0.76 | 0.75 |
| Highest quartile | 0.29 | 0.53 | 0.72 | 0.67 | 0.96 | 0.93 | 1.00 | 1.02 | 0.97 |
| Sophomore's school sector | | | | | | | | | |
| Public | 0.19 | 0.26 | 0.40 | 0.51 | 0.60 | 0.53 | 0.58 | 0.62 | 0.58 |
| Catholic | 0.43 | 0.75 | 1.06 | 1.05 | 1.21 | 1.33 | 1.74 | 1.48 | 1.24 |
| Other private | 0.61 | 1.08 | 1.25 | 1.46 | 1.68 | 2.58 | 2.24 | 2.24 | 1.47 |
| Region of sophomore's school | | | | | | | | | |
| Northeast | 0.42 | 0.51 | 1.01 | 1.06 | 1.23 | 1.16 | 1.25 | 1.64 | 1.07 |
| Midwest | 0.33 | 0.46 | 0.79 | 1.00 | 1.11 | 0.90 | 1.16 | 1.09 | 1.08 |
| South | 0.25 | 0.40 | 0.57 | 0.82 | 0.95 | 0.76 | 0.88 | 0.93 | 0.71 |
| West | 0.46 | 0.63 | 0.77 | 1.03 | 1.23 | 1.28 | 1.17 | 1.24 | 1.51 |
| Urbanicity of sophomore's school | | | | | | | | | |
| Urban | 0.27 | 0.45 | 0.70 | 1.03 | 1.05 | 0.89 | 1.04 | 1.02 | 0.93 |
| Suburban | 0.26 | 0.35 | 0.52 | 0.59 | 0.75 | 0.68 | 0.73 | 0.85 | 0.78 |
| Rural | 0.43 | 0.55 | 0.84 | 1.01 | 1.32 | 1.24 | 1.31 | 1.40 | 1.23 |

¹The first language students learned to speak when they were children.

²Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

Table B–10. Standard errors for table 10 estimates (percentage of high school sophomores who participated in various school-sponsored activities): 2002

| Activity | Standard error |
|--|----------------|
| Academic club | 0.33 |
| Band, orchestra, chorus, choir | 0.52 |
| Hobby club | 0.34 |
| National Honor Society (NHS) or other academic honor society | 0.33 |
| School play or musical | 0.38 |
| School yearbook, newspaper, literary magazine | 0.28 |
| Service club | 0.41 |
| Sports ¹ | 0.63 |
| Student government | 0.28 |
| Vocational education club, vocational student organization (e.g., DECA, ² VICA, ³ FFA, ⁴ FHA ⁵) | 0.43 |

¹ Students were defined as sports participants if they indicated that they participated in at least one sport at the intramural or interscholastic level. Cheerleading, pompon (pompom), and drill team were not included in this category. Students were defined as sports nonparticipants if they did not participate in *any* sports or they indicated that their school did not offer sports.

² Distributive Education Clubs of America.

³ Vocational Industrial Clubs of America.

⁴ Future Farmers of America.

⁵ Future Homemakers of America.

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

**Appendix B:
Standard Error Tables**

Table B–11. Standard errors for table 11 estimates (percentage of high school sophomores who participated in various school-sponsored activities, by selected student and school characteristics): 2002

| Selected student and school characteristics | Academic club | Sports | Cheer-leading | Hobby club | Music (band, orchestra, chorus, or choir) | Vocational education club or vocational student organization |
|---|---------------|--------|---------------|------------|---|--|
| Total | 0.33 | 0.63 | 0.46 | 0.34 | 0.52 | 0.43 |
| Sex | | | | | | |
| Male | 0.38 | 0.81 | 0.52 | 0.41 | 0.60 | 0.53 |
| Female | 0.46 | 0.85 | 0.63 | 0.50 | 0.71 | 0.53 |
| Racial/ethnic group | | | | | | |
| American Indian or Alaska Native | 2.15 | 5.33 | 2.90 | 2.23 | 3.75 | 3.61 |
| Asian or Pacific Islander | 1.33 | 1.87 | 1.06 | 1.41 | 1.56 | 0.57 |
| Black | 0.67 | 1.48 | 1.16 | 0.68 | 1.33 | 0.81 |
| Hispanic or Latino | 0.60 | 1.59 | 0.97 | 0.64 | 0.91 | 0.63 |
| More than one race | 1.29 | 2.53 | 1.82 | 1.50 | 1.80 | 1.31 |
| White | 0.43 | 0.79 | 0.54 | 0.47 | 0.65 | 0.60 |
| Socioeconomic status | | | | | | |
| Lowest quartile | 0.46 | 1.09 | 0.73 | 0.50 | 0.75 | 0.76 |
| Middle two quartiles | 0.38 | 0.82 | 0.60 | 0.39 | 0.64 | 0.50 |
| Highest quartile | 0.74 | 1.05 | 0.78 | 0.79 | 1.02 | 0.57 |
| Parents' education | | | | | | |
| High school or less | 0.43 | 1.06 | 0.77 | 0.44 | 0.72 | 0.69 |
| Some college | 0.45 | 0.87 | 0.69 | 0.48 | 0.75 | 0.56 |
| College graduation | 0.65 | 1.13 | 0.78 | 0.67 | 1.01 | 0.62 |
| Graduate/professional degree | 0.93 | 1.39 | 0.86 | 0.89 | 1.19 | 0.67 |
| Student's educational expectations | | | | | | |
| High school or less | 0.61 | 1.79 | 1.18 | 0.74 | 1.15 | 1.04 |
| Some college | 0.62 | 1.69 | 1.08 | 0.86 | 1.15 | 1.12 |
| College graduation | 0.40 | 0.97 | 0.64 | 0.46 | 0.74 | 0.56 |
| Graduate/professional degree | 0.61 | 0.90 | 0.70 | 0.63 | 0.87 | 0.56 |
| Don't know | 0.68 | 1.55 | 1.08 | 0.77 | 1.22 | 0.80 |
| Native language ¹ | | | | | | |
| English | 0.34 | 0.66 | 0.50 | 0.37 | 0.55 | 0.48 |
| Non-English | 0.63 | 1.51 | 0.82 | 0.65 | 0.86 | 0.52 |
| High school program ² | | | | | | |
| General | 0.37 | 0.97 | 0.64 | 0.50 | 0.74 | 0.61 |
| College preparatory | 0.51 | 0.78 | 0.56 | 0.48 | 0.72 | 0.44 |
| Vocational | 0.56 | 1.63 | 1.14 | 0.84 | 1.12 | 1.34 |

See notes at end of table.

Table B–11. Standard errors for table 11 estimates (percentage of high school sophomores who participated in various school-sponsored activities, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Academic club | Sports | Cheer-leading | Hobby club | Music (band, orchestra, chorus, or choir) | Vocational education club or vocational student organization |
|--|---------------|--------|---------------|------------|---|--|
| Composite achievement test score in sophomore year | | | | | | |
| Lowest quartile | 0.42 | 1.03 | 0.82 | 0.52 | 0.79 | 0.63 |
| Middle two quartiles | 0.37 | 0.81 | 0.56 | 0.42 | 0.62 | 0.53 |
| Highest quartile | 0.80 | 1.04 | 0.73 | 0.75 | 1.02 | 0.67 |
| Sophomore's school sector | | | | | | |
| Public | 0.34 | 0.67 | 0.49 | 0.35 | 0.53 | 0.46 |
| Catholic | 1.20 | 1.38 | 1.06 | 1.35 | 1.82 | 0.37 |
| Other private | 1.66 | 2.16 | 1.96 | 2.14 | 3.61 | 1.02 |
| Region of sophomore's school | | | | | | |
| Northeast | 0.85 | 1.36 | 1.26 | 0.78 | 1.29 | 0.63 |
| Midwest | 0.57 | 1.36 | 0.89 | 0.77 | 1.07 | 1.10 |
| South | 0.58 | 0.89 | 0.76 | 0.50 | 0.85 | 0.73 |
| West | 0.66 | 1.53 | 0.88 | 0.77 | 0.95 | 0.80 |
| Urbanicity of sophomore's school | | | | | | |
| Urban | 0.59 | 1.08 | 0.73 | 0.71 | 0.96 | 0.46 |
| Suburban | 0.46 | 0.91 | 0.71 | 0.46 | 0.70 | 0.52 |
| Rural | 0.74 | 1.47 | 0.94 | 0.67 | 1.27 | 1.60 |

¹The first language students learned to speak when they were children.

²Students' self-report of the type of high school program in which they participated.

NOTE: See appendix A for the weighted response rates of all unimputed variables used in this analysis. All race categories exclude Hispanic.

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

Table B-12. Standard errors for table 12 estimates (percentage of high schools offering various sports to male and female students, by school type): 2002

| Sports | Total | | Public | | Catholic | | Other private school | |
|-----------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|----------------------|-----------------|
| | Male students | Female students | Male students | Female students | Male students | Female students | Male students | Female students |
| Baseball | 3.54 | 0.49 | 3.95 | 0.38 | 0.00 | 4.85 | 8.59 | 1.67 |
| Softball | 1.93 | 3.37 | 0.52 | 3.95 | 2.13 | 6.86 | 8.40 | 8.24 |
| Basketball | 1.48 | 2.27 | 0.93 | 2.05 | 0.35 | 1.68 | 6.11 | 7.70 |
| Football | 3.27 | 2.08 | 3.73 | 2.72 | 5.21 | 0.66 | 8.06 | 0.52 |
| Soccer | 3.28 | 3.22 | 3.55 | 3.46 | 7.40 | 6.16 | 8.68 | 8.62 |
| Swim team | 2.31 | 2.34 | 2.67 | 2.69 | 8.89 | 8.52 | 4.82 | 4.93 |
| Ice hockey | 1.09 | 0.79 | 1.36 | 1.02 | 6.93 | 4.29 | 0.60 | 0.52 |
| Field hockey | 0.94 | 1.23 | 0.25 | 0.93 | 3.62 | 4.30 | 4.33 | 4.80 |
| Volleyball | 2.09 | 3.35 | 1.13 | 3.61 | 7.07 | 6.28 | 8.57 | 9.42 |
| Lacrosse | 0.92 | 0.85 | 1.01 | 0.95 | 6.16 | 3.88 | 2.04 | 2.12 |
| Tennis | 2.95 | 3.01 | 3.49 | 3.55 | 6.90 | 7.89 | 5.55 | 6.10 |
| Cross-country | 3.62 | 3.54 | 4.25 | 4.12 | 4.71 | 7.37 | 6.84 | 6.76 |
| Track | 3.39 | 3.29 | 3.63 | 3.44 | 6.19 | 6.61 | 9.37 | 9.53 |
| Golf | 3.78 | 3.59 | 4.39 | 4.24 | 2.34 | 7.64 | 8.39 | 7.52 |
| Gymnastics | 0.43 | 1.08 | 0.34 | 1.33 | 0.00 | 2.79 | 1.69 | 1.72 |
| Wrestling | 3.00 | 1.82 | 3.72 | 2.11 | 8.51 | 5.59 | 4.92 | 4.23 |
| Cheerleading | 2.99 | 3.02 | 3.80 | 3.46 | 6.53 | 4.48 | 1.57 | 8.20 |
| Pompon (pompom), drill team | 0.98 | 2.74 | 1.30 | 3.25 | 0.00 | 5.75 | 0.37 | 6.93 |
| Other | 1.48 | 1.25 | 1.09 | 1.21 | 7.74 | 7.11 | 5.67 | 3.76 |
| No sports offered | 1.18 | 1.19 | 0.88 | 1.02 | 0.00 | 0.00 | 4.62 | 4.36 |

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

Table B-13. Standard errors for table 13 estimates (percentage of high school sophomores who attended schools offering various sports to male and female students, by school type): 2002

| Sports | Percentage of sophomores attending schools offering sport to: | | | | | | | |
|-----------------------------|---|-----------------|---------------|-----------------|---------------|-----------------|----------------------|-----------------|
| | Total | | Public | | Catholic | | Other private school | |
| | Male students | Female students | Male students | Female students | Male students | Female students | Male students | Female students |
| Baseball | 0.92 | 0.80 | 0.97 | 0.85 | 0.00 | 2.77 | 5.20 | 0.99 |
| Softball | 0.82 | 0.94 | 0.86 | 0.97 | 3.68 | 3.56 | 3.38 | 6.18 |
| Basketball | 0.40 | 0.67 | 0.43 | 0.71 | 1.04 | 2.21 | 2.02 | 3.05 |
| Football | 0.84 | 1.18 | 0.85 | 1.27 | 2.88 | 1.24 | 7.33 | 1.78 |
| Soccer | 1.36 | 1.47 | 1.44 | 1.55 | 3.49 | 3.12 | 6.23 | 7.10 |
| Swim team | 2.06 | 2.02 | 2.19 | 2.14 | 5.51 | 5.21 | 7.02 | 7.29 |
| Ice hockey | 1.59 | 1.15 | 1.68 | 1.23 | 6.08 | 2.73 | 1.91 | 1.78 |
| Field hockey | 0.70 | 1.28 | 0.74 | 1.34 | 2.31 | 4.45 | 1.59 | 6.61 |
| Volleyball | 1.77 | 1.36 | 1.88 | 1.44 | 6.09 | 4.13 | 4.13 | 5.27 |
| Lacrosse | 1.55 | 1.45 | 1.63 | 1.53 | 6.03 | 4.93 | 6.28 | 6.69 |
| Tennis | 1.59 | 1.60 | 1.68 | 1.69 | 4.13 | 5.14 | 6.46 | 6.52 |
| Cross-country | 1.21 | 1.18 | 1.29 | 1.23 | 1.79 | 2.99 | 6.17 | 6.93 |
| Track | 0.89 | 0.93 | 0.93 | 0.97 | 2.56 | 3.03 | 6.08 | 6.08 |
| Golf | 1.35 | 2.02 | 1.44 | 2.15 | 1.35 | 5.26 | 5.91 | 7.27 |
| Gymnastics | 0.87 | 1.67 | 0.93 | 1.78 | 0.00 | 3.82 | 1.51 | 1.73 |
| Wrestling | 1.66 | 1.55 | 1.75 | 1.65 | 5.93 | 3.90 | 6.46 | 2.24 |
| Cheerleading | 2.26 | 1.09 | 2.41 | 1.14 | 5.92 | 4.05 | 5.50 | 6.37 |
| Pompon (pompon), drill team | 1.58 | 2.15 | 1.70 | 2.28 | 0.00 | 5.70 | 0.51 | 5.15 |
| Other | 1.62 | 1.79 | 1.71 | 1.90 | 6.55 | 6.72 | 4.96 | 3.89 |
| No sports offered | 0.22 | 0.37 | 0.23 | 0.39 | 0.00 | 0.00 | 1.62 | 1.40 |

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

**Appendix B:
Standard Error Tables**

Table B-14. Standard errors for table 14 estimates (percentage of high school sophomores who participated in one or more intramural or interscholastic sports, by selected student and school characteristics): 2002

| Selected student and school characteristics | Did not participate ¹ | Intramural | Junior varsity | Varsity | Varsity captain |
|---|----------------------------------|------------|----------------|---------|-----------------|
| Total | 0.63 | 0.52 | 0.54 | 0.57 | 0.27 |
| Sex | | | | | |
| Male | 0.81 | 0.77 | 0.72 | 0.76 | 0.38 |
| Female | 0.85 | 0.64 | 0.64 | 0.72 | 0.31 |
| Racial/ethnic group | | | | | |
| American Indian or Alaska Native | 5.33 | 5.94 | 4.41 | 4.45 | 1.37 |
| Asian or Pacific Islander | 1.87 | 1.37 | 1.81 | 1.52 | 0.52 |
| Black | 1.48 | 1.21 | 1.51 | 1.23 | 0.67 |
| Hispanic or Latino | 1.59 | 1.41 | 1.43 | 1.09 | 0.54 |
| More than one race | 2.53 | 2.29 | 2.00 | 1.94 | 0.97 |
| White | 0.79 | 0.68 | 0.69 | 0.74 | 0.35 |
| Socioeconomic status | | | | | |
| Lowest quartile | 1.09 | 0.97 | 1.00 | 0.86 | 0.43 |
| Middle two quartiles | 0.82 | 0.72 | 0.70 | 0.75 | 0.37 |
| Highest quartile | 1.05 | 0.90 | 1.06 | 1.03 | 0.51 |
| Parents' education | | | | | |
| High school or less | 1.06 | 0.93 | 0.90 | 0.78 | 0.48 |
| Some college | 0.87 | 0.78 | 0.77 | 0.78 | 0.38 |
| College graduation | 1.13 | 1.00 | 1.14 | 1.12 | 0.50 |
| Graduate/professional degree | 1.39 | 1.06 | 1.27 | 1.27 | 0.64 |
| Student's educational expectations | | | | | |
| High school or less | 1.79 | 1.64 | 1.26 | 1.30 | 0.79 |
| Some college | 1.69 | 1.65 | 1.43 | 1.10 | 0.71 |
| College graduation | 0.97 | 0.88 | 0.87 | 0.78 | 0.39 |
| Graduate/professional degree | 0.90 | 0.79 | 0.88 | 0.90 | 0.42 |
| Don't know | 1.55 | 1.45 | 1.25 | 1.25 | 0.66 |
| Native language ² | | | | | |
| English | 0.66 | 0.56 | 0.55 | 0.62 | 0.29 |
| Non-English | 1.51 | 1.35 | 1.38 | 0.97 | 0.58 |
| High school program ³ | | | | | |
| General | 0.97 | 0.80 | 0.76 | 0.80 | 0.32 |
| College preparatory | 0.78 | 0.70 | 0.77 | 0.74 | 0.38 |
| Vocational | 1.63 | 1.52 | 1.37 | 1.29 | 0.62 |

See notes at end of table.

Table B-14. Standard errors for table 14 estimates (percentage of high school sophomores who participated in one or more intramural or interscholastic sports, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Did not participate ¹ | Intramural | Junior varsity | Varsity | Varsity captain |
|--|----------------------------------|------------|----------------|---------|-----------------|
| Composite achievement test score in sophomore year | | | | | |
| Lowest quartile | 1.03 | 0.93 | 0.98 | 0.80 | 0.52 |
| Middle two quartiles | 0.81 | 0.72 | 0.67 | 0.74 | 0.30 |
| Highest quartile | 1.04 | 0.87 | 0.99 | 1.00 | 0.53 |
| Sophomore's school sector | | | | | |
| Public | 0.67 | 0.55 | 0.57 | 0.59 | 0.29 |
| Catholic | 1.38 | 1.50 | 2.07 | 1.89 | 0.64 |
| Other private | 2.16 | 2.64 | 2.59 | 2.87 | 1.10 |
| Region of sophomore's school | | | | | |
| Northeast | 1.36 | 1.14 | 1.33 | 1.29 | 0.74 |
| Midwest | 1.36 | 1.15 | 1.12 | 1.15 | 0.57 |
| South | 0.89 | 0.77 | 0.82 | 0.90 | 0.41 |
| West | 1.53 | 1.20 | 1.18 | 1.27 | 0.52 |
| Urbanicity of sophomore's school | | | | | |
| Urban | 1.08 | 0.82 | 0.93 | 1.01 | 0.43 |
| Suburban | 0.91 | 0.78 | 0.78 | 0.77 | 0.42 |
| Rural | 1.47 | 1.20 | 1.23 | 1.44 | 0.54 |

¹Students were defined as nonparticipants if they did not participate in *any* sports or they indicated their school did not offer sports.

²The first language students learned to speak when they were children.

³Students' self-report of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–15. Standard errors for table 15 estimates (percentage of high school sophomores participating in sports and extracurricular activities, by selected student characteristics): 2002

| Selected student characteristics | Sports | | Extracurricular activities | | Non-participants in sports and extracurricular activities |
|--|---------------------------|------------------|----------------------------|------------------|---|
| | Participants ¹ | Non-participants | Participants ² | Non-participants | |
| Total | 0.63 | 0.63 | 0.64 | 0.64 | 0.53 |
| Expect to earn 4-year degree or higher | 0.61 | 0.82 | 0.55 | 0.86 | 1.17 |
| Expect to go directly to college | 0.67 | 0.86 | 0.65 | 0.75 | 1.18 |
| Highest test quartile | 0.86 | 0.77 | 0.87 | 0.71 | 0.87 |
| Highest socioeconomic status quartile | 0.87 | 0.84 | 0.94 | 0.74 | 0.80 |
| Never cut class | 0.86 | 0.88 | 0.77 | 0.92 | 1.19 |
| Like school a great deal | 0.66 | 0.65 | 0.63 | 0.59 | 0.91 |
| Rate good grades as very important | 0.75 | 0.83 | 0.71 | 0.70 | 1.08 |
| Currently employed | 0.69 | 0.71 | 0.72 | 0.75 | 1.06 |
| Want to participate in college athletics | 0.72 | 0.75 | 0.75 | 0.80 | 1.12 |
| Hope to get an athletic scholarship | 0.76 | 1.66 | 0.94 | 1.10 | 2.39 |

¹Students were defined as sports participants if they indicated that they participated in at least one sport at the intramural or interscholastic level. Cheerleading, pom pom, and drill team were not included in this category. Students were defined as sports nonparticipants if they did not participate in *any* sports or they indicated that their school did not offer sports.

²Students were defined as extracurricular participants if they indicated that they participated in at least one extracurricular activity other than sports. Cheerleading, pompon (pom pom), and drill team were included in this category.

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

Table B–16. Standard errors for table 16 estimates (percentage of high school sophomores and high-intensity extracurricular participants, by selected student characteristics): 2002

| Selected student characteristics | All sophomore students | High-intensity (top quartile) extracurricular participants ¹ |
|--|------------------------|--|
| Expect to earn 4-year degree or higher | 0.56 | 0.78 |
| Expect to go directly to college | 0.52 | 0.88 |
| Highest test quartile | 0.68 | 1.18 |
| Highest socioeconomic status quartile | 0.73 | 1.27 |
| Never cut class | 0.70 | 1.14 |
| Like school a great deal | 0.45 | 0.99 |
| Rate good grades as very important | 0.53 | 1.09 |
| Currently employed | 0.52 | 0.95 |

¹Students were defined as high-intensity extracurricular participants if they spent 9 hours (or more) per week participating in extracurricular activities.

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

Table B-17. Standard errors and standard deviations for table 17 estimates (average number of hours per week spent by high school sophomores on various activities outside of school, by selected student and school characteristics): 2002

| Selected student and school characteristics | Average number of hours per week spent on the following activities: | | | | | | | | | | | |
|---|---|------|------|---|------|------|----------------------------------|------|------|------------------------------|------|-------|
| | School-sponsored extra-curricular activities | | | Additional reading not assigned by school | | | Doing homework outside of school | | | Working for pay ¹ | | |
| | n | SE | SD | n | SE | SD | n | SE | SD | n | SE | SD |
| Total | 14,555 | 0.07 | 5.73 | 14,670 | 0.04 | 3.88 | 14,903 | 0.08 | 5.76 | 4,578 | 0.21 | 10.32 |
| Sex | | | | | | | | | | | | |
| Male | 7,213 | 0.09 | 5.92 | 7,253 | 0.06 | 3.94 | 7,353 | 0.09 | 5.51 | 2,232 | 0.30 | 10.87 |
| Female | 7,342 | 0.09 | 5.53 | 7,417 | 0.06 | 3.82 | 7,550 | 0.10 | 5.93 | 2,346 | 0.25 | 9.47 |
| Racial/ethnic group | | | | | | | | | | | | |
| American Indian or Alaska Native | 116 | 0.45 | 4.75 | 119 | 0.37 | 3.50 | 125 | 0.79 | 6.77 | 27 | 2.29 | 11.53 |
| Asian or Pacific Islander | 1,387 | 0.20 | 4.84 | 1,400 | 0.14 | 3.75 | 1,427 | 0.30 | 7.10 | 266 | 0.83 | 8.78 |
| Black | 1,821 | 0.15 | 5.28 | 1,844 | 0.13 | 4.10 | 1,908 | 0.16 | 5.60 | 432 | 0.62 | 10.85 |
| Hispanic or Latino | 2,009 | 0.14 | 4.90 | 2,045 | 0.11 | 4.04 | 2,118 | 0.16 | 5.78 | 464 | 0.68 | 11.95 |
| More than one race | 708 | 0.30 | 5.82 | 707 | 0.19 | 4.21 | 720 | 0.27 | 5.59 | 226 | 0.87 | 10.84 |
| White | 8,514 | 0.09 | 5.96 | 8,555 | 0.05 | 3.78 | 8,605 | 0.10 | 5.63 | 3,163 | 0.23 | 9.86 |
| Socioeconomic status | | | | | | | | | | | | |
| Lowest quartile | 3,280 | 0.11 | 4.96 | 3,338 | 0.08 | 3.99 | 3,459 | 0.11 | 5.33 | 915 | 0.43 | 10.88 |
| Middle two quartiles | 7,060 | 0.09 | 5.70 | 7,105 | 0.06 | 3.91 | 7,180 | 0.08 | 5.49 | 2,370 | 0.28 | 10.25 |
| Highest quartile | 4,215 | 0.13 | 6.02 | 4,227 | 0.08 | 3.73 | 4,264 | 0.16 | 6.32 | 1,293 | 0.36 | 9.36 |
| Parents' education | | | | | | | | | | | | |
| High school or less | 3,642 | 0.11 | 5.12 | 3,697 | 0.07 | 3.75 | 3,803 | 0.10 | 5.20 | 1,144 | 0.37 | 10.68 |
| Some college | 4,815 | 0.10 | 5.67 | 4,846 | 0.07 | 4.03 | 4,902 | 0.10 | 5.46 | 1,557 | 0.33 | 10.10 |
| College graduation | 3,341 | 0.14 | 5.97 | 3,354 | 0.09 | 3.96 | 3,397 | 0.15 | 5.97 | 1,061 | 0.40 | 10.10 |
| Graduate/professional degree | 2,757 | 0.17 | 5.95 | 2,773 | 0.10 | 3.65 | 2,801 | 0.19 | 6.48 | 816 | 0.46 | 9.53 |
| Native language ² | | | | | | | | | | | | |
| English | 12,210 | 0.08 | 5.81 | 12,278 | 0.05 | 3.84 | 12,436 | 0.08 | 5.65 | 4,063 | 0.21 | 10.20 |
| Non-English | 2,345 | 0.14 | 4.89 | 2,392 | 0.13 | 4.14 | 2,467 | 0.18 | 6.35 | 515 | 0.69 | 11.24 |

See notes at end of table.

Table B-17. Standard errors and standard deviations for table 17 estimates (average number of hours per week spent by high school sophomores on various activities outside of school, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Average number of hours per week spent on the following activities: | | | | | | | | | | | |
|--|---|------|------|---|------|------|----------------------------------|------|------|------------------------------|------|-------|
| | School-sponsored extra-curricular activities | | | Additional reading not assigned by school | | | Doing homework outside of school | | | Working for pay ¹ | | |
| | n | SE | SD | n | SE | SD | n | SE | SD | n | SE | SD |
| Student's educational expectations | | | | | | | | | | | | |
| High school or less | 988 | 0.14 | 3.98 | 996 | 0.14 | 3.82 | 1,042 | 0.16 | 4.28 | 290 | 0.76 | 12.14 |
| Some college | 1,345 | 0.14 | 4.67 | 1,352 | 0.12 | 3.77 | 1,387 | 0.14 | 4.84 | 465 | 0.56 | 10.52 |
| College graduation | 5,213 | 0.11 | 5.81 | 5,250 | 0.06 | 3.63 | 5,299 | 0.11 | 5.34 | 1,654 | 0.32 | 9.89 |
| Graduate/professional degree | 5,685 | 0.11 | 5.99 | 5,717 | 0.07 | 4.04 | 5,780 | 0.11 | 6.24 | 1,766 | 0.29 | 9.80 |
| Don't know | 1,324 | 0.17 | 4.95 | 1,355 | 0.14 | 4.19 | 1,395 | 0.20 | 5.79 | 403 | 0.60 | 10.75 |
| High school program ³ | | | | | | | | | | | | |
| General | 5,100 | 0.10 | 5.45 | 5,154 | 0.07 | 3.85 | 5,231 | 0.10 | 5.16 | 1,654 | 0.33 | 10.56 |
| College preparatory | 8,075 | 0.10 | 5.91 | 8,116 | 0.06 | 3.85 | 8,241 | 0.11 | 6.08 | 2,477 | 0.25 | 9.85 |
| Vocational | 1,380 | 0.16 | 5.05 | 1,400 | 0.12 | 4.12 | 1,431 | 0.17 | 5.44 | 447 | 0.56 | 10.62 |
| Composite achievement test score in sophomore year | | | | | | | | | | | | |
| Lowest quartile | 3,036 | 0.10 | 4.90 | 3,079 | 0.09 | 3.97 | 3,225 | 0.10 | 4.93 | 881 | 0.46 | 11.52 |
| Middle two quartiles | 7,474 | 0.09 | 5.72 | 7,538 | 0.06 | 3.67 | 7,610 | 0.09 | 5.59 | 2,370 | 0.27 | 10.13 |
| Highest quartile | 4,045 | 0.14 | 5.95 | 4,053 | 0.08 | 4.15 | 4,068 | 0.15 | 6.24 | 1,327 | 0.29 | 8.80 |
| Sophomore's school sector | | | | | | | | | | | | |
| Public | 11,329 | 0.08 | 5.70 | 11,431 | 0.05 | 3.92 | 11,634 | 0.08 | 5.64 | 3,559 | 0.22 | 10.33 |
| Catholic | 1,892 | 0.19 | 5.92 | 1,899 | 0.09 | 3.31 | 1,910 | 0.23 | 6.10 | 643 | 0.42 | 9.01 |
| Other private | 1,334 | 0.26 | 5.41 | 1,340 | 0.13 | 3.65 | 1,359 | 0.49 | 6.95 | 376 | 0.78 | 10.19 |
| Region of sophomore's school | | | | | | | | | | | | |
| Northeast | 2,620 | 0.19 | 5.94 | 2,635 | 0.09 | 3.80 | 2,690 | 0.22 | 5.82 | 951 | 0.45 | 9.71 |
| Midwest | 3,727 | 0.14 | 5.82 | 3,746 | 0.09 | 3.94 | 3,788 | 0.14 | 5.63 | 1,440 | 0.36 | 9.85 |
| South | 5,303 | 0.11 | 5.57 | 5,342 | 0.07 | 3.83 | 5,436 | 0.10 | 5.40 | 1,501 | 0.35 | 10.66 |
| West | 2,905 | 0.16 | 5.64 | 2,947 | 0.11 | 3.95 | 2,989 | 0.22 | 6.23 | 686 | 0.58 | 11.05 |

See notes at end of table.

B-27

Table B-17. Standard errors and standard deviations for table 17 estimates (average number of hours per week spent by high school sophomores on various activities outside of school, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Average number of hours per week spent on the following activities: | | | | | | | | | | | |
|---|---|------|------|---|------|------|----------------------------------|------|------|------------------------------|------|-------|
| | School-sponsored extra-curricular activities | | | Additional reading not assigned by school | | | Doing homework outside of school | | | Working for pay ¹ | | |
| | n | SE | SD | n | SE | SD | n | SE | SD | n | SE | SD |
| Urbanicity of sophomore's school | | | | | | | | | | | | |
| Urban | 4,772 | 0.12 | 5.49 | 4,825 | 0.08 | 3.86 | 4,932 | 0.14 | 6.03 | 1,318 | 0.44 | 10.54 |
| Suburban | 7,050 | 0.11 | 5.82 | 7,093 | 0.07 | 3.86 | 7,202 | 0.12 | 5.76 | 2,346 | 0.28 | 9.98 |
| Rural | 2,733 | 0.16 | 5.79 | 2,752 | 0.09 | 3.98 | 2,769 | 0.17 | 5.25 | 914 | 0.45 | 10.86 |

¹This analysis is limited to those students who worked during the 2001–02 school year. Current school year work status information was available for only 84.3 percent of the students. In addition, only 81.7 percent of students who had ever held a job for pay reported the number of hours they worked each week. Readers are cautioned that both these estimates fall below the NCES weighted item response standard of 85 percent. Missing data have not been explicitly accounted for in the data.

²The first language students learned to speak when they were children.

³Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

Table B–18. Standard errors and standard deviations for table 18 estimates (average number of hours per week high school sophomores spent on homework in and out of school, by subject and selected student and school characteristics): 2002—Part I

| Selected student and school characteristics | Number of hours spent on all homework total | | | Number of hours spent on all homework in school | | | Number of hours spent on all homework out of school | | |
|---|---|------|------|---|------|------|---|------|------|
| | n | SE | SD | n | SE | SD | n | SE | SD |
| Total | 14,733 | 0.11 | 8.87 | 14,781 | 0.07 | 5.10 | 14,903 | 0.08 | 5.76 |
| Sex | | | | | | | | | |
| Male | 7,276 | 0.13 | 8.44 | 7,306 | 0.08 | 4.90 | 7,353 | 0.09 | 5.51 |
| Female | 7,457 | 0.15 | 9.20 | 7,475 | 0.09 | 5.27 | 7,550 | 0.10 | 5.93 |
| Racial/ethnic group | | | | | | | | | |
| American Indian or Alaska Native | 123 | 1.01 | 9.92 | 123 | 0.45 | 5.00 | 125 | 0.79 | 6.77 |
| Asian or Pacific Islander | 1,410 | 0.43 | 9.83 | 1,415 | 0.21 | 5.00 | 1,427 | 0.30 | 7.10 |
| Black | 1,875 | 0.25 | 8.78 | 1,884 | 0.14 | 4.83 | 1,908 | 0.16 | 5.60 |
| Hispanic or Latino | 2,067 | 0.26 | 9.50 | 2,086 | 0.14 | 5.33 | 2,118 | 0.16 | 5.78 |
| More than one race | 714 | 0.40 | 8.71 | 719 | 0.23 | 5.04 | 720 | 0.27 | 5.59 |
| White | 8,544 | 0.14 | 8.60 | 8,554 | 0.09 | 5.09 | 8,605 | 0.10 | 5.63 |
| Socioeconomic status | | | | | | | | | |
| Lowest quartile | 3,408 | 0.20 | 9.11 | 3,426 | 0.12 | 5.36 | 3,459 | 0.11 | 5.33 |
| Middle two quartiles | 7,097 | 0.13 | 8.74 | 7,120 | 0.08 | 5.17 | 7,180 | 0.08 | 5.49 |
| Highest quartile | 4,228 | 0.19 | 8.71 | 4,235 | 0.11 | 4.67 | 4,264 | 0.16 | 6.32 |
| Parents' education | | | | | | | | | |
| High school or less | 3,755 | 0.18 | 8.91 | 3,771 | 0.12 | 5.36 | 3,803 | 0.10 | 5.20 |
| Some college | 4,842 | 0.16 | 8.88 | 4,861 | 0.10 | 5.30 | 4,902 | 0.10 | 5.46 |
| College graduation | 3,364 | 0.20 | 8.63 | 3,375 | 0.11 | 4.76 | 3,397 | 0.15 | 5.97 |
| Graduate/professional degree | 2,772 | 0.24 | 8.88 | 2,774 | 0.12 | 4.59 | 2,801 | 0.19 | 6.48 |
| Native language ¹ | | | | | | | | | |
| English | 12,318 | 0.11 | 8.73 | 12,346 | 0.07 | 5.07 | 12,436 | 0.08 | 5.65 |
| Non-English | 2,415 | 0.27 | 9.72 | 2,435 | 0.14 | 5.26 | 2,467 | 0.18 | 6.35 |
| Student's educational expectations | | | | | | | | | |
| High school or less | 1,024 | 0.28 | 7.70 | 1,033 | 0.18 | 4.79 | 1,042 | 0.16 | 4.28 |
| Some college | 1,368 | 0.27 | 8.72 | 1,375 | 0.18 | 5.46 | 1,387 | 0.14 | 4.84 |
| College graduation | 5,244 | 0.16 | 8.55 | 5,257 | 0.10 | 5.14 | 5,299 | 0.11 | 5.34 |
| Graduate/professional degree | 5,735 | 0.16 | 8.99 | 5,748 | 0.09 | 4.98 | 5,780 | 0.11 | 6.24 |
| Don't know | 1,362 | 0.32 | 9.27 | 1,368 | 0.17 | 5.16 | 1,395 | 0.20 | 5.79 |
| High school program ² | | | | | | | | | |
| General | 5,160 | 0.16 | 8.60 | 5,171 | 0.10 | 5.23 | 5,231 | 0.10 | 5.16 |
| College preparatory | 8,159 | 0.15 | 8.94 | 8,185 | 0.08 | 4.97 | 8,241 | 0.11 | 6.08 |
| Vocational | 1,414 | 0.28 | 8.93 | 1,425 | 0.17 | 5.19 | 1,431 | 0.17 | 5.44 |

See notes at end of table.

**Appendix B:
Standard Error Tables**

**Table B-18. Standard errors and standard deviations for table 18 estimates (average number of hours per week high school sophomores spent on homework in and out of school, by subject and selected student and school characteristics): 2002—Part I—
Continued**

| Selected student and school characteristics | Number of hours spent on all homework total | | | Number of hours spent on all homework in school | | | Number of hours spent on all homework out of school | | |
|--|---|------|------|---|------|------|---|------|------|
| | n | SE | SD | n | SE | SD | n | SE | SD |
| Composite achievement test score in sophomore year | | | | | | | | | |
| Lowest quartile | 3,147 | 0.19 | 8.59 | 3,180 | 0.12 | 5.09 | 3,225 | 0.10 | 4.93 |
| Middle two quartiles | 7,544 | 0.14 | 8.97 | 7,555 | 0.09 | 5.21 | 7,610 | 0.09 | 5.59 |
| Highest quartile | 4,042 | 0.19 | 8.44 | 4,046 | 0.11 | 4.86 | 4,068 | 0.15 | 6.24 |
| Sophomore's school sector | | | | | | | | | |
| Public | 11,494 | 0.12 | 8.84 | 11,537 | 0.07 | 5.14 | 11,634 | 0.08 | 5.64 |
| Catholic | 1,898 | 0.29 | 8.53 | 1,899 | 0.13 | 4.32 | 1,910 | 0.23 | 6.10 |
| Other private | 1,341 | 0.48 | 9.33 | 1,345 | 0.20 | 4.77 | 1,359 | 0.49 | 6.95 |
| Region of sophomore's school | | | | | | | | | |
| Northeast | 2,648 | 0.27 | 7.93 | 2,660 | 0.11 | 3.92 | 2,690 | 0.22 | 5.82 |
| Midwest | 3,765 | 0.20 | 9.18 | 3,772 | 0.13 | 5.56 | 3,788 | 0.14 | 5.63 |
| South | 5,370 | 0.15 | 8.38 | 5,384 | 0.10 | 4.79 | 5,436 | 0.10 | 5.40 |
| West | 2,950 | 0.31 | 9.60 | 2,965 | 0.16 | 5.44 | 2,989 | 0.22 | 6.23 |
| Urbanicity of sophomore's school | | | | | | | | | |
| Urban | 4,865 | 0.20 | 9.09 | 4,887 | 0.11 | 5.01 | 4,932 | 0.14 | 6.03 |
| Suburban | 7,118 | 0.17 | 8.79 | 7,138 | 0.09 | 5.01 | 7,202 | 0.12 | 5.76 |
| Rural | 2,750 | 0.22 | 8.73 | 2,756 | 0.17 | 5.40 | 2,769 | 0.17 | 5.25 |

See notes at end of table.

Table B–18. Standard errors and standard deviations for table 18 estimates (average number of hours per week high school sophomores spent on homework in and out of school, by subject and selected student and school characteristics): 2002—Part II

| Selected student and school characteristics | Number of hours spent on math homework total | | | Number of hours spent on math homework in school | | | Number of hours spent on math homework out of school | | |
|---|--|------|------|--|------|------|--|------|------|
| | n | SE | SD | n | SE | SD | n | SE | SD |
| Total | 14,619 | 0.06 | 5.21 | 14,729 | 0.04 | 3.11 | 14,835 | 0.04 | 3.09 |
| Sex | | | | | | | | | |
| Male | 7,258 | 0.08 | 4.97 | 7,315 | 0.05 | 3.02 | 7,338 | 0.05 | 2.97 |
| Female | 7,361 | 0.09 | 5.42 | 7,414 | 0.05 | 3.19 | 7,497 | 0.06 | 3.19 |
| Racial/ethnic group | | | | | | | | | |
| American Indian or Alaska Native | 122 | 0.42 | 4.06 | 122 | 0.20 | 2.20 | 126 | 0.29 | 2.66 |
| Asian or Pacific Islander | 1,396 | 0.22 | 5.61 | 1,406 | 0.12 | 2.99 | 1,422 | 0.14 | 3.49 |
| Black | 1,850 | 0.17 | 6.34 | 1,873 | 0.10 | 3.67 | 1,897 | 0.10 | 3.62 |
| Hispanic or Latino | 2,047 | 0.18 | 6.50 | 2,070 | 0.10 | 3.78 | 2,104 | 0.10 | 3.73 |
| More than one race | 711 | 0.30 | 5.60 | 715 | 0.17 | 3.35 | 717 | 0.19 | 3.42 |
| White | 8,493 | 0.07 | 4.46 | 8,543 | 0.04 | 2.77 | 8,569 | 0.04 | 2.69 |
| Socioeconomic status | | | | | | | | | |
| Lowest quartile | 3,367 | 0.12 | 6.04 | 3,407 | 0.07 | 3.53 | 3,436 | 0.07 | 3.40 |
| Middle two quartiles | 7,046 | 0.09 | 5.26 | 7,096 | 0.05 | 3.19 | 7,159 | 0.05 | 3.08 |
| Highest quartile | 4,206 | 0.09 | 4.19 | 4,226 | 0.05 | 2.44 | 4,240 | 0.06 | 2.76 |
| Parents' education | | | | | | | | | |
| High school or less | 3,721 | 0.10 | 5.43 | 3,757 | 0.06 | 3.27 | 3,788 | 0.06 | 3.06 |
| Some college | 4,811 | 0.11 | 5.58 | 4,851 | 0.06 | 3.30 | 4,884 | 0.06 | 3.26 |
| College graduation | 3,336 | 0.11 | 4.83 | 3,355 | 0.07 | 2.88 | 3,376 | 0.07 | 3.00 |
| Graduate/professional degree | 2,751 | 0.10 | 4.48 | 2,766 | 0.06 | 2.65 | 2,787 | 0.06 | 2.85 |
| Native language ¹ | | | | | | | | | |
| English | 12,216 | 0.07 | 4.93 | 12,304 | 0.04 | 2.97 | 12,371 | 0.04 | 2.97 |
| Non-English | 2,403 | 0.19 | 6.69 | 2,425 | 0.11 | 3.89 | 2,464 | 0.10 | 3.73 |
| Student's educational expectations | | | | | | | | | |
| High school or less | 1,011 | 0.21 | 5.93 | 1,031 | 0.12 | 3.40 | 1,029 | 0.13 | 3.57 |
| Some college | 1,362 | 0.19 | 5.70 | 1,375 | 0.11 | 3.52 | 1,390 | 0.11 | 3.14 |
| College graduation | 5,209 | 0.10 | 5.28 | 5,245 | 0.06 | 3.21 | 5,277 | 0.06 | 3.02 |
| Graduate/professional degree | 5,689 | 0.09 | 4.91 | 5,719 | 0.05 | 2.80 | 5,767 | 0.06 | 3.06 |
| Don't know | 1,348 | 0.15 | 4.77 | 1,359 | 0.10 | 3.11 | 1,372 | 0.09 | 2.81 |

See notes at end of table.

**Appendix B:
Standard Error Tables**

**Table B–18. Standard errors and standard deviations for table 18 estimates (average number of hours per week high school sophomores spent on homework in and out of school, by subject and selected student and school characteristics): 2002—Part II—
Continued**

| Selected student and school characteristics | Number of hours spent on math homework total | | | Number of hours spent on math homework in school | | | Number of hours spent on math homework out of school | | |
|--|--|------|------|--|------|------|--|------|------|
| | n | SE | SD | n | SE | SD | n | SE | SD |
| High school program ² | | | | | | | | | |
| General | 5,118 | 0.09 | 5.25 | 5,160 | 0.06 | 3.20 | 5,200 | 0.06 | 3.05 |
| College preparatory | 8,098 | 0.08 | 5.05 | 8,147 | 0.04 | 2.99 | 8,209 | 0.05 | 3.04 |
| Vocational | 1,403 | 0.20 | 5.80 | 1,422 | 0.12 | 3.31 | 1,426 | 0.11 | 3.39 |
| Composite achievement test score in sophomore year | | | | | | | | | |
| Lowest quartile | 3,128 | 0.15 | 6.84 | 3,178 | 0.09 | 4.13 | 3,211 | 0.08 | 3.73 |
| Middle two quartiles | 7,485 | 0.08 | 4.90 | 7,533 | 0.04 | 2.86 | 7,573 | 0.05 | 2.97 |
| Highest quartile | 4,006 | 0.09 | 3.95 | 4,018 | 0.05 | 2.39 | 4,051 | 0.06 | 2.63 |
| Sophomore's school sector | | | | | | | | | |
| Public | 11,415 | 0.07 | 5.29 | 11,506 | 0.04 | 3.16 | 11,594 | 0.04 | 3.11 |
| Catholic | 1,881 | 0.14 | 4.21 | 1,888 | 0.07 | 2.28 | 1,900 | 0.10 | 2.83 |
| Other private | 1,323 | 0.16 | 4.20 | 1,335 | 0.10 | 2.42 | 1,341 | 0.12 | 2.78 |
| Region of sophomore's school | | | | | | | | | |
| Northeast | 2,603 | 0.15 | 4.78 | 2,633 | 0.08 | 2.75 | 2,670 | 0.09 | 2.89 |
| Midwest | 3,746 | 0.10 | 4.88 | 3,770 | 0.07 | 3.10 | 3,772 | 0.07 | 2.94 |
| South | 5,330 | 0.10 | 5.22 | 5,368 | 0.06 | 3.08 | 5,402 | 0.05 | 3.06 |
| West | 2,940 | 0.17 | 5.75 | 2,958 | 0.09 | 3.34 | 2,991 | 0.10 | 3.40 |
| Urbanicity of sophomore's school | | | | | | | | | |
| Urban | 4,813 | 0.12 | 5.52 | 4,851 | 0.07 | 3.34 | 4,902 | 0.07 | 3.26 |
| Suburban | 7,072 | 0.09 | 5.12 | 7,121 | 0.05 | 2.98 | 7,168 | 0.05 | 3.08 |
| Rural | 2,734 | 0.12 | 4.95 | 2,757 | 0.08 | 3.07 | 2,765 | 0.08 | 2.81 |

See notes at end of table.

Table B–18. Standard errors and standard deviations for table 18 estimates (average number of hours per week high school sophomores spent on homework in and out of school, by subject and selected student and school characteristics): 2002—Part III

| Selected student and school characteristics | Number of hours spent on English homework total | | | Number of hours spent on English homework in school | | | Number of hours spent on English homework out of school | | |
|---|---|------|------|---|------|------|---|------|------|
| | n | SE | SD | n | SE | SD | n | SE | SD |
| Total | 14,614 | 0.06 | 4.97 | 14,698 | 0.03 | 2.89 | 14,853 | 0.04 | 2.99 |
| Sex | | | | | | | | | |
| Male | 7,243 | 0.07 | 4.76 | 7,289 | 0.04 | 2.78 | 7,342 | 0.05 | 2.88 |
| Female | 7,371 | 0.08 | 5.16 | 7,409 | 0.05 | 2.99 | 7,511 | 0.05 | 3.08 |
| Racial/ethnic group | | | | | | | | | |
| American Indian or Alaska Native | 120 | 0.49 | 5.22 | 120 | 0.28 | 2.92 | 126 | 0.29 | 3.18 |
| Asian or Pacific Islander | 1,387 | 0.27 | 6.04 | 1,393 | 0.16 | 3.28 | 1,422 | 0.15 | 3.64 |
| Black | 1,865 | 0.15 | 5.78 | 1,882 | 0.08 | 3.22 | 1,901 | 0.09 | 3.41 |
| Hispanic or Latino | 2,045 | 0.18 | 6.20 | 2,066 | 0.09 | 3.49 | 2,110 | 0.10 | 3.62 |
| More than one race | 714 | 0.21 | 4.86 | 716 | 0.13 | 2.87 | 721 | 0.12 | 2.88 |
| White | 8,483 | 0.07 | 4.28 | 8,521 | 0.04 | 2.60 | 8,573 | 0.04 | 2.61 |
| Socioeconomic status | | | | | | | | | |
| Lowest quartile | 3,373 | 0.11 | 5.64 | 3,407 | 0.07 | 3.32 | 3,443 | 0.06 | 3.17 |
| Middle two quartiles | 7,053 | 0.08 | 4.98 | 7,090 | 0.05 | 2.89 | 7,171 | 0.05 | 2.99 |
| Highest quartile | 4,188 | 0.09 | 4.22 | 4,201 | 0.05 | 2.38 | 4,239 | 0.06 | 2.76 |
| Parents' education | | | | | | | | | |
| High school or less | 3,723 | 0.10 | 5.29 | 3,758 | 0.06 | 3.16 | 3,791 | 0.06 | 2.99 |
| Some college | 4,824 | 0.10 | 5.15 | 4,853 | 0.05 | 2.97 | 4,896 | 0.06 | 3.08 |
| College graduation | 3,327 | 0.11 | 4.53 | 3,339 | 0.06 | 2.60 | 3,378 | 0.07 | 2.90 |
| Graduate/professional degree | 2,740 | 0.12 | 4.59 | 2,748 | 0.07 | 2.61 | 2,788 | 0.07 | 2.86 |
| Native language ¹ | | | | | | | | | |
| English | 12,223 | 0.06 | 4.73 | 12,285 | 0.04 | 2.78 | 12,389 | 0.04 | 2.87 |
| Non-English | 2,391 | 0.19 | 6.26 | 2,413 | 0.10 | 3.51 | 2,464 | 0.11 | 3.60 |

See notes at end of table.

**Appendix B:
Standard Error Tables**

**Table B–18. Standard errors and standard deviations for table 18 estimates (average number of hours per week high school sophomores spent on homework in and out of school, by subject and selected student and school characteristics): 2002—Part III—
Continued**

| Selected student and school characteristics | Number of hours spent on English homework total | | | Number of hours spent on English homework in school | | | Number of hours spent on English homework out of school | | |
|--|---|------|------|---|------|------|---|------|------|
| | n | SE | SD | n | SE | SD | n | SE | SD |
| Student's educational expectations | | | | | | | | | |
| High school or less | 1,018 | 0.19 | 5.35 | 1,033 | 0.11 | 3.21 | 1,038 | 0.10 | 3.00 |
| Some college | 1,362 | 0.18 | 5.43 | 1,375 | 0.10 | 3.14 | 1,381 | 0.10 | 3.03 |
| College graduation | 5,207 | 0.10 | 5.00 | 5,231 | 0.06 | 2.97 | 5,288 | 0.06 | 2.90 |
| Graduate/professional degree | 5,680 | 0.08 | 4.77 | 5,699 | 0.04 | 2.69 | 5,772 | 0.05 | 3.04 |
| Don't know | 1,347 | 0.15 | 4.68 | 1,360 | 0.09 | 2.76 | 1,374 | 0.09 | 2.89 |
| High school program ² | | | | | | | | | |
| General | 5,123 | 0.09 | 4.91 | 5,156 | 0.06 | 2.98 | 5,203 | 0.05 | 2.85 |
| College preparatory | 8,082 | 0.07 | 4.88 | 8,119 | 0.04 | 2.76 | 8,217 | 0.05 | 3.02 |
| Vocational | 1,409 | 0.18 | 5.59 | 1,423 | 0.10 | 3.16 | 1,433 | 0.11 | 3.24 |
| Composite achievement test score in sophomore year | | | | | | | | | |
| Lowest quartile | 3,141 | 0.14 | 6.40 | 3,179 | 0.08 | 3.79 | 3,224 | 0.08 | 3.52 |
| Middle two quartiles | 7,477 | 0.07 | 4.71 | 7,515 | 0.04 | 2.72 | 7,578 | 0.05 | 2.86 |
| Highest quartile | 3,996 | 0.08 | 3.83 | 4,004 | 0.04 | 2.12 | 4,051 | 0.06 | 2.66 |
| Sophomore's school sector | | | | | | | | | |
| Public | 11,423 | 0.06 | 5.02 | 11,489 | 0.04 | 2.93 | 11,613 | 0.04 | 2.99 |
| Catholic | 1,883 | 0.16 | 4.25 | 1,886 | 0.07 | 2.23 | 1,903 | 0.11 | 2.79 |
| Other private | 1,308 | 0.17 | 4.53 | 1,323 | 0.09 | 2.47 | 1,337 | 0.14 | 2.97 |
| Region of sophomore's school | | | | | | | | | |
| Northeast | 2,597 | 0.16 | 4.57 | 2,616 | 0.08 | 2.48 | 2,676 | 0.10 | 2.82 |
| Midwest | 3,745 | 0.11 | 4.87 | 3,764 | 0.07 | 2.97 | 3,775 | 0.07 | 2.85 |
| South | 5,329 | 0.08 | 4.91 | 5,363 | 0.05 | 2.84 | 5,407 | 0.05 | 2.96 |
| West | 2,943 | 0.14 | 5.37 | 2,955 | 0.08 | 3.10 | 2,995 | 0.09 | 3.25 |

See notes at end of table.

Table B-18. Standard errors and standard deviations for table 18 estimates (average number of hours per week high school sophomores spent on homework in and out of school, by subject and selected student and school characteristics): 2002—Part III—Continued

| Selected student and school characteristics | Number of hours spent on English homework total | | | Number of hours spent on English homework in school | | | Number of hours spent on English homework out of school | | |
|---|---|------|------|---|------|------|---|------|------|
| | n | SE | SD | n | SE | SD | n | SE | SD |
| Urbanicity of sophomore's school | | | | | | | | | |
| Urban | 4,805 | 0.11 | 5.47 | 4,835 | 0.06 | 3.12 | 4,904 | 0.07 | 3.24 |
| Suburban | 7,083 | 0.08 | 4.78 | 7,119 | 0.05 | 2.76 | 7,183 | 0.05 | 2.91 |
| Rural | 2,726 | 0.12 | 4.63 | 2,744 | 0.07 | 2.88 | 2,766 | 0.08 | 2.73 |

¹The first language students learned to speak when they were children.

²Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–19a. Standard errors for table 19a estimates (percentage of high school sophomores who reported that computers were available at home or at school according to frequency of using computers at those locations, by selected student and school characteristics): 2002

| Selected student and school characteristics | Computer available at home | Percent who used computer at home ¹ | | | Computer available at school | Percent who used computer at school ² | | |
|---|----------------------------|--|-----------------------|-------------------------------|------------------------------|--|-----------------------|-------------------------------|
| | | Never | Less than once a week | At least once or twice a week | | Never | Less than once a week | At least once or twice a week |
| Total | 0.42 | 0.23 | 0.42 | 0.50 | 0.15 | 0.73 | 0.61 | 0.72 |
| Sex | | | | | | | | |
| Male | 0.52 | 0.34 | 0.53 | 0.66 | 0.25 | 0.88 | 0.79 | 0.86 |
| Female | 0.55 | 0.27 | 0.57 | 0.60 | 0.18 | 0.84 | 0.79 | 0.91 |
| Racial/ethnic group | | | | | | | | |
| American Indian or Alaska Native | 3.47 | 2.81 | 3.91 | 4.42 | 2.49 | 5.84 | 5.11 | 5.46 |
| Asian or Pacific Islander | 0.94 | 0.80 | 1.04 | 1.08 | 0.48 | 1.89 | 1.90 | 1.76 |
| Black | 1.23 | 0.82 | 1.12 | 1.37 | 0.49 | 1.57 | 1.28 | 1.49 |
| Hispanic or Latino | 1.24 | 0.86 | 1.26 | 1.47 | 0.52 | 1.55 | 1.32 | 1.34 |
| More than one race | 1.41 | 1.32 | 1.69 | 2.00 | 0.71 | 2.25 | 2.26 | 2.33 |
| White | 0.35 | 0.23 | 0.46 | 0.49 | 0.15 | 0.86 | 0.78 | 0.95 |
| Socioeconomic status | | | | | | | | |
| Lowest quartile | 0.90 | 0.64 | 0.95 | 1.11 | 0.35 | 1.03 | 1.01 | 1.12 |
| Middle two quartiles | 0.46 | 0.30 | 0.55 | 0.59 | 0.19 | 0.93 | 0.80 | 0.87 |
| Highest quartile | 0.31 | 0.27 | 0.55 | 0.65 | 0.23 | 1.08 | 1.15 | 1.24 |
| Parents' education | | | | | | | | |
| High school or less | 0.83 | 0.59 | 0.87 | 1.01 | 0.31 | 1.05 | 1.09 | 1.06 |
| Some college | 0.52 | 0.36 | 0.66 | 0.72 | 0.24 | 0.99 | 0.91 | 0.97 |
| College graduation | 0.48 | 0.41 | 0.74 | 0.87 | 0.25 | 1.09 | 1.10 | 1.19 |
| Graduate/professional degree | 0.51 | 0.34 | 0.75 | 0.82 | 0.31 | 1.32 | 1.36 | 1.39 |
| Native language ³ | | | | | | | | |
| English | 0.38 | 0.24 | 0.44 | 0.50 | 0.15 | 0.77 | 0.66 | 0.79 |
| Non-English | 1.38 | 0.74 | 1.17 | 1.33 | 0.56 | 1.49 | 1.40 | 1.38 |
| Educational expectations | | | | | | | | |
| High school or less | 1.59 | 1.42 | 1.76 | 2.04 | 0.77 | 1.82 | 1.85 | 1.64 |
| Some college | 1.21 | 1.01 | 1.21 | 1.46 | 0.47 | 1.71 | 1.46 | 1.73 |
| College graduation | 0.61 | 0.35 | 0.62 | 0.72 | 0.22 | 0.96 | 0.93 | 0.93 |
| Graduate/professional degree | 0.46 | 0.25 | 0.60 | 0.66 | 0.22 | 0.86 | 0.93 | 0.99 |
| Do not know | 1.10 | 0.92 | 1.20 | 1.44 | 0.52 | 1.66 | 1.68 | 1.53 |
| High school program ⁴ | | | | | | | | |
| General | 0.62 | 0.40 | 0.65 | 0.78 | 0.25 | 1.08 | 0.97 | 0.99 |
| College preparatory | 0.48 | 0.26 | 0.50 | 0.54 | 0.18 | 0.82 | 0.76 | 0.84 |
| Vocational | 1.10 | 0.97 | 1.28 | 1.54 | 0.54 | 1.44 | 1.51 | 1.59 |

See notes at end of table.

Table B–19a. Standard errors for table 19a estimates (percentage of high school sophomores who reported that computers were available at home or at school according to frequency of using computers at those locations, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Computer available at home | Percent who used computer at home ¹ | | | Computer available at school | Percent who used computer at school ² | | |
|--|----------------------------|--|-----------------------|-------------------------------|------------------------------|--|-----------------------|-------------------------------|
| | | Never | Less than once a week | At least once or twice a week | | Never | Less than once a week | At least once or twice a week |
| Composite achievement test score in sophomore year | | | | | | | | |
| Lowest quartile | 0.92 | 0.68 | 0.92 | 1.13 | 0.46 | 1.30 | 1.06 | 1.10 |
| Middle two quartiles | 0.50 | 0.29 | 0.48 | 0.55 | 0.17 | 0.87 | 0.82 | 0.88 |
| Highest quartile | 0.34 | 0.22 | 0.58 | 0.64 | 0.17 | 0.95 | 1.14 | 1.28 |
| Sophomore's school sector | | | | | | | | |
| Public | 0.45 | 0.24 | 0.45 | 0.53 | 0.16 | 0.77 | 0.65 | 0.75 |
| Catholic | 0.34 | 0.27 | 0.78 | 0.92 | 0.45 | 2.54 | 1.93 | 2.56 |
| Other private | 1.08 | 1.51 | 1.19 | 2.08 | 0.95 | 3.61 | 2.94 | 4.71 |
| Region of sophomore's school | | | | | | | | |
| Northeast | 0.72 | 0.36 | 0.80 | 0.93 | 0.38 | 1.92 | 1.52 | 1.68 |
| Midwest | 0.91 | 0.46 | 0.85 | 1.01 | 0.21 | 1.38 | 1.16 | 1.58 |
| South | 0.65 | 0.40 | 0.65 | 0.76 | 0.25 | 1.18 | 1.06 | 1.12 |
| West | 1.02 | 0.58 | 1.07 | 1.28 | 0.41 | 1.60 | 1.31 | 1.55 |
| Urbanicity of sophomore's school | | | | | | | | |
| Urban | 0.89 | 0.45 | 0.87 | 1.10 | 0.36 | 1.49 | 1.11 | 1.28 |
| Suburban | 0.57 | 0.34 | 0.57 | 0.67 | 0.19 | 0.94 | 0.78 | 0.98 |
| Rural | 0.74 | 0.37 | 0.84 | 0.88 | 0.25 | 1.71 | 1.68 | 1.83 |

¹Percent of sophomores who have a computer available at home.

²Percent of sophomores who have a computer available at school.

³The first language students learned to speak when they were children.

⁴Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–19b. Standard errors for table 19b estimates (percentage of high school sophomores who reported that computers were available at a public library or friend’s house according to frequency of using computers at those locations, by selected student and school characteristics): 2002

| Selected student and school characteristics | Percent who used computer at public library ¹ | | | | Percent who used computer at friend’s house ² | | | |
|---|--|-------|-----------------------|-------------------------------|--|-------|-----------------------|-------------------------------|
| | Computer available at public library ³ | Never | Less than once a week | At least once or twice a week | Computer available at friend’s house | Never | Less than once a week | At least once or twice a week |
| Total | 0.23 | 0.54 | 0.46 | 0.25 | 0.21 | 0.63 | 0.55 | 0.51 |
| Sex | | | | | | | | |
| Male | 0.35 | 0.71 | 0.59 | 0.36 | 0.30 | 0.82 | 0.71 | 0.69 |
| Female | 0.28 | 0.75 | 0.69 | 0.35 | 0.27 | 0.81 | 0.77 | 0.62 |
| Racial/ethnic group | | | | | | | | |
| American Indian or Alaska Native | 3.25 | 6.49 | 3.83 | 4.32 | 1.66 | 5.95 | 5.49 | 5.40 |
| Asian or Pacific Islander | 0.53 | 1.74 | 1.66 | 0.79 | 0.51 | 2.00 | 1.97 | 1.56 |
| Black | 0.53 | 1.42 | 1.14 | 0.84 | 0.63 | 1.39 | 1.19 | 1.18 |
| Hispanic or Latino | 0.71 | 1.54 | 1.29 | 0.80 | 0.71 | 1.38 | 1.37 | 1.07 |
| More than one race | 0.88 | 2.39 | 2.16 | 1.42 | 0.89 | 2.41 | 2.31 | 2.18 |
| White | 0.29 | 0.63 | 0.60 | 0.26 | 0.22 | 0.74 | 0.66 | 0.64 |
| Socioeconomic status | | | | | | | | |
| Lowest quartile | 0.51 | 1.08 | 0.93 | 0.59 | 0.51 | 1.11 | 1.03 | 0.84 |
| Middle two quartiles | 0.31 | 0.68 | 0.61 | 0.33 | 0.28 | 0.79 | 0.71 | 0.68 |
| Highest quartile | 0.33 | 0.86 | 0.80 | 0.40 | 0.21 | 1.03 | 0.94 | 0.93 |
| Parents’ education | | | | | | | | |
| High school or less | 0.47 | 0.99 | 0.83 | 0.53 | 0.44 | 1.10 | 1.09 | 0.89 |
| Some college | 0.36 | 0.78 | 0.68 | 0.38 | 0.34 | 0.94 | 0.84 | 0.78 |
| College graduation | 0.42 | 1.03 | 0.96 | 0.50 | 0.32 | 1.17 | 1.14 | 0.99 |
| Graduate/professional degree | 0.42 | 1.09 | 1.04 | 0.47 | 0.41 | 1.24 | 1.17 | 1.10 |
| Native language ⁴ | | | | | | | | |
| English | 0.25 | 0.57 | 0.50 | 0.26 | 0.22 | 0.65 | 0.57 | 0.55 |
| Non-English | 0.61 | 1.45 | 1.34 | 0.88 | 0.69 | 1.43 | 1.26 | 1.19 |
| Educational expectations | | | | | | | | |
| High school or less | 1.03 | 1.76 | 1.47 | 0.98 | 1.03 | 1.93 | 1.69 | 1.45 |
| Some college | 0.84 | 1.53 | 1.34 | 0.75 | 0.59 | 1.63 | 1.70 | 1.30 |
| College graduation | 0.36 | 0.81 | 0.69 | 0.43 | 0.30 | 0.95 | 0.89 | 0.81 |
| Graduate/professional degree | 0.30 | 0.78 | 0.73 | 0.37 | 0.27 | 0.93 | 0.90 | 0.80 |
| Do not know | 0.71 | 1.39 | 1.22 | 0.66 | 0.66 | 1.62 | 1.51 | 1.18 |
| High school program ⁵ | | | | | | | | |
| General | 0.39 | 0.77 | 0.66 | 0.40 | 0.36 | 0.93 | 0.86 | 0.73 |
| College preparatory | 0.27 | 0.71 | 0.64 | 0.33 | 0.24 | 0.77 | 0.71 | 0.64 |
| Vocational | 0.72 | 1.54 | 1.48 | 0.78 | 0.62 | 1.58 | 1.62 | 1.27 |

See notes at end of table.

Table B–19b. Standard errors for table 19b estimates (percentage of high school sophomores who reported that computers were available at a public library or friend’s house according to frequency of using computers at those locations, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Percent who used computer at public library ¹ | | | | Percent who used computer at friend’s house ² | | | |
|--|--|-------|-----------------------|-------------------------------|--|-------|-----------------------|-------------------------------|
| | Computer available at public library ³ | Never | Less than once a week | At least once or twice a week | Computer available at friend’s house | Never | Less than once a week | At least once or twice a week |
| Composite achievement test score in sophomore year | | | | | | | | |
| Lowest quartile | 0.62 | 1.13 | 0.89 | 0.67 | 0.60 | 1.09 | 1.01 | 0.88 |
| Middle two quartiles | 0.30 | 0.72 | 0.66 | 0.33 | 0.24 | 0.81 | 0.71 | 0.70 |
| Highest quartile | 0.27 | 0.93 | 0.88 | 0.36 | 0.19 | 1.04 | 0.91 | 0.83 |
| Sophomore’s school sector | | | | | | | | |
| Public | 0.25 | 0.58 | 0.49 | 0.27 | 0.23 | 0.67 | 0.58 | 0.54 |
| Catholic | 0.50 | 1.55 | 1.45 | 0.40 | 0.29 | 1.24 | 1.19 | 1.07 |
| Other private | 0.74 | 1.66 | 1.32 | 0.88 | 0.61 | 2.40 | 2.05 | 1.87 |
| Region of sophomore’s school | | | | | | | | |
| Northeast | 0.59 | 1.33 | 1.17 | 0.56 | 0.40 | 1.61 | 1.54 | 1.59 |
| Midwest | 0.45 | 1.13 | 0.94 | 0.53 | 0.44 | 1.26 | 1.05 | 0.91 |
| South | 0.35 | 0.84 | 0.70 | 0.35 | 0.33 | 0.93 | 0.81 | 0.69 |
| West | 0.54 | 1.22 | 1.02 | 0.61 | 0.52 | 1.33 | 1.16 | 1.04 |
| Urbanicity of sophomore’s school | | | | | | | | |
| Urban | 0.44 | 1.00 | 0.78 | 0.54 | 0.48 | 1.17 | 1.01 | 0.99 |
| Suburban | 0.32 | 0.75 | 0.66 | 0.32 | 0.26 | 0.85 | 0.75 | 0.71 |
| Rural | 0.54 | 1.18 | 1.05 | 0.51 | 0.43 | 1.51 | 1.25 | 1.03 |

¹Percent of sophomores who have a computer available at a public library.

²Percent of sophomores who have a computer available at a friend’s house.

³For activities other than catalog searches.

⁴The first language students learned to speak when they were children.

⁵Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–20. Standard errors and standard deviations for table 20 estimates (average number of hours per day high school sophomores used a computer for school or nonschoolwork and percentage who reported using a computer at least once or twice per week for various purposes, by selected student and school characteristics): 2002

| Selected student and school characteristics | Average number of hours a day using computer for | | | | | | Percentage using a computer at least once or twice per week for | | |
|---|--|------|------|---------------|------|------|---|---------------------------|---|
| | Schoolwork | | | Nonschoolwork | | | Fun | Schoolwork or assignments | Learning things of interest to me on my own |
| | n | SE | SD | n | SE | SD | | | |
| Total | 14,066 | 0.02 | 1.20 | 14,101 | 0.02 | 1.74 | 0.58 | 0.75 | 0.57 |
| Sex | | | | | | | | | |
| Male | 6,931 | 0.02 | 1.22 | 6,950 | 0.03 | 1.82 | 0.73 | 0.93 | 0.78 |
| Female | 7,135 | 0.02 | 1.17 | 7,151 | 0.02 | 1.64 | 0.75 | 0.87 | 0.71 |
| Racial/ethnic group | | | | | | | | | |
| American Indian or Alaska Native | 110 | 0.12 | 1.12 | 113 | 0.24 | 1.74 | 3.56 | 4.45 | 4.47 |
| Asian or Pacific Islander | 1,335 | 0.05 | 1.31 | 1,340 | 0.07 | 1.77 | 1.48 | 1.84 | 1.73 |
| Black | 1,752 | 0.04 | 1.33 | 1,761 | 0.06 | 1.83 | 1.22 | 1.42 | 1.41 |
| Hispanic or Latino | 1,979 | 0.04 | 1.24 | 1,984 | 0.04 | 1.76 | 1.69 | 1.50 | 1.24 |
| More than one race | 696 | 0.06 | 1.24 | 699 | 0.10 | 1.91 | 2.19 | 2.35 | 2.22 |
| White | 8,194 | 0.02 | 1.13 | 8,204 | 0.02 | 1.69 | 0.56 | 0.93 | 0.70 |
| Socioeconomic status | | | | | | | | | |
| Lowest quartile | 3,186 | 0.03 | 1.24 | 3,207 | 0.04 | 1.80 | 1.08 | 1.15 | 1.03 |
| Middle two quartiles | 6,855 | 0.02 | 1.18 | 6,861 | 0.03 | 1.75 | 0.68 | 0.84 | 0.75 |
| Highest quartile | 4,025 | 0.03 | 1.20 | 4,033 | 0.03 | 1.64 | 0.86 | 1.31 | 0.97 |
| Parents' education | | | | | | | | | |
| High school or less | 3,554 | 0.03 | 1.22 | 3,566 | 0.04 | 1.79 | 1.08 | 1.05 | 0.96 |
| Some college | 4,641 | 0.02 | 1.19 | 4,658 | 0.03 | 1.74 | 0.76 | 0.99 | 0.90 |
| College graduation | 3,241 | 0.03 | 1.18 | 3,239 | 0.04 | 1.71 | 0.95 | 1.21 | 1.12 |
| Graduate/professional degree | 2,630 | 0.03 | 1.19 | 2,638 | 0.05 | 1.66 | 1.03 | 1.57 | 1.24 |
| Native language ¹ | | | | | | | | | |
| English | 11,753 | 0.02 | 1.18 | 11,777 | 0.02 | 1.73 | 0.56 | 0.78 | 0.60 |
| Non-English | 2,313 | 0.03 | 1.26 | 2,324 | 0.05 | 1.80 | 1.47 | 1.57 | 1.38 |
| Student's educational expectations | | | | | | | | | |
| High school or less | 942 | 0.05 | 1.18 | 942 | 0.07 | 1.84 | 1.97 | 1.36 | 1.58 |
| Some college | 1,306 | 0.04 | 1.13 | 1,310 | 0.06 | 1.82 | 1.52 | 1.68 | 1.66 |
| College graduation | 4,988 | 0.02 | 1.22 | 5,014 | 0.03 | 1.73 | 0.81 | 0.98 | 0.95 |
| Graduate/professional degree | 5,488 | 0.02 | 1.18 | 5,491 | 0.03 | 1.69 | 0.73 | 1.00 | 0.90 |
| Don't know | 1,342 | 0.04 | 1.20 | 1,344 | 0.06 | 1.74 | 1.45 | 1.65 | 1.54 |

See notes at end of table.

Table B–20. Standard errors and standard deviations for table 20 estimates (average number of hours per day high school sophomores used a computer for school or nonschoolwork and percentage who reported using a computer at least once or twice per week for various purposes, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Average number of hours a day using computer for | | | | | | Percentage using a computer at least once or twice per week for | | |
|---|--|------|------|---------------|------|------|---|----------------------------|---|
| | Schoolwork | | | Nonschoolwork | | | Fun | School-work or assignments | Learning things of interest to me on my own |
| | n | SE | SD | n | SE | SD | | | |
| High school program² | | | | | | | | | |
| General | 4,926 | 0.02 | 1.15 | 4,940 | 0.03 | 1.77 | 0.89 | 1.08 | 0.80 |
| College preparatory | 7,776 | 0.02 | 1.21 | 7,798 | 0.03 | 1.68 | 0.66 | 0.91 | 0.73 |
| Vocational | 1,364 | 0.04 | 1.28 | 1,363 | 0.06 | 1.88 | 1.46 | 1.65 | 1.67 |
| Composite achievement test score in sophomore year | | | | | | | | | |
| Lowest quartile | 3,053 | 0.03 | 1.29 | 3,077 | 0.04 | 1.84 | 1.06 | 1.10 | 1.12 |
| Middle two quartiles | 7,121 | 0.02 | 1.19 | 7,133 | 0.03 | 1.75 | 0.63 | 0.87 | 0.73 |
| Highest quartile | 3,892 | 0.02 | 1.11 | 3,891 | 0.04 | 1.59 | 0.83 | 1.25 | 1.08 |
| Sophomore's school sector | | | | | | | | | |
| Public | 10,979 | 0.02 | 1.20 | 11,012 | 0.02 | 1.74 | 0.62 | 0.79 | 0.60 |
| Catholic | 1,819 | 0.05 | 1.12 | 1,821 | 0.04 | 1.60 | 1.05 | 2.14 | 1.97 |
| Other private | 1,268 | 0.06 | 1.21 | 1,268 | 0.07 | 1.69 | 2.60 | 3.78 | 2.22 |
| Region of sophomore's school | | | | | | | | | |
| Northeast | 2,540 | 0.03 | 1.24 | 2,560 | 0.05 | 1.79 | 0.96 | 1.83 | 1.27 |
| Midwest | 3,585 | 0.03 | 1.15 | 3,599 | 0.04 | 1.72 | 1.12 | 1.47 | 1.04 |
| South | 5,129 | 0.03 | 1.21 | 5,138 | 0.03 | 1.73 | 0.83 | 1.10 | 0.89 |
| West | 2,812 | 0.04 | 1.18 | 2,804 | 0.05 | 1.69 | 1.61 | 1.81 | 1.41 |
| Urbanicity of sophomore's school | | | | | | | | | |
| Urban | 4,587 | 0.03 | 1.29 | 4,597 | 0.04 | 1.76 | 1.15 | 1.40 | 1.22 |
| Suburban | 6,846 | 0.02 | 1.17 | 6,868 | 0.03 | 1.73 | 0.85 | 1.07 | 0.73 |
| Rural | 2,633 | 0.03 | 1.10 | 2,636 | 0.04 | 1.71 | 0.95 | 1.59 | 1.14 |

¹The first language students learned to speak when they were children.

²Students' self-reports of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–21. Standard errors and standard deviations for table 21 estimates (percentage of high school sophomores demonstrating proficiency in specific reading knowledge and skills, by student, family, and school characteristics): 2002

| Selected student, family, and school characteristics | Sample (n) | Level 1 ¹ | | Level 2 ² | | Level 3 ³ | |
|--|------------|----------------------|-------|----------------------|-------|----------------------|-------|
| | | SE | SD | SE | SD | SE | SD |
| Total | 15,362 | 0.39 | 25.57 | 0.70 | 39.65 | 0.28 | 21.08 |
| Sex | | | | | | | |
| Male | 7,646 | 0.48 | 27.60 | 0.78 | 39.94 | 0.32 | 20.92 |
| Female | 7,716 | 0.44 | 23.18 | 0.85 | 39.25 | 0.37 | 21.25 |
| Racial/ethnic group | | | | | | | |
| American Indian or Alaska Native | 131 | 2.46 | 28.44 | 3.36 | 34.47 | 0.30 | 3.25 |
| Asian or Pacific Islander | 1,465 | 0.95 | 23.25 | 1.98 | 39.75 | 1.07 | 23.10 |
| Black | 2,033 | 0.89 | 31.40 | 1.08 | 32.01 | 0.22 | 9.42 |
| Hispanic or Latino | 2,234 | 1.12 | 33.78 | 1.18 | 35.29 | 0.30 | 11.60 |
| More than one race | 742 | 1.16 | 23.80 | 1.93 | 38.83 | 0.88 | 20.09 |
| White | 8,757 | 0.31 | 19.90 | 0.71 | 38.74 | 0.38 | 24.21 |
| Socioeconomic status | | | | | | | |
| Lowest quartile | 3,635 | 0.77 | 32.23 | 0.84 | 33.80 | 0.23 | 11.07 |
| Middle two quartiles | 7,388 | 0.39 | 24.52 | 0.68 | 38.56 | 0.25 | 17.69 |
| Highest quartile | 4,339 | 0.38 | 15.86 | 0.88 | 35.98 | 0.71 | 29.95 |
| Parents' education | | | | | | | |
| High school or less | 3,977 | 0.70 | 30.46 | 0.80 | 35.53 | 0.24 | 11.91 |
| Some college | 5,049 | 0.46 | 25.10 | 0.83 | 38.70 | 0.28 | 17.20 |
| College graduation | 3,484 | 0.53 | 22.25 | 0.96 | 38.96 | 0.57 | 24.37 |
| Graduate/professional degree | 2,852 | 0.56 | 18.95 | 1.17 | 37.62 | 0.84 | 30.38 |
| Student's educational expectations | | | | | | | |
| High school or less | 1,127 | 1.37 | 37.69 | 0.98 | 26.75 | 0.20 | 5.70 |
| Some college | 1,453 | 0.94 | 31.01 | 1.07 | 33.09 | 0.29 | 9.55 |
| College graduation | 5,455 | 0.47 | 22.69 | 0.85 | 38.74 | 0.36 | 19.62 |
| Graduate/professional degree | 5,866 | 0.34 | 17.59 | 0.85 | 37.60 | 0.48 | 26.08 |
| Don't know | 1,461 | 0.99 | 30.21 | 1.22 | 37.71 | 0.59 | 17.95 |
| Native language ⁴ | | | | | | | |
| English | 12,766 | 0.33 | 22.92 | 0.68 | 39.46 | 0.29 | 21.87 |
| Non-English | 2,596 | 1.13 | 35.49 | 1.18 | 35.55 | 0.41 | 14.65 |
| Family composition | | | | | | | |
| Mother and father | 9,131 | 0.40 | 22.69 | 0.77 | 39.68 | 0.38 | 23.72 |
| Mother or father and guardian | 2,375 | 0.71 | 28.05 | 1.10 | 38.48 | 0.49 | 17.60 |
| Single parent (mother or father) | 3,209 | 0.69 | 28.36 | 0.97 | 38.40 | 0.32 | 16.15 |
| Other ⁵ | 647 | 1.67 | 31.72 | 1.67 | 35.08 | 0.66 | 13.54 |
| High school program ⁶ | | | | | | | |
| General | 5,419 | 0.55 | 27.70 | 0.83 | 37.95 | 0.28 | 15.26 |
| College preparatory | 8,439 | 0.41 | 22.01 | 0.79 | 39.38 | 0.43 | 25.35 |
| Vocational | 1,504 | 0.96 | 30.70 | 1.39 | 35.12 | 0.39 | 11.19 |

See notes at end of table.

Table B–21. Standard errors and standard deviations for table 21 estimates (percentage of high school sophomores demonstrating proficiency in specific reading knowledge and skills, by student, family, and school characteristics): 2002—Continued

| Selected student, family, and school characteristics | Sample (n) | Level 1 ¹ | | Level 2 ² | | Level 3 ³ | |
|--|------------|----------------------|-------|----------------------|-------|----------------------|-------|
| | | SE | SD | SE | SD | SE | SD |
| Sophomore's school sector | | | | | | | |
| Public | 12,039 | 0.42 | 26.16 | 0.74 | 39.45 | 0.29 | 20.16 |
| Catholic | 1,920 | 0.53 | 11.75 | 1.70 | 34.60 | 1.17 | 27.48 |
| Other private | 1,403 | 1.14 | 18.96 | 2.69 | 37.69 | 1.63 | 30.40 |
| Region of sophomore's school | | | | | | | |
| Northeast | 2,763 | 0.77 | 22.98 | 1.56 | 39.50 | 0.72 | 23.20 |
| Midwest | 3,879 | 0.76 | 24.04 | 1.44 | 39.68 | 0.55 | 21.90 |
| South | 5,640 | 0.56 | 25.73 | 0.99 | 39.33 | 0.39 | 20.19 |
| West | 3,080 | 1.04 | 28.46 | 1.70 | 39.46 | 0.66 | 19.52 |
| Urbanicity of sophomore's school | | | | | | | |
| Urban | 5,115 | 0.86 | 28.04 | 1.46 | 39.54 | 0.58 | 21.26 |
| Suburban | 7,399 | 0.52 | 24.58 | 0.93 | 39.69 | 0.39 | 21.11 |
| Rural | 2,848 | 0.64 | 23.75 | 1.34 | 39.23 | 0.46 | 20.73 |

¹Simple reading comprehension, including reproduction of detail and/or author's main thought.

²Ability to make relatively simple inferences beyond the author's main thought and/or understand and evaluate abstract concepts.

³Ability to make complex inferences or evaluative judgments that require piecing together multiple sources of information from the passage.

⁴The first language students learned to speak when they were children.

⁵Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.

⁶Students' self-report of the type of high school program in which they were enrolled.

NOTE: All race categories exclude Hispanic.

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

Table B-22. Standard errors and standard deviations for table 22 estimates (percentage of high school sophomores demonstrating proficiency in specific mathematics knowledge and skills, by student, family, and school characteristics): 2002

| Selected student, family, and school characteristics | 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 | 15,362 | 0.30 | 19.46 | 0.77 | 41.57 | 0.81 | 45.82 | 0.54 | 32.82 | 0.08 | 6.62 |
| Sex | | | | | | | | | | | |
| Male | 7,646 | 0.35 | 19.69 | 0.84 | 41.21 | 0.92 | 46.02 | 0.63 | 34.24 | 0.13 | 8.17 |
| Female | 7,716 | 0.35 | 19.21 | 0.89 | 41.90 | 0.92 | 45.55 | 0.63 | 31.18 | 0.07 | 4.49 |
| Racial/ethnic group | | | | | | | | | | | |
| American Indian or Alaska Native | 131 | 1.91 | 18.56 | 5.28 | 42.57 | 4.65 | 40.15 | 1.36 | 13.85 | 0.11 | 1.94 |
| Asian or Pacific Islander | 1,465 | 0.56 | 14.64 | 1.69 | 36.74 | 2.19 | 44.92 | 2.07 | 39.52 | 0.69 | 15.06 |
| Black | 2,033 | 0.81 | 25.17 | 1.52 | 42.53 | 1.22 | 35.16 | 0.48 | 15.31 | 0.06 | 2.33 |
| Hispanic or Latino | 2,234 | 0.73 | 26.05 | 1.47 | 43.88 | 1.31 | 39.64 | 0.70 | 22.42 | 0.07 | 3.25 |
| More than one race | 742 | 1.01 | 21.73 | 2.07 | 41.47 | 2.17 | 44.74 | 1.31 | 29.34 | 0.33 | 5.91 |
| White | 8,757 | 0.20 | 14.02 | 0.64 | 36.09 | 0.79 | 44.98 | 0.64 | 35.69 | 0.10 | 7.03 |
| Socioeconomic status | | | | | | | | | | | |
| Lowest quartile | 3,635 | 0.56 | 25.11 | 1.15 | 43.75 | 0.96 | 39.23 | 0.45 | 20.33 | 0.05 | 2.58 |
| Middle two quartiles | 7,388 | 0.33 | 18.20 | 0.75 | 40.68 | 0.81 | 45.23 | 0.52 | 30.26 | 0.06 | 4.32 |
| Highest quartile | 4,339 | 0.26 | 11.84 | 0.73 | 29.94 | 1.02 | 41.35 | 0.95 | 39.33 | 0.23 | 11.29 |
| Parents' education | | | | | | | | | | | |
| High school or less | 3,977 | 0.48 | 22.90 | 1.02 | 43.64 | 0.95 | 41.38 | 0.54 | 23.11 | 0.05 | 2.69 |
| Some college | 5,049 | 0.37 | 19.36 | 0.88 | 41.52 | 0.93 | 44.94 | 0.56 | 29.34 | 0.06 | 3.76 |
| College graduation | 3,484 | 0.37 | 16.28 | 0.91 | 37.47 | 1.13 | 45.43 | 0.86 | 36.02 | 0.17 | 7.42 |
| Graduate/professional degree | 2,852 | 0.46 | 15.41 | 1.09 | 33.64 | 1.32 | 42.72 | 1.20 | 39.68 | 0.31 | 12.25 |

See notes at end of table.

Table B–22. Standard errors and standard deviations for table 22 estimates (percentage of high school sophomores demonstrating proficiency in specific mathematics knowledge and skills, by student, family, and school characteristics): 2002—Continued

| Selected student, family, and school characteristics | 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 | 1,127 | 1.05 | 28.62 | 1.42 | 40.27 | 1.13 | 29.86 | 0.43 | 12.67 | 0.02 | 1.34 |
| Some college | 1,453 | 0.85 | 25.16 | 1.48 | 42.88 | 1.33 | 38.02 | 0.61 | 18.19 | 0.02 | 0.86 |
| College graduation | 5,455 | 0.33 | 16.55 | 0.89 | 39.79 | 1.00 | 45.48 | 0.66 | 31.36 | 0.07 | 4.48 |
| Graduate/professional degree | 5,866 | 0.30 | 13.65 | 0.81 | 34.43 | 1.00 | 44.09 | 0.82 | 37.61 | 0.17 | 9.64 |
| Don't know | 1,461 | 0.72 | 22.92 | 1.46 | 43.99 | 1.44 | 42.75 | 0.95 | 27.65 | 0.16 | 5.22 |
| Native language ⁶ | | | | | | | | | | | |
| English | 12,766 | 0.26 | 17.71 | 0.71 | 40.37 | 0.79 | 45.81 | 0.55 | 33.36 | 0.08 | 6.43 |
| Non-English | 2,596 | 0.81 | 26.53 | 1.62 | 44.53 | 1.44 | 42.36 | 0.91 | 27.99 | 0.19 | 7.68 |
| High school program ⁷ | | | | | | | | | | | |
| General | 5,419 | 0.41 | 21.40 | 0.99 | 43.06 | 0.97 | 43.76 | 0.56 | 27.40 | 0.06 | 3.91 |
| College preparatory | 8,439 | 0.30 | 16.56 | 0.75 | 37.42 | 0.91 | 45.34 | 0.73 | 36.31 | 0.13 | 8.47 |
| Vocational | 1,504 | 0.76 | 22.76 | 1.77 | 44.02 | 1.64 | 41.79 | 0.87 | 24.42 | 0.11 | 3.42 |
| Family composition | | | | | | | | | | | |
| Mother and father | 9,131 | 0.30 | 16.99 | 0.76 | 38.81 | 0.88 | 45.75 | 0.65 | 35.40 | 0.11 | 7.49 |
| Mother or father and guardian | 2,375 | 0.50 | 20.72 | 1.20 | 42.17 | 1.32 | 44.53 | 0.81 | 28.47 | 0.12 | 4.86 |
| Single parent (mother or father) | 3,209 | 0.58 | 21.94 | 1.18 | 43.98 | 1.14 | 44.10 | 0.67 | 28.35 | 0.12 | 5.22 |
| Other ⁸ | 647 | 1.23 | 26.02 | 2.16 | 43.88 | 1.93 | 40.95 | 0.97 | 20.47 | 0.41 | 6.56 |

See notes at end of table.

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Table B–22. Standard errors and standard deviations for table 22 estimates (percentage of high school sophomores demonstrating proficiency in specific mathematics knowledge and skills, by student, family, and school characteristics): 2002—Continued

| Selected student, family, and school characteristics | 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 |
| Sophomore's school sector | | | | | | | | | | | |
| Public | 12,039 | 0.32 | 19.91 | 0.82 | 42.00 | 0.86 | 45.65 | 0.57 | 32.15 | 0.08 | 6.36 |
| Catholic | 1,920 | 0.36 | 8.84 | 1.22 | 28.86 | 1.74 | 41.56 | 1.66 | 36.70 | 0.23 | 7.50 |
| Other private | 1,403 | 0.83 | 13.97 | 1.93 | 32.92 | 2.76 | 43.12 | 2.43 | 38.78 | 0.49 | 10.90 |
| Region of sophomore's school | | | | | | | | | | | |
| Northeast | 2,763 | 0.69 | 18.07 | 1.73 | 39.77 | 1.99 | 45.92 | 1.38 | 34.69 | 0.20 | 6.64 |
| Midwest | 3,879 | 0.59 | 18.06 | 1.56 | 41.12 | 1.62 | 45.84 | 1.05 | 33.64 | 0.12 | 5.83 |
| South | 5,640 | 0.44 | 19.78 | 1.13 | 41.81 | 1.17 | 45.47 | 0.74 | 31.20 | 0.12 | 6.52 |
| West | 3,080 | 0.74 | 21.27 | 1.81 | 42.56 | 1.82 | 45.45 | 1.28 | 32.32 | 0.20 | 7.47 |
| Urbanicity of sophomore's school | | | | | | | | | | | |
| Urban | 5,115 | 0.67 | 22.14 | 1.65 | 43.31 | 1.71 | 45.26 | 1.03 | 31.26 | 0.13 | 6.69 |
| Suburban | 7,399 | 0.39 | 18.39 | 0.98 | 40.87 | 1.05 | 45.89 | 0.76 | 33.50 | 0.12 | 6.84 |
| Rural | 2,848 | 0.47 | 17.23 | 1.41 | 39.55 | 1.53 | 45.60 | 1.07 | 33.09 | 0.13 | 5.90 |

¹Math level 1: Simple arithmetical operations on whole numbers: essentially, single-step operations that rely on rote memory.

²Math level 2: Simple operations with decimals, fractions, powers, and roots.

³Math level 3: Simple problem solving, requiring the understanding of low-level mathematical concepts.

⁴Math level 4: Understanding of intermediate-level mathematical concepts and/or having the ability to formulate multistep solutions to word problems.

⁵Math level 5: Proficiency in solving complex multistep word problems and/or the ability to demonstrate knowledge of material found in advanced mathematics courses.

⁶The first language students learned to speak when they were children.

⁷Students' self-report of the type of high school program in which they participated.

⁸Other includes two guardians, female guardian only, male guardian only, and guardian who lives with the student less than half of the time.

NOTE: All race categories exclude Hispanic.

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

Table B–23. Standard errors and standard deviations for table 23 estimates (percentage of high school sophomores demonstrating proficiency in specific reading knowledge and skills, by selected behavioral characteristics): 2002

| Selected characteristics | Sample (n) | Level 1 ¹ | | Level 2 ² | | Level 3 ³ | |
|--|---------------|----------------------|-------|----------------------|-------|----------------------|-------|
| | | SE | SD | SE | SD | SE | SD |
| Total | 15,362 | 0.39 | 25.57 | 0.70 | 39.65 | 0.28 | 21.08 |
| Hours of outside reading per week | | | | | | | |
| None | 4,074 | 0.59 | 26.77 | 0.85 | 37.79 | 0.27 | 14.31 |
| 1–4 | 7,808 | 0.42 | 22.39 | 0.86 | 39.24 | 0.37 | 22.03 |
| 5 or more | 2,788 | 0.62 | 22.61 | 1.13 | 39.88 | 0.69 | 26.75 |
| Hours of English homework per week | | | | | | | |
| None | 1,829 | 0.90 | 29.84 | 1.25 | 39.26 | 0.54 | 17.08 |
| 1–4 | 8,027 | 0.43 | 23.58 | 0.80 | 39.49 | 0.36 | 22.07 |
| 5 or more | 4,758 | 0.49 | 22.88 | 0.99 | 39.25 | 0.44 | 21.60 |
| Importance placed on good grades | | | | | | | |
| Not important | 199 | 2.85 | 34.84 | 3.70 | 40.79 | 2.10 | 23.16 |
| Somewhat important | 1,705 | 0.88 | 28.09 | 1.23 | 37.68 | 0.50 | 16.35 |
| Important | 5,308 | 0.49 | 24.61 | 0.87 | 38.57 | 0.35 | 18.20 |
| Very important | 7,874 | 0.46 | 24.29 | 0.87 | 40.17 | 0.40 | 23.66 |
| Ever come to class without books | | | | | | | |
| Usually | 1,358 | 1.27 | 34.58 | 1.25 | 36.56 | 0.51 | 15.32 |
| Often | 942 | 1.34 | 33.15 | 1.68 | 39.48 | 0.89 | 20.15 |
| Seldom or never | 12,182 | 0.36 | 22.78 | 0.72 | 39.41 | 0.31 | 22.05 |
| Ever come to class without homework done | | | | | | | |
| Usually | 1,609 | 1.23 | 34.84 | 1.29 | 38.32 | 0.47 | 15.11 |
| Often | 1,963 | 0.88 | 28.72 | 1.25 | 39.12 | 0.54 | 19.17 |
| Seldom or never | 10,875 | 0.34 | 22.30 | 0.73 | 39.41 | 0.34 | 22.53 |
| I cut or skipped classes first semester | | | | | | | |
| Never | 10,407 | 0.39 | 23.80 | 0.76 | 39.83 | 0.36 | 23.27 |
| 1–2 times | 2,532 | 0.69 | 27.75 | 1.08 | 38.28 | 0.40 | 15.57 |
| 3–6 times | 881 | 1.13 | 27.18 | 1.71 | 37.05 | 0.74 | 16.88 |
| 7 or more times | 741 | 1.80 | 34.30 | 1.70 | 35.61 | 0.62 | 14.80 |

¹Simple reading comprehension, including reproduction of detail and/or author's main thought.

²Ability to make relatively simple inferences beyond the author's main thought and/or understand and evaluate abstract concepts.

³Ability to make complex inferences or evaluative judgments that require piecing together multiple sources of information from the passage.

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

Table B-24. Standard errors and standard deviations for table 24 estimates (percentage of high school sophomores demonstrating proficiency in specific mathematics knowledge and skills, by selected behavioral characteristics): 2002

| Selected characteristics | 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 | 15,362 | 0.30 | 19.46 | 0.77 | 41.57 | 0.81 | 45.82 | 0.54 | 32.82 | 0.08 | 6.62 |
| Hours of math homework per week | | | | | | | | | | | |
| None | 1,208 | 0.86 | 22.39 | 1.75 | 43.75 | 1.82 | 43.66 | 1.25 | 27.89 | 0.10 | 3.10 |
| 1-4 | 7,482 | 0.35 | 18.23 | 0.90 | 41.47 | 0.94 | 45.74 | 0.61 | 32.75 | 0.10 | 6.53 |
| 5 or more | 5,929 | 0.34 | 16.95 | 0.82 | 38.80 | 0.95 | 45.67 | 0.76 | 34.44 | 0.14 | 7.65 |
| Importance placed on good grades | | | | | | | | | | | |
| Not important | 199 | 2.75 | 27.81 | 3.97 | 44.46 | 3.98 | 44.66 | 2.92 | 32.43 | 0.17 | 2.81 |
| Somewhat important | 1,705 | 0.58 | 18.53 | 1.40 | 41.64 | 1.45 | 43.65 | 0.89 | 27.75 | 0.15 | 5.12 |
| Important | 5,308 | 0.35 | 18.29 | 0.91 | 41.79 | 0.96 | 44.86 | 0.59 | 29.03 | 0.09 | 5.47 |
| Very important | 7,874 | 0.38 | 19.30 | 0.90 | 40.64 | 0.97 | 46.19 | 0.73 | 35.76 | 0.12 | 7.65 |
| Ever come to class without books | | | | | | | | | | | |
| Usually | 1,358 | 0.97 | 26.44 | 1.59 | 44.62 | 1.56 | 42.57 | 0.95 | 26.79 | 0.13 | 4.67 |
| Often | 942 | 1.02 | 25.43 | 1.82 | 44.70 | 1.72 | 43.27 | 1.27 | 29.67 | 0.25 | 6.99 |
| Seldom or never | 12,182 | 0.25 | 17.11 | 0.74 | 39.97 | 0.82 | 45.82 | 0.58 | 33.88 | 0.09 | 6.96 |

See notes at end of table.

Table B–24. Standard errors and standard deviations for table 24 estimates (percentage of high school sophomores demonstrating proficiency in specific mathematics knowledge and skills, by selected behavioral characteristics): 2002—Continued

| Selected characteristics | 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 |
| Ever come to class without homework done | | | | | | | | | | | |
| Usually | 1,609 | 0.96 | 25.82 | 1.58 | 44.77 | 1.50 | 43.30 | 0.96 | 27.90 | 0.11 | 4.47 |
| Often | 1,963 | 0.66 | 22.14 | 1.37 | 43.58 | 1.38 | 44.52 | 0.93 | 29.89 | 0.18 | 6.19 |
| Seldom or never | 10,875 | 0.26 | 16.96 | 0.73 | 39.90 | 0.84 | 45.92 | 0.59 | 34.19 | 0.09 | 7.16 |
| I cut or skipped classes first semester | | | | | | | | | | | |
| Never | 10,407 | 0.30 | 18.17 | 0.76 | 40.13 | 0.87 | 46.01 | 0.65 | 35.16 | 0.10 | 7.21 |
| 1–2 times | 2,532 | 0.58 | 21.54 | 1.24 | 43.22 | 1.27 | 44.20 | 0.80 | 27.82 | 0.16 | 6.52 |
| 3–6 times | 881 | 0.87 | 19.96 | 1.98 | 42.87 | 1.87 | 43.16 | 1.06 | 25.14 | 0.24 | 5.79 |
| 7 or more times | 741 | 1.15 | 25.50 | 2.13 | 44.17 | 1.96 | 41.16 | 1.07 | 22.62 | 0.04 | 1.79 |

¹Math level 1: Simple arithmetical operations on whole numbers: essentially, single-step operations that rely on rote memory.

²Math level 2: Simple operations with decimals, fractions, powers, and roots.

³Math level 3: Simple problem solving, requiring the understanding of low-level mathematical concepts.

⁴Math level 4: Understanding of intermediate-level mathematical concepts and/or having the ability to formulate multistep solutions to word problems.

⁵Math level 5: Proficiency in solving complex multistep word problems and/or the ability to demonstrate knowledge of material found in advanced mathematics courses.

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

**Appendix B:
Standard Error Tables**

Table B–25. Standard errors and standard deviations for table 25 estimates (reading proficiency of high school sophomores, by socioeconomic status [SES] and selected racial/ethnic group): 2002

| SES quartile | Racial/ethnic group | Sample (n) | 2002 high school sophomores, percent | | | | | |
|-----------------|---------------------|---------------|--------------------------------------|-------|---------|-------|---------|-------|
| | | | Level 1 | | Level 2 | | Level 3 | |
| | | | SE | SD | SE | SD | SE | SD |
| Lowest | Black | 696 | 1.41 | 33.73 | 1.17 | 25.73 | 0.24 | 6.39 |
| | Hispanic or Latino | 1,019 | 1.47 | 36.58 | 1.25 | 30.30 | 0.29 | 7.32 |
| | White | 1,289 | 0.86 | 26.07 | 1.32 | 37.41 | 0.47 | 14.15 |
| Middle | Black | 1,037 | 1.23 | 30.93 | 1.31 | 32.04 | 0.26 | 7.67 |
| | Hispanic or Latino | 909 | 1.33 | 30.29 | 1.58 | 36.13 | 0.43 | 11.65 |
| | White | 4,396 | 0.39 | 20.45 | 0.78 | 38.28 | 0.35 | 19.99 |
| Highest | Black | 300 | 1.65 | 23.62 | 2.95 | 37.80 | 1.12 | 17.87 |
| | Hispanic or Latino | 306 | 1.93 | 25.01 | 2.70 | 40.62 | 1.54 | 22.15 |
| | White | 3,072 | 0.38 | 13.95 | 0.93 | 34.03 | 0.82 | 31.13 |

NOTE: All race categories exclude Hispanic.

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

Table B-26. Standard errors and standard deviations for table 26 estimates (mathematics proficiency of high school sophomores, by socioeconomic status [SES] and selected racial/ethnic group): 2002

| | | 2002 high school sophomores, percent | | | | | | | | | |
|--------------|---------------------|--------------------------------------|---------|-------|---------|-------|---------|-------|---------|-------|----------------------|
| SES quartile | Racial/ethnic group | Sample (n) | Level 1 | | Level 2 | | Level 3 | | Level 4 | | Level 5 ¹ |
| | | | SE | SD | SE | SD | SE | SD | SE | SD | — |
| Lowest | Black | 696 | 1.04 | 25.24 | 1.93 | 39.68 | 1.38 | 28.72 | 0.54 | 11.59 | — |
| | Hispanic or Latino | 1,019 | 1.06 | 29.27 | 1.76 | 42.22 | 1.37 | 34.53 | 0.67 | 17.40 | — |
| | White | 1,289 | 0.57 | 19.57 | 1.49 | 42.89 | 1.53 | 43.17 | 0.78 | 23.64 | — |
| Middle | Black | 1,037 | 1.08 | 25.70 | 1.89 | 42.31 | 1.49 | 33.95 | 0.46 | 12.77 | — |
| | Hispanic or Latino | 909 | 0.94 | 21.99 | 1.81 | 43.58 | 1.76 | 41.40 | 0.94 | 22.53 | — |
| | White | 4,396 | 0.25 | 13.73 | 0.75 | 36.57 | 0.92 | 45.10 | 0.66 | 32.95 | — |
| Highest | Black | 300 | 1.54 | 21.19 | 3.25 | 42.02 | 3.54 | 45.22 | 1.88 | 26.28 | — |
| | Hispanic or Latino | 306 | 1.12 | 16.40 | 3.34 | 41.47 | 3.62 | 45.82 | 2.82 | 35.06 | — |
| | White | 3,072 | 0.25 | 10.06 | 0.68 | 25.86 | 1.02 | 38.64 | 1.02 | 39.34 | — |

¹Owing to the small sample size at level 5, analysis was conducted only for levels 1–4.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–27. Standard errors and standard deviations for table 27 estimates (differences in reading proficiency of high school sophomores, by level of educational expectations and selected racial/ethnic group): 2002

| Educational expectations | Racial/ethnic group | Sample (n) | 2002 high school sophomores, percent | | | | | |
|---|---------------------|------------|--------------------------------------|-------|---------|-------|---------|-------|
| | | | Level 1 | | Level 2 | | Level 3 | |
| | | | SE | SD | SE | SD | SE | SD |
| High school or less ¹ | Black | 187 | 3.26 | 38.31 | 1.39 | 17.06 | 0.03 | 0.36 |
| | Hispanic or Latino | 244 | 2.80 | 39.76 | 1.32 | 18.39 | 0.07 | 2.27 |
| | White | 567 | 1.78 | 34.74 | 1.45 | 30.75 | 0.37 | 7.59 |
| Some college ² | Black | 222 | 2.80 | 35.14 | 1.84 | 25.58 | 0.04 | 0.65 |
| | Hispanic or Latino | 255 | 2.70 | 37.03 | 2.30 | 30.36 | 0.63 | 8.64 |
| | White | 794 | 0.98 | 26.09 | 1.38 | 34.76 | 0.44 | 11.23 |
| College graduation or higher ³ | Black | 1,447 | 0.95 | 27.15 | 1.34 | 33.66 | 0.31 | 10.80 |
| | Hispanic or Latino | 1,448 | 1.23 | 30.18 | 1.46 | 37.32 | 0.42 | 13.55 |
| | White | 6,626 | 0.25 | 14.16 | 0.70 | 36.23 | 0.46 | 26.28 |

¹High school or less includes sophomores who do not expect to complete high school, those expecting to complete a GED, and those expecting to graduate from high school.

²Some college includes sophomores who expect to attend or complete a 2-year community college or vocational school and those expecting to attend a 4-year college, but not complete a degree.

³College graduation or higher includes sophomores who expect their highest degree to be a 4-year college degree, master's degree, Ph.D., M.D., or other advanced degree.

NOTE: All race categories exclude Hispanic.

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

Table B–28. Standard errors and standard deviations for table 28 estimates (differences in mathematics proficiency of high school sophomores, level of educational expectations and selected racial/ethnic group): 2002

| | | 2002 high school sophomores, percent | | | | | | | | | |
|---|---------------------|--------------------------------------|------|---------|------|---------|------|---------|------|----------------------|---|
| | | Level 1 | | Level 2 | | Level 3 | | Level 4 | | Level 5 ¹ | |
| Educational expectations | Racial/ethnic group | Sample (n) | SE | SD | SE | SD | SE | SD | SE | SD | |
| High school or less ² | Black | 187 | 2.21 | 29.03 | 2.52 | 31.22 | 1.35 | 18.27 | 0.20 | 2.58 | — |
| | Hispanic or Latino | 244 | 2.31 | 31.65 | 2.35 | 33.62 | 1.09 | 16.47 | 0.36 | 7.03 | — |
| | White | 567 | 1.22 | 25.01 | 1.96 | 42.13 | 1.76 | 34.73 | 0.75 | 15.49 | — |
| Some college ³ | Black | 222 | 2.20 | 29.16 | 2.88 | 37.00 | 1.73 | 23.12 | 0.44 | 6.88 | — |
| | Hispanic or Latino | 255 | 2.25 | 29.12 | 3.20 | 41.25 | 2.75 | 34.86 | 1.19 | 15.32 | — |
| | White | 794 | 0.90 | 20.83 | 1.72 | 42.02 | 1.64 | 40.76 | 0.83 | 20.66 | — |
| College graduation or higher ⁴ | Black | 1,447 | 0.91 | 22.09 | 1.73 | 42.58 | 1.49 | 38.08 | 0.64 | 17.69 | — |
| | Hispanic or Latino | 1,448 | 0.86 | 22.74 | 1.78 | 43.81 | 1.75 | 42.51 | 0.98 | 25.32 | — |
| | White | 6,626 | 0.15 | 9.26 | 0.56 | 29.80 | 0.75 | 42.22 | 0.72 | 37.21 | — |

¹Owing to the small sample size at level 5, analysis was conducted only for levels 1–4.

²High school or less includes sophomores who do not expect to complete high school, those expecting to complete a GED, and those expecting to graduate from high school.

³Some college includes sophomores who expect to attend or complete a 2-year community college or vocational school and those expecting to attend a 4-year college, but not complete a degree.

⁴College graduation or higher includes sophomores who expect their highest degree to be a 4-year college degree, master's degree, Ph.D., M.D., or other advanced degree.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–29. Standard errors and standard deviations for table 29 estimates (differences in reading proficiency of high school sophomores, by sex and selected racial/ethnic group): 2002

| Sex | Racial/ethnic group | Sample (n) | 2002 high school sophomores, percent | | | | | |
|--------|---------------------|---------------|--------------------------------------|-------|---------|-------|---------|-------|
| | | | Level 1 | | Level 2 | | Level 3 | |
| | | | SE | SD | SE | SD | SE | SD |
| Male | Black | 1,011 | 1.14 | 32.99 | 1.33 | 31.74 | 0.28 | 8.89 |
| | Hispanic or Latino | 1,109 | 1.51 | 35.37 | 1.59 | 35.56 | 0.42 | 11.69 |
| | White | 4,339 | 0.46 | 22.31 | 0.85 | 39.57 | 0.47 | 23.99 |
| Female | Black | 1,022 | 1.19 | 29.56 | 1.27 | 32.29 | 0.34 | 9.94 |
| | Hispanic or Latino | 1,125 | 1.29 | 31.96 | 1.39 | 35.04 | 0.40 | 11.51 |
| | White | 4,418 | 0.35 | 16.96 | 0.90 | 37.70 | 0.52 | 24.41 |

NOTE: All race categories exclude Hispanic.

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

Table B–30. Standard errors and standard deviations for table 30 estimates (differences in mathematics proficiency of high school sophomores, by sex and selected racial/ethnic group): 2002

| | | 2002 high school sophomores, percent | | | | | | | | | |
|--------|---------------------|--------------------------------------|---------|-------|---------|-------|---------|-------|---------|-------|----------------------|
| Sex | Racial/ethnic group | Sample (n) | Level 1 | | Level 2 | | Level 3 | | Level 4 | | Level 5 ¹ |
| | | | SE | SD | SE | SD | SE | SD | SE | SD | — |
| Male | Black | 1,011 | 1.05 | 24.75 | 1.91 | 42.88 | 1.64 | 36.71 | 0.60 | 15.36 | — |
| | Hispanic or Latino | 1,109 | 0.97 | 26.21 | 1.82 | 43.80 | 1.81 | 40.53 | 1.01 | 23.51 | — |
| | White | 4,339 | 0.29 | 14.85 | 0.80 | 35.91 | 0.97 | 44.89 | 0.77 | 37.11 | — |
| Female | Black | 1,022 | 1.00 | 25.59 | 1.76 | 42.04 | 1.39 | 33.36 | 0.60 | 15.25 | — |
| | Hispanic or Latino | 1,125 | 0.95 | 25.91 | 1.76 | 43.81 | 1.54 | 38.69 | 0.78 | 21.28 | — |
| | White | 4,418 | 0.26 | 13.13 | 0.79 | 36.26 | 0.98 | 45.02 | 0.80 | 33.98 | — |

¹Owing to the small sample size at level 5, analysis was conducted only for levels 1–4.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–31. Standard errors for table 31 estimates (percentage of high school sophomores who reported that various life values related to education and work were very important to them, by selected student and school characteristics): 2002

| Selected student and school characteristics | 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 interests |
|---|--------------------------|----------------------------------|-------------------------------------|----------------------|--------------------------------|--|
| Total | 0.40 | 0.38 | 0.47 | 0.56 | 0.38 | 0.51 |
| Sex | | | | | | |
| Male | 0.63 | 0.52 | 0.66 | 0.79 | 0.58 | 0.70 |
| Female | 0.45 | 0.49 | 0.67 | 0.71 | 0.45 | 0.70 |
| Racial/ethnic group | | | | | | |
| American Indian or Alaska Native | 4.01 | 3.89 | 4.06 | 5.11 | 3.97 | 4.31 |
| Asian or Pacific Islander | 1.06 | 1.12 | 1.51 | 1.91 | 1.32 | 1.68 |
| Black | 0.84 | 0.90 | 1.05 | 1.40 | 0.88 | 1.25 |
| Hispanic or Latino | 0.97 | 1.05 | 1.19 | 1.37 | 1.03 | 1.36 |
| More than one race | 1.81 | 1.63 | 2.24 | 2.43 | 1.80 | 2.22 |
| White | 0.55 | 0.47 | 0.65 | 0.68 | 0.48 | 0.62 |
| Socioeconomic status | | | | | | |
| Lowest quartile | 0.81 | 0.82 | 0.95 | 0.99 | 0.80 | 0.99 |
| Middle two quartiles | 0.58 | 0.48 | 0.59 | 0.79 | 0.49 | 0.64 |
| Highest quartile | 0.77 | 0.65 | 0.93 | 0.92 | 0.77 | 0.87 |
| Parents' education | | | | | | |
| High school or less | 0.73 | 0.75 | 0.91 | 0.88 | 0.76 | 0.97 |
| Some college | 0.67 | 0.53 | 0.72 | 0.93 | 0.58 | 0.80 |
| College graduation | 0.76 | 0.77 | 1.07 | 1.10 | 0.80 | 1.05 |
| Graduate/professional degree | 0.95 | 0.80 | 1.03 | 1.19 | 0.93 | 1.10 |
| Student's educational expectations | | | | | | |
| High school or less | 1.90 | 1.82 | 1.87 | 1.70 | 1.67 | 1.72 |
| Some college | 1.39 | 1.35 | 1.54 | 1.73 | 1.27 | 1.51 |
| College graduation | 0.64 | 0.57 | 0.79 | 0.87 | 0.66 | 0.77 |
| Graduate/professional degree | 0.40 | 0.37 | 0.71 | 0.85 | 0.55 | 0.74 |
| Don't know | 1.55 | 1.40 | 1.69 | 1.55 | 1.43 | 1.48 |
| Native language ¹ | | | | | | |
| English | 0.45 | 0.38 | 0.52 | 0.61 | 0.39 | 0.54 |
| Non-English | 0.97 | 1.13 | 1.21 | 1.38 | 1.10 | 1.25 |
| High school program ² | | | | | | |
| General | 0.76 | 0.65 | 0.78 | 0.81 | 0.66 | 0.81 |
| College preparatory | 0.43 | 0.43 | 0.65 | 0.76 | 0.50 | 0.63 |
| Vocational | 1.38 | 1.11 | 1.31 | 1.67 | 1.31 | 1.40 |

See notes at end of table.

Table B–31. Standard errors for table 31 estimates (percentage of high school sophomores who reported that various life values related to education and work were very important to them, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | 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 interests |
|--|--------------------------|----------------------------------|-------------------------------------|----------------------|--------------------------------|--|
| Composite achievement test score in sophomore year | | | | | | |
| Lowest quartile | 0.87 | 0.82 | 0.94 | 1.08 | 0.85 | 0.97 |
| Middle two quartiles | 0.55 | 0.47 | 0.61 | 0.72 | 0.46 | 0.64 |
| Highest quartile | 0.72 | 0.60 | 1.05 | 0.98 | 0.75 | 0.88 |
| Sophomore's school sector | | | | | | |
| Public | 0.43 | 0.41 | 0.50 | 0.60 | 0.40 | 0.54 |
| Catholic | 0.85 | 0.69 | 1.40 | 1.55 | 0.80 | 1.25 |
| Other private | 1.28 | 1.40 | 1.66 | 1.94 | 1.52 | 2.23 |
| Region of sophomore's school | | | | | | |
| Northeast | 0.98 | 0.96 | 1.22 | 1.40 | 0.84 | 1.01 |
| Midwest | 0.74 | 0.71 | 1.06 | 1.24 | 0.65 | 0.86 |
| South | 0.65 | 0.53 | 0.60 | 0.83 | 0.56 | 0.85 |
| West | 0.98 | 0.94 | 1.03 | 1.19 | 1.01 | 1.34 |
| Urbanicity of sophomore's school | | | | | | |
| Urban | 0.74 | 0.65 | 0.79 | 1.09 | 0.72 | 0.89 |
| Suburban | 0.57 | 0.55 | 0.67 | 0.80 | 0.53 | 0.76 |
| Rural | 0.92 | 0.86 | 1.12 | 1.06 | 0.78 | 1.04 |

¹The first language students learned to speak when they were children.

²Students' self-report of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–32. Standard errors for table 32 estimates (percentage of high school sophomores who reported that various life values related to family and friends were very important to them, by selected student and school characteristics): 2002

| Selected student and school characteristics | 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 | 0.47 | 0.58 | 0.43 | 0.41 |
| Sex | | | | |
| Male | 0.68 | 0.82 | 0.63 | 0.58 |
| Female | 0.60 | 0.76 | 0.57 | 0.51 |
| Racial/ethnic group | | | | |
| American Indian or Alaska Native | 6.02 | 6.63 | 3.54 | 4.23 |
| Asian or Pacific Islander | 1.45 | 1.96 | 1.65 | 1.11 |
| Black | 1.10 | 1.43 | 0.88 | 1.19 |
| Hispanic or Latino | 1.28 | 1.40 | 0.93 | 1.32 |
| More than one race | 1.95 | 2.40 | 1.85 | 1.89 |
| White | 0.56 | 0.72 | 0.57 | 0.40 |
| Socioeconomic status | | | | |
| Lowest quartile | 0.89 | 1.12 | 0.74 | 0.91 |
| Middle two quartiles | 0.61 | 0.81 | 0.58 | 0.54 |
| Highest quartile | 0.87 | 0.96 | 0.88 | 0.61 |
| Parents' education | | | | |
| High school or less | 0.82 | 0.99 | 0.68 | 0.81 |
| Some college | 0.75 | 0.92 | 0.68 | 0.62 |
| College graduation | 0.92 | 1.07 | 0.88 | 0.79 |
| Graduate/professional degree | 1.01 | 1.23 | 1.08 | 0.81 |
| Student's educational expectations | | | | |
| High school or less | 1.77 | 1.72 | 1.70 | 1.66 |
| Some college | 1.36 | 1.53 | 1.47 | 1.41 |
| College graduation | 0.72 | 0.93 | 0.67 | 0.66 |
| Graduate/professional degree | 0.72 | 0.85 | 0.63 | 0.62 |
| Don't know | 1.43 | 1.60 | 1.34 | 1.28 |
| Native language¹ | | | | |
| English | 0.48 | 0.60 | 0.46 | 0.42 |
| Non-English | 1.24 | 1.42 | 1.02 | 1.35 |
| High school program² | | | | |
| General | 0.72 | 0.84 | 0.69 | 0.70 |
| College preparatory | 0.60 | 0.80 | 0.57 | 0.49 |
| Vocational | 1.33 | 1.69 | 1.23 | 1.28 |

See notes at end of table.

Table B–32. Standard errors for table 32 estimates (percentage of high school sophomores who reported that various life values related to family and friends were very important to them, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | 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 |
|--|--|-----------------|---|---------------------------|
| Composite achievement test score in sophomore year | | | | |
| Lowest quartile | 0.85 | 0.99 | 0.83 | 0.91 |
| Middle two quartiles | 0.62 | 0.79 | 0.49 | 0.53 |
| Highest quartile | 0.84 | 1.04 | 0.91 | 0.59 |
| Sophomore's school sector | | | | |
| Public | 0.50 | 0.62 | 0.45 | 0.43 |
| Catholic | 0.94 | 1.30 | 1.18 | 0.83 |
| Other private | 1.45 | 1.48 | 1.68 | 1.02 |
| Region of sophomore's school | | | | |
| Northeast | 1.04 | 1.38 | 0.99 | 0.87 |
| Midwest | 0.86 | 1.16 | 1.02 | 0.72 |
| South | 0.76 | 0.92 | 0.64 | 0.69 |
| West | 1.13 | 1.29 | 0.87 | 0.98 |
| Urbanicity of sophomore's school | | | | |
| Urban | 0.91 | 1.07 | 0.78 | 0.87 |
| Suburban | 0.66 | 0.87 | 0.61 | 0.53 |
| Rural | 0.91 | 1.02 | 0.90 | 0.79 |

¹The first language students learned to speak when they were children.

²Student's self-report of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–33. Standard errors for table 33 estimates (percentage of high school sophomores who reported that various life values related to community and society were very important to them, by selected student and school characteristics): 2002

| Selected student and school characteristics | Living close to parents and relatives | Getting away from this area of the country | Helping other people in community | Working to correct social and economic inequalities |
|---|---------------------------------------|--|-----------------------------------|---|
| Total | 0.52 | 0.48 | 0.46 | 0.46 |
| Sex | | | | |
| Male | 0.69 | 0.64 | 0.63 | 0.60 |
| Female | 0.70 | 0.61 | 0.70 | 0.65 |
| Racial/ethnic group | | | | |
| American Indian or Alaska Native | 5.68 | 4.78 | 4.40 | 3.52 |
| Asian or Pacific Islander | 2.04 | 1.32 | 1.92 | 1.49 |
| Black | 1.14 | 1.32 | 1.42 | 1.37 |
| Hispanic or Latino | 1.23 | 1.15 | 1.29 | 1.33 |
| More than one race | 2.10 | 2.15 | 2.39 | 1.65 |
| White | 0.65 | 0.56 | 0.59 | 0.51 |
| Socioeconomic status | | | | |
| Lowest quartile | 0.98 | 0.84 | 0.93 | 0.97 |
| Middle two quartiles | 0.67 | 0.67 | 0.71 | 0.61 |
| Highest quartile | 0.89 | 0.74 | 0.87 | 0.69 |
| Parents' education | | | | |
| High school or less | 0.97 | 0.80 | 0.94 | 0.86 |
| Some college | 0.74 | 0.83 | 0.76 | 0.67 |
| College graduation | 0.99 | 0.86 | 0.95 | 0.80 |
| Graduate/professional degree | 1.09 | 0.95 | 1.18 | 0.91 |
| Student's educational expectations | | | | |
| High school or less | 1.82 | 1.64 | 1.73 | 1.47 |
| Some college | 1.54 | 1.43 | 1.43 | 1.26 |
| College graduation | 0.84 | 0.74 | 0.85 | 0.70 |
| Graduate/professional degree | 0.78 | 0.68 | 0.77 | 0.69 |
| Don't know | 1.39 | 1.32 | 1.48 | 1.20 |
| Native language¹ | | | | |
| English | 0.54 | 0.53 | 0.50 | 0.45 |
| Non-English | 1.39 | 1.03 | 1.24 | 1.38 |
| High school program² | | | | |
| General | 0.76 | 0.75 | 0.76 | 0.66 |
| College preparatory | 0.67 | 0.63 | 0.64 | 0.59 |
| Vocational | 1.41 | 1.47 | 1.53 | 1.54 |

See notes at end of table.

Table B–33. Standard errors for table 33 estimates (percentage of high school sophomores who reported that various life values related to community and society were very important to them, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Living close to parents and relatives | Getting away from this area of the country | Helping other people in community | Working to correct social and economic inequalities |
|--|---------------------------------------|--|-----------------------------------|---|
| Composite achievement test score in sophomore year | | | | |
| Lowest quartile | 1.05 | 0.96 | 1.02 | 0.96 |
| Middle two quartiles | 0.70 | 0.66 | 0.68 | 0.58 |
| Highest quartile | 0.84 | 0.71 | 0.88 | 0.64 |
| Sophomore's school sector | | | | |
| Public | 0.56 | 0.52 | 0.49 | 0.49 |
| Catholic | 1.37 | 1.05 | 1.36 | 0.95 |
| Other private | 1.56 | 1.34 | 1.95 | 1.47 |
| Region of sophomore's school | | | | |
| Northeast | 1.13 | 1.13 | 1.11 | 1.09 |
| Midwest | 1.11 | 0.77 | 0.90 | 0.88 |
| South | 0.83 | 0.82 | 0.74 | 0.72 |
| West | 1.15 | 1.20 | 0.99 | 1.10 |
| Urbanicity of sophomore's school | | | | |
| Urban | 1.02 | 0.85 | 0.82 | 0.87 |
| Suburban | 0.72 | 0.68 | 0.66 | 0.67 |
| Rural | 1.03 | 1.15 | 0.99 | 0.82 |

¹The first language students learned to speak when they were children.

²Student's self-report of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–34. Standard errors for table 34 estimates (percentage of high school sophomores who expected to reach various levels of education, by selected student and school characteristics): 2002

| Selected student and school characteristics | Less than high school | High school or GED | Attend or complete 2-year community or vocational school | Attend college, but not complete 4-year degree | Graduate from college | Master's degree or equivalent | Ph.D., M.D., or other advanced degree | Don't know |
|---|-----------------------|--------------------|--|--|-----------------------|-------------------------------|---------------------------------------|------------|
| Total | 0.10 | 0.30 | 0.29 | 0.18 | 0.46 | 0.44 | 0.40 | 0.30 |
| Sex | | | | | | | | |
| Male | 0.14 | 0.44 | 0.43 | 0.26 | 0.66 | 0.56 | 0.44 | 0.42 |
| Female | 0.13 | 0.31 | 0.34 | 0.25 | 0.65 | 0.57 | 0.61 | 0.37 |
| Racial/ethnic group | | | | | | | | |
| American Indian or Alaska Native | 0.41 | 3.28 | 2.55 | 1.49 | 6.15 | 5.07 | 4.07 | 3.04 |
| Asian or Pacific Islander | 0.43 | 0.59 | 0.57 | 0.83 | 1.89 | 1.40 | 1.75 | 1.05 |
| Black | 0.27 | 0.82 | 0.64 | 0.59 | 1.19 | 0.92 | 1.24 | 0.69 |
| Hispanic or Latino | 0.30 | 0.90 | 0.66 | 0.58 | 1.30 | 0.86 | 0.94 | 0.92 |
| More than one race | 0.49 | 1.12 | 1.00 | 0.95 | 2.32 | 1.93 | 1.82 | 1.35 |
| White | 0.11 | 0.35 | 0.34 | 0.19 | 0.60 | 0.58 | 0.47 | 0.35 |
| Socioeconomic status | | | | | | | | |
| Lowest quartile | 0.23 | 0.67 | 0.55 | 0.46 | 0.89 | 0.62 | 0.60 | 0.64 |
| Middle two quartiles | 0.14 | 0.37 | 0.39 | 0.23 | 0.70 | 0.57 | 0.52 | 0.43 |
| Highest quartile | 0.10 | 0.31 | 0.32 | 0.26 | 0.91 | 0.90 | 0.92 | 0.49 |
| Parents' education | | | | | | | | |
| High school or less | 0.21 | 0.67 | 0.56 | 0.41 | 0.90 | 0.66 | 0.57 | 0.64 |
| Some college | 0.13 | 0.45 | 0.44 | 0.35 | 0.82 | 0.65 | 0.61 | 0.50 |
| College graduation | 0.18 | 0.43 | 0.44 | 0.31 | 1.06 | 1.00 | 0.80 | 0.55 |
| Graduate/professional degree | 0.21 | 0.45 | 0.42 | 0.29 | 1.15 | 1.13 | 1.16 | 0.57 |
| Native language ¹ | | | | | | | | |
| English | 0.10 | 0.31 | 0.30 | 0.19 | 0.49 | 0.48 | 0.44 | 0.31 |
| Non-English | 0.29 | 0.85 | 0.66 | 0.59 | 1.04 | 0.88 | 0.95 | 0.82 |
| High school program ² | | | | | | | | |
| General | 0.19 | 0.55 | 0.45 | 0.33 | 0.79 | 0.59 | 0.54 | 0.56 |
| College preparatory | 0.09 | 0.24 | 0.24 | 0.23 | 0.65 | 0.66 | 0.59 | 0.36 |
| Vocational | 0.35 | 1.03 | 1.21 | 0.69 | 1.36 | 1.13 | 0.96 | 0.90 |

See notes at end of table.

Table B–34. Standard errors for table 34 estimates (percentage of high school sophomores who expected to reach various levels of education, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Less than high school | High school or GED | Attend or complete 2-year community or vocational school | Attend college, but not complete 4-year degree | Graduate from college | Master's degree or equivalent | Ph.D., M.D., or other advanced degree | Don't know |
|--|-----------------------|--------------------|--|--|-----------------------|-------------------------------|---------------------------------------|------------|
| Composite achievement test score in sophomore year | | | | | | | | |
| Lowest quartile | 0.35 | 0.81 | 0.65 | 0.54 | 0.86 | 0.57 | 0.61 | 0.70 |
| Middle two quartiles | 0.09 | 0.32 | 0.41 | 0.23 | 0.68 | 0.53 | 0.53 | 0.41 |
| Highest quartile | 0.01 | 0.18 | 0.30 | 0.20 | 0.91 | 0.95 | 0.91 | 0.48 |
| Sophomore's school sector | | | | | | | | |
| Public | 0.11 | 0.33 | 0.31 | 0.20 | 0.49 | 0.47 | 0.42 | 0.32 |
| Catholic | 0.03 | 0.26 | 0.33 | 0.37 | 1.55 | 1.41 | 1.25 | 0.58 |
| Other private | 0.12 | 0.76 | 0.39 | 0.49 | 1.69 | 1.40 | 2.09 | 0.95 |
| Region of sophomore's school | | | | | | | | |
| Northeast | 0.16 | 0.76 | 0.65 | 0.36 | 1.11 | 1.12 | 0.94 | 0.56 |
| Midwest | 0.18 | 0.54 | 0.55 | 0.34 | 0.97 | 0.83 | 0.74 | 0.65 |
| South | 0.15 | 0.44 | 0.42 | 0.29 | 0.75 | 0.60 | 0.65 | 0.40 |
| West | 0.28 | 0.77 | 0.75 | 0.47 | 0.94 | 1.15 | 0.93 | 0.81 |
| Urbanicity of sophomore's school | | | | | | | | |
| Urban | 0.19 | 0.63 | 0.47 | 0.35 | 0.86 | 0.86 | 0.86 | 0.59 |
| Suburban | 0.13 | 0.38 | 0.43 | 0.26 | 0.63 | 0.63 | 0.52 | 0.42 |
| Rural | 0.20 | 0.68 | 0.67 | 0.38 | 1.07 | 0.88 | 0.78 | 0.61 |

¹The first language students learned to speak when they were children.

²Student's self-report of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B-35. Standard errors for table 35 estimates (percentage of high school sophomores who expected to reach various levels of education, by selected racial/ethnic groups, sex, and socioeconomic status [SES]): 2002

| Racial/ethnic group and sex | SES | High school or less | Some college | College graduation | Graduate/professional degree | Don't know |
|-----------------------------|----------|---------------------|--------------|--------------------|------------------------------|------------|
| White male | All SES | 0.57 | 0.57 | 0.89 | 0.85 | 0.50 |
| | Low SES | 1.93 | 1.71 | 2.04 | 1.77 | 1.39 |
| | Mid SES | 0.71 | 0.78 | 1.22 | 1.11 | 0.74 |
| | High SES | 0.60 | 0.68 | 1.54 | 1.65 | 0.82 |
| White female | All SES | 0.38 | 0.50 | 0.83 | 0.86 | 0.47 |
| | Low SES | 1.34 | 1.69 | 1.89 | 1.96 | 1.54 |
| | Mid SES | 0.52 | 0.67 | 1.33 | 1.22 | 0.67 |
| | High SES | 0.24 | 0.46 | 1.47 | 1.44 | 0.70 |
| Black male | All SES | 1.32 | 1.22 | 1.70 | 1.54 | 1.04 |
| | Low SES | 2.09 | 2.25 | 2.71 | 2.56 | 1.41 |
| | Mid SES | 1.85 | 1.58 | 2.44 | 2.01 | 1.74 |
| | High SES | 2.80 | 3.26 | 4.36 | 4.13 | 1.49 |
| Black female | All SES | 0.89 | 1.04 | 1.73 | 1.98 | 1.03 |
| | Low SES | 1.64 | 1.73 | 2.86 | 2.79 | 1.68 |
| | Mid SES | 1.11 | 1.44 | 2.62 | 2.72 | 1.43 |
| | High SES | 1.15 | 2.63 | 4.42 | 4.29 | 3.29 |
| Hispanic or Latino male | All SES | 1.36 | 1.43 | 1.87 | 1.38 | 1.24 |
| | Low SES | 1.77 | 1.70 | 2.25 | 1.70 | 1.78 |
| | Mid SES | 1.92 | 2.42 | 3.03 | 2.41 | 1.48 |
| | High SES | 3.46 | 2.51 | 5.75 | 4.74 | 2.91 |
| Hispanic or Latina female | All SES | 1.03 | 1.00 | 1.54 | 1.68 | 1.20 |
| | Low SES | 1.59 | 1.43 | 2.10 | 2.14 | 1.74 |
| | Mid SES | 1.54 | 1.77 | 2.82 | 2.90 | 1.77 |
| | High SES | 1.65 | 2.44 | 5.07 | 5.80 | 2.79 |

NOTE: All race categories exclude Hispanic.

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

Table B–36. Standard errors for table 36 estimates (high school sophomores' plans for education after high school, by selected student and school characteristics): 2002

| Selected student and school characteristics | Plans to continue education right after high school | Plans to continue education after staying out of school for 1 year | Plans to continue education after staying out of school for over 1 year | Does not plan to continue education after high school | Don't know |
|---|---|--|---|---|------------|
| Total | 0.52 | 0.40 | 0.15 | 0.07 | 0.34 |
| Sex | | | | | |
| Male | 0.73 | 0.55 | 0.29 | 0.12 | 0.53 |
| Female | 0.67 | 0.56 | 0.13 | 0.07 | 0.40 |
| Racial/ethnic group | | | | | |
| American Indian or Alaska Native | 4.58 | 4.07 | 2.08 | 0.63 | 3.42 |
| Asian or Pacific Islander | 1.55 | 1.00 | 0.38 | 0.20 | 1.02 |
| Black | 1.25 | 1.01 | 0.27 | 0.23 | 0.79 |
| Hispanic or Latino | 1.15 | 0.97 | 0.48 | 0.21 | 0.91 |
| More than one race | 2.64 | 2.05 | 0.72 | 0.21 | 1.58 |
| White | 0.66 | 0.49 | 0.19 | 0.09 | 0.43 |
| Socioeconomic status | | | | | |
| Lowest quartile | 1.04 | 0.90 | 0.35 | 0.22 | 0.73 |
| Middle two quartiles | 0.74 | 0.61 | 0.21 | 0.09 | 0.48 |
| Highest quartile | 0.73 | 0.56 | 0.26 | 0.06 | 0.49 |
| Parents' education | | | | | |
| High school or less | 1.01 | 0.83 | 0.34 | 0.20 | 0.69 |
| Some college | 0.83 | 0.70 | 0.28 | 0.11 | 0.56 |
| College graduation | 0.90 | 0.68 | 0.30 | 0.11 | 0.57 |
| Graduate/professional degree | 0.94 | 0.82 | 0.26 | 0.07 | 0.58 |
| Student educational expectations | | | | | |
| High school or less | † | † | † | † | † |
| Some college | 1.50 | 1.41 | 0.63 | 0.38 | 1.15 |
| College graduation | 0.75 | 0.63 | 0.26 | 0.08 | 0.42 |
| Graduate/professional degree | 0.57 | 0.51 | 0.17 | 0.05 | 0.30 |
| Don't know | 1.51 | 1.15 | 0.49 | 0.40 | 1.61 |
| Native language¹ | | | | | |
| English | 0.55 | 0.43 | 0.16 | 0.07 | 0.36 |
| Non-English | 1.23 | 0.97 | 0.46 | 0.27 | 0.85 |
| High school program² | | | | | |
| General | 0.90 | 0.68 | 0.27 | 0.15 | 0.69 |
| College preparatory | 0.57 | 0.46 | 0.17 | 0.05 | 0.37 |
| Vocational | 1.62 | 1.33 | 0.70 | 0.31 | 1.07 |

See notes at end of table.

**Appendix B:
Standard Error Tables**

Table B–36. Standard errors for table 36 estimates (high school sophomores' plans for education after high school, by selected student and school characteristics): 2002—Continued

| Selected student and school characteristics | Plans to continue education right after high school | Plans to continue education after staying out of school for 1 year | Plans to continue education after staying out of school for over 1 year | Does not plan to continue education after high school | Don't know |
|--|---|--|---|---|------------|
| Composite achievement test score in sophomore year | | | | | |
| Lowest quartile | 1.16 | 0.89 | 0.41 | 0.28 | 0.89 |
| Middle two quartiles | 0.76 | 0.61 | 0.19 | 0.06 | 0.48 |
| Highest quartile | 0.82 | 0.54 | 0.27 | 0.08 | 0.60 |
| Sophomore's school sector | | | | | |
| Public | 0.56 | 0.43 | 0.17 | 0.08 | 0.36 |
| Catholic | 1.14 | 0.79 | 0.11 | 0.09 | 0.63 |
| Other private | 2.22 | 1.17 | 0.17 | 0.02 | 1.83 |
| Region of sophomore's school | | | | | |
| Northeast | 1.31 | 0.86 | 0.41 | 0.19 | 0.70 |
| Midwest | 0.99 | 0.77 | 0.18 | 0.17 | 0.69 |
| South | 0.79 | 0.63 | 0.23 | 0.09 | 0.52 |
| West | 1.17 | 0.96 | 0.44 | 0.14 | 0.81 |
| Urbanicity of sophomore's school | | | | | |
| Urban | 0.88 | 0.68 | 0.29 | 0.13 | 0.67 |
| Suburban | 0.73 | 0.57 | 0.23 | 0.09 | 0.46 |
| Rural | 1.35 | 0.90 | 0.30 | 0.18 | 0.71 |

[†]Not applicable. Questionnaire respondents who indicated in question BY56 that they did not plan to go on to postsecondary studies were routed past subsequent questions on postsecondary plans.

¹The first language students learned to speak when they were children.

²Student's self-report of the type of high school program in which they participated.

NOTE: All race categories exclude Hispanic.

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

Table B–37. Standard errors for table 37 estimates (high school sophomores’ reports of what parents and other adults thought was the most important thing for them to do right after high school): 2002

| Most important thing to do right after high school | Adults’ opinions as reported by students, in percent | | | |
|--|--|--------|------------------|-----------|
| | Mother | Father | Favorite teacher | Counselor |
| Go to college | 0.55 | 0.54 | 0.51 | 0.59 |
| Get a full-time job | 0.21 | 0.23 | 0.10 | 0.10 |
| Enter a trade school or apprenticeship | 0.15 | 0.16 | 0.12 | 0.13 |
| Enter military service | 0.12 | 0.18 | 0.09 | 0.09 |
| Get married | 0.07 | 0.06 | 0.05 | 0.03 |
| They think I should do what I want | 0.36 | 0.33 | 0.28 | 0.26 |
| They have no opinion / I don’t know their opinion | 0.25 | 0.31 | 0.44 | 0.49 |

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

Table B–38. Standard errors for table 38 estimates (percentage of high school sophomores who expected to work in various occupational categories at age 30): 2002

| Occupational category | Standard error |
|--------------------------------|----------------|
| Clerical | 0.05 |
| Craftsperson | 0.18 |
| Farmer, farm manager | 0.03 |
| Homemaker (without other job) | 0.03 |
| Laborer | 0.06 |
| Manager, administrator | 0.14 |
| Military | 0.10 |
| Operative | 0.10 |
| Professional I ¹ | 0.46 |
| Professional II ² | 0.43 |
| Proprietor or owner | 0.15 |
| Protective service | 0.17 |
| Sales | 0.08 |
| School teacher | 0.13 |
| Service | 0.17 |
| Technical | 0.19 |
| Other | 0.07 |
| Not planning to work at age 30 | 0.11 |
| Don’t know | 0.52 |

¹Professional I = Accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, but not including school teacher.

²Professional II = Clergy, dentist, physician, lawyer, scientist, college teacher.

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

**Appendix B:
Standard Error Tables**

Table B–39. Standard errors for table 39 estimates (percentage of high school sophomores who expected to work in various occupational categories at age 30, by sex): 2002

| Occupational category | Female students | Male students |
|--------------------------------|-----------------|---------------|
| Clerical | 0.10 | 0.04 |
| Craftsperson | 0.13 | 0.32 |
| Farmer, farm manager | 0.03 | 0.06 |
| Homemaker (without other job) | 0.06 | 0.01 |
| Laborer | 0.00 | 0.12 |
| Manager, administrator | 0.19 | 0.22 |
| Military | 0.08 | 0.19 |
| Operative | 0.04 | 0.19 |
| Professional I ¹ | 0.61 | 0.70 |
| Professional II ² | 0.61 | 0.49 |
| Proprietor or owner | 0.19 | 0.23 |
| Protective service | 0.15 | 0.32 |
| Sales | 0.08 | 0.14 |
| School teacher | 0.24 | 0.12 |
| Service | 0.33 | 0.09 |
| Technical | 0.22 | 0.32 |
| Other | 0.10 | 0.11 |
| Not planning to work at age 30 | 0.16 | 0.14 |
| Don't know | 0.68 | 0.73 |

¹Professional I = Accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, but not including school teacher.

²Professional II = Clergy, dentist, physician, lawyer, scientist, college teacher.

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

Table B–40. Standard errors for figure 1 estimates (percentage of high school sophomores, by year of birth): 2002

| Year | Standard error |
|---------------------------------|----------------|
| 1983/1984 ¹ | 0.27 |
| 1985 | 0.48 |
| 1986/1987 or later ² | 0.54 |

¹4.4 percent born in 1984 and an additional 0.6 percent born in 1983 and earlier.

²57.6 percent born in 1986 and an additional 0.5 percent born in 1987 or later.

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

Table B–41. Standard errors for figure 2 estimates (percentage of high school sophomores, by racial/ethnic group): 2002

| Racial/ethnic group | Standard error |
|----------------------------------|----------------|
| American Indian or Alaska Native | 0.20 |
| Asian or Pacific Islander | 0.26 |
| Black | 0.66 |
| Hispanic or Latino | 0.87 |
| More than one race | 0.23 |
| White | 0.98 |

NOTE: All race categories exclude Hispanic.

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

Table B–42. Standard errors for figure 3 estimates (percentage of high school sophomores whose native language was English, by racial/ethnic group): 2002

| Racial/ethnic group | Standard error |
|---------------------------|----------------|
| Asian or Pacific Islander | 2.01 |
| Black | 0.64 |
| Hispanic or Latino | 1.93 |
| White | 0.28 |

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–43. Standard errors for figure 4 estimates (percentage of high school sophomores living in various family configurations): 2002

| Family configuration | Standard error |
|-------------------------------|----------------|
| Single parent | 0.47 |
| Mother and father | 0.57 |
| Mother or father and guardian | 0.40 |
| Other ¹ | 0.21 |

¹Other includes two guardians, female guardian only, male guardian only, and a guardian who lives with the student less than half the time.

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

Table B–44. Standard errors for figure 5 estimates (percentage of high school sophomores, by mother’s highest level of education): 2002

| Education level mother completed | Standard error |
|----------------------------------|----------------|
| Less than high school | 0.54 |
| High school only | 0.49 |
| Some college | 0.53 |
| 4-year degree | 0.46 |
| Graduate/professional degree | 0.33 |

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

Table B–45. Standard errors for figure 6 estimates (percentage of high school sophomores, by father’s highest level of education): 2002

| Education level father completed | Standard error |
|----------------------------------|----------------|
| Less than high school | 0.54 |
| High school only | 0.54 |
| Some college | 0.48 |
| 4-year degree | 0.43 |
| Graduate/professional degree | 0.46 |

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

Table B–46. Standard errors for figure 7 estimates (percentage of high school sophomores, by parents’ highest level of education, by racial/ethnic group): 2002

| Racial/ethnic group | Less than high school | High school only | Some college | 4-year degree | Graduate/professional degree |
|----------------------------------|-----------------------|------------------|--------------|---------------|------------------------------|
| Total | 0.39 | 0.47 | 0.53 | 0.46 | 0.53 |
| American Indian or Alaska native | 2.58 | 4.12 | 4.99 | 4.04 | 3.50 |
| Asian or Pacific Islander | 1.15 | 1.21 | 1.74 | 1.75 | 2.08 |
| Black | 0.56 | 1.00 | 1.18 | 0.99 | 0.81 |
| Hispanic or Latino | 1.53 | 1.10 | 1.20 | 1.03 | 0.64 |
| More than one race | 1.08 | 1.73 | 2.30 | 1.98 | 1.56 |
| White | 0.21 | 0.62 | 0.69 | 0.59 | 0.67 |

NOTE: All race categories exclude Hispanic.

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

Table B–47. Standard errors for figure 8 estimates (percentage of high school sophomores in selected racial/ethnic groups, by socioeconomic status [SES]): 2002

| Racial/ethnic group | Low SES | Middle SES | High SES |
|---------------------------|---------|------------|----------|
| Asian or Pacific Islander | 2.16 | 1.69 | 2.15 |
| Black | 1.38 | 1.37 | 0.89 |
| Hispanic or Latino | 1.86 | 1.54 | 0.86 |
| White | 0.63 | 0.80 | 0.94 |

NOTE: Excludes “American Indian/Alaska Native” and “More than one race.” All race categories exclude Hispanic.

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

Table B–48. Standard errors for figure 9 estimates (percentage of high school sophomores attending various types of schools): 2002

| School type | Standard error |
|---------------|----------------|
| Catholic | 0.16 |
| Other private | 0.23 |
| Public | 0.29 |

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

**Appendix B:
Standard Error Tables**

Table B–49. Standard errors for figure 10 estimates (percentage of high school sophomores attending various types of schools, by racial/ethnic group): 2002

| Racial/ethnic group | Public | Catholic | Other private |
|----------------------------------|--------|----------|---------------|
| Total | 0.29 | 0.16 | 0.23 |
| American Indian or Alaska Native | 2.50 | 0.47 | 2.45 |
| Asian or Pacific Islander | 1.51 | 1.13 | 1.04 |
| Black | 0.39 | 0.35 | 0.17 |
| Hispanic or Latino | 0.52 | 0.43 | 0.26 |
| More than one race | 0.93 | 0.63 | 0.66 |
| White | 0.47 | 0.27 | 0.39 |

NOTE: All race categories exclude Hispanic.

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

Table B–50. Standard errors for figure 11 estimates (percentage of high school sophomores attending various types of schools, by socioeconomic status [SES]): 2002

| Socioeconomic status | Public | Catholic | Other private |
|----------------------|--------|----------|---------------|
| Total | 0.29 | 0.16 | 0.23 |
| Low SES | 0.24 | 0.16 | 0.17 |
| Middle SES | 0.31 | 0.19 | 0.25 |
| High SES | 0.98 | 0.59 | 0.81 |

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

Table B–51. Standard errors for figure 12 estimates (percentage of high school sophomores in urban, suburban, and rural schools): 2002

| School location | Standard error |
|-----------------|----------------|
| Urban | 0.75 |
| Suburban | 0.80 |
| Rural | 0.63 |

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

Table B–52. Standard errors for figure 13 estimates (percentage of high school sophomores in urban, suburban, and rural schools, by racial/ethnic group): 2002

| Racial/ethnic group | Urban | Suburban | Rural |
|----------------------------------|-------|----------|-------|
| Total | 0.75 | 0.80 | 0.63 |
| American Indian or Alaska Native | 7.20 | 10.36 | 8.87 |
| Asian or Pacific Islander | 2.94 | 2.99 | 1.60 |
| Black | 2.29 | 2.16 | 1.44 |
| Hispanic or Latino | 3.03 | 3.01 | 1.16 |
| More than one race | 2.44 | 2.70 | 2.26 |
| White | 0.95 | 1.13 | 0.94 |

NOTE: All race categories exclude Hispanic.

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

Table B–53. Standard errors for figure 14 estimates (percentage of high school sophomores in urban, suburban, and rural schools, by socioeconomic status [SES]): 2002

| Socioeconomic status | Urban | Suburban | Rural |
|----------------------|-------|----------|-------|
| Total | 0.75 | 0.80 | 0.63 |
| Low SES | 1.63 | 1.62 | 1.10 |
| Middle SES | 0.89 | 1.01 | 0.78 |
| High SES | 1.47 | 1.62 | 1.23 |

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

Table B–54. Standard errors for figure 17 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about their school and the teachers in their school, by school type): 2002

| School type | The teaching is good | Students of different racial/ethnic groups make friends | Teachers are interested in students | Students get along well with teachers | There is real school spirit | When I work hard, teachers praise my effort |
|---------------|----------------------|---|-------------------------------------|---------------------------------------|-----------------------------|---|
| Total | 0.50 | 0.34 | 0.54 | 0.60 | 0.71 | 0.55 |
| Public | 0.53 | 0.37 | 0.58 | 0.64 | 0.76 | 0.58 |
| Catholic | 0.96 | 0.66 | 1.11 | 1.06 | 1.58 | 1.44 |
| Other private | 1.25 | 1.28 | 1.39 | 1.57 | 2.71 | 1.61 |

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

**Appendix B:
Standard Error Tables**

Table B–55. Standard errors for figure 18 estimates (percentage distribution of high school sophomores according to the extent to which they liked their school, by racial/ethnic group): 2002

| Racial/ethnic group | Liked school a great deal | Liked school somewhat | Did not like school at all |
|----------------------------------|---------------------------|-----------------------|----------------------------|
| Total | 0.45 | 0.48 | 0.37 |
| American Indian or Alaska Native | 3.19 | 4.17 | 4.34 |
| Asian or Pacific Islander | 1.50 | 1.53 | 0.83 |
| Black | 1.19 | 1.22 | 0.81 |
| Hispanic or Latino | 1.23 | 1.26 | 0.75 |
| More than one race | 2.12 | 2.47 | 1.70 |
| White | 0.54 | 0.60 | 0.48 |

NOTE: All race categories exclude Hispanic.

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

Table B–56. Standard errors for figure 19 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about school safety, by school type, urbanicity, and school region): 2002

| Selected school characteristics | I do not feel safe at this school | There are gangs in school | Fights often occur between different racial/ethnic groups |
|---------------------------------|-----------------------------------|---------------------------|---|
| School type | | | |
| Public | 0.41 | 0.90 | 0.78 |
| Catholic | 0.57 | 1.41 | 0.99 |
| Other private | 0.65 | 0.89 | 0.95 |
| Urbanicity | | | |
| Urban | 0.81 | 1.51 | 1.48 |
| Suburban | 0.53 | 1.25 | 1.01 |
| Rural | 0.65 | 1.65 | 1.33 |
| School region | | | |
| Northeast | 0.97 | 1.91 | 2.07 |
| Midwest | 0.68 | 1.69 | 1.31 |
| South | 0.67 | 1.24 | 0.93 |
| West | 0.81 | 2.09 | 1.84 |

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

Table B–57. Standard errors for figure 20 estimates (percentage of high school sophomores who experienced various forms of crime and bullying at school at least once or twice during the first semester/terms of the school year, by sex): 2002

| Sex | Any crime and bullying | I had something stolen from me | Someone offered to sell me drugs | Someone threatened to hurt me | Someone hit me | Someone bullied or picked on me | Someone purposely damaged or destroyed my belongings | I got into a physical fight | Someone used strong-arm/forceful methods to get money or things from me |
|--------|------------------------|--------------------------------|----------------------------------|-------------------------------|----------------|---------------------------------|--|-----------------------------|---|
| Total | 0.53 | 0.54 | 0.53 | 0.46 | 0.46 | 0.44 | 0.39 | 0.40 | 0.16 |
| Male | 0.67 | 0.75 | 0.74 | 0.71 | 0.71 | 0.61 | 0.58 | 0.59 | 0.25 |
| Female | 0.77 | 0.74 | 0.65 | 0.62 | 0.51 | 0.60 | 0.44 | 0.41 | 0.18 |

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

Table B–58. Standard errors for figure 21 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about their school rules, by school type): 2002

| School type | Everyone knows what the school rules are | The school rules are fair | Punishment for breaking the rules is the same no matter who you are | The school rules are strictly enforced | If a school rule is broken, students know what kind of punishment will follow |
|---------------|--|---------------------------|---|--|---|
| Total | 0.48 | 0.65 | 0.59 | 0.57 | 0.54 |
| Public | 0.52 | 0.69 | 0.63 | 0.61 | 0.57 |
| Catholic | 1.03 | 2.06 | 1.76 | 1.30 | 1.33 |
| Other private | 1.27 | 2.39 | 2.26 | 2.35 | 1.92 |

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

Table B–59. Standard errors for figure 22 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about their school rules, by students' feelings of safety at school): 2002

| I feel unsafe at school | Everyone knows what the school rules are | The school rules are fair | Punishment for breaking the rules is the same no matter who you are | The school rules are strictly enforced | If a school rule is broken, students know what kind of punishment will follow |
|-------------------------------|--|---------------------------|---|--|---|
| Agreed/strongly agreed | 1.45 | 1.55 | 1.64 | 1.52 | 1.54 |
| Disagreed/ strongly disagreed | 0.48 | 0.67 | 0.62 | 0.59 | 0.56 |

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

**Appendix B:
Standard Error Tables**

Table B–60. Standard errors for figure 23 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about reasons for going to school): 2002

| Statement | Standard error |
|--|----------------|
| Education is important for getting a job later on | 0.18 |
| My parents expect me to succeed | 0.25 |
| I am learning skills that I will need for a job | 0.38 |
| School is a place to meet my friends | 0.48 |
| I get a feeling of satisfaction from doing what I am supposed to do in class | 0.56 |
| My teachers expect me to succeed | 0.50 |
| The subjects that I am taking are interesting and challenging | 0.55 |
| I play on a team or belong to a club | 0.59 |
| I have nothing better to do | 0.54 |

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

Table B–61. Standard errors for figure 24 estimates (percentage of high school sophomores who agreed or strongly agreed with various statements about reasons for going to school, by selected racial/ethnic groups): 2002

| Racial/ ethnic group | Education is important for getting a job later on | My parents expect me to succeed | I am learning skills that I will need for a job | School is a place to meet my friends | I get a feeling of satisfaction from doing what I am supposed to do in class | My teachers expect me to succeed | The subjects that I am taking are interesting and challenging | I play on a team or belong to a club | I have nothing better to do |
|----------------------------|--|---|--|---|--|--|---|--|--------------------------------------|
| Black | 0.39 | 0.57 | 0.91 | 1.49 | 1.19 | 1.15 | 1.31 | 1.40 | 1.21 |
| White | 0.24 | 0.33 | 0.50 | 0.45 | 0.70 | 0.67 | 0.71 | 0.75 | 0.69 |

NOTE: All race categories exclude Hispanic.

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

Table B–62. Standard errors for figure 25 estimates (percentage of high school sophomores, by demonstrated reading proficiency): 2002

| Reading proficiency | Standard error |
|--------------------------------|----------------|
| Level 1 (simple comprehension) | 0.39 |
| Level 2 (simple inference) | 0.70 |
| Level 3 (complex inference) | 0.28 |

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

Table B–63. Standard errors for figure 26 estimates (percentage of high school sophomores, by demonstrated mathematics proficiency): 2002

| Mathematics proficiency | Standard error |
|---|----------------|
| Level 1 (simple operations: whole numbers) | 0.30 |
| Level 2 (simple operations: decimals, fractions, roots, and powers) | 0.77 |
| Level 3 (simple problem solving) | 0.81 |
| Level 4 (understanding of intermediate concepts) | 0.54 |
| Level 5 (complex problem solving, advanced knowledge) | 0.08 |

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

Table B–64. Standard errors for figure 27 estimates (percentage of high school sophomores who achieved level 2 reading proficiency [simple inference], by socioeconomic status [SES] and selected racial/ethnic group): 2002

| Racial/ethnic group | Low SES | Middle SES | High SES |
|---------------------|---------|------------|----------|
| Black | 1.17 | 1.31 | 2.95 |
| Hispanic or Latino | 1.25 | 1.58 | 2.70 |
| White | 1.32 | 0.78 | 0.93 |

NOTE: All race categories exclude Hispanic.

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

**Appendix B:
Standard Error Tables**

Table B–65. Standard errors for figure 28 estimates (percentage of high school sophomores who achieved level 4 mathematics proficiency [intermediate concepts], by socioeconomic status [SES] and selected racial/ethnic group): 2002

| Racial/ethnic group | Low SES | Middle SES | High SES |
|---------------------|---------|------------|----------|
| Black | 0.54 | 0.46 | 1.88 |
| Hispanic or Latino | 0.67 | 0.94 | 2.82 |
| White | 0.78 | 0.66 | 1.02 |

NOTE: All race categories exclude Hispanic.

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

Table B–66. Standard errors for figure 29 estimates (percentage of high school sophomores who achieved level 2 reading proficiency [simple inference], by selected racial/ethnic groups within the highest educational expectations group): 2002

| Racial/ethnic group | Expected to complete a 4-year degree or higher and reached level 2 reading proficiency |
|---------------------|--|
| Black | 1.34 |
| Hispanic or Latino | 1.46 |
| White | 0.70 |

NOTE: All race categories exclude Hispanic.

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

Table B–67. Standard errors for figure 30 estimates (percentage of high school sophomores who achieved level 4 mathematics proficiency [intermediate concepts], by selected racial/ethnic groups within the highest educational expectations group): 2002

| Racial/ethnic group | Expected to complete a 4-year degree or higher and reached level 4 mathematics proficiency |
|---------------------|--|
| Black | 0.64 |
| Hispanic or Latino | 0.98 |
| White | 0.72 |

NOTE: All race categories exclude Hispanic.

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

Table B–68. Standard errors for figure 31 estimates (percentage of high school sophomores who achieved level 2 reading proficiency [simple inference], by sex and selected racial/ethnic group): 2002

| Racial/ethnic group | Female, and reached level 2 reading proficiency | Male and reached level 2 reading proficiency |
|---------------------|---|--|
| Black | 1.27 | 1.33 |
| Hispanic or Latino | 1.39 | 1.59 |
| White | 0.90 | 0.85 |

NOTE: All race categories exclude Hispanic.

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

Table B–69. Standard errors for figure 32 estimates (percentage of high school sophomores who achieved level 4 mathematics proficiency [intermediate concepts], by sex and selected racial/ethnic group): 2002

| Racial/ethnic group | Female and reached level 4 mathematics proficiency | Male and reached level 4 mathematics proficiency |
|---------------------|--|--|
| Black | 0.60 | 0.60 |
| Hispanic or Latino | 0.78 | 1.01 |
| White | 0.80 | 0.77 |

NOTE: All race categories exclude Hispanic.

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

Table B–70. Standard errors for figure 33 estimates (high school sophomores' educational expectations): 2002

| Educational expectations | Standard error |
|------------------------------|----------------|
| High school or less | 0.32 |
| Some college | 0.34 |
| 4-year college degree | 0.46 |
| Graduate/professional degree | 0.57 |
| Don't know | 0.30 |

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

**Appendix B:
Standard Error Tables**

Table B-71. Standard errors for figure 34 estimates (high school sophomores' educational expectations, by selected racial/ethnic group and sex): 2002

| Educational expectations | High school or less | Some college | 4-year college degree | Graduate/professional degree | Don't know |
|---------------------------|---------------------|--------------|-----------------------|------------------------------|------------|
| White male | 0.57 | 0.57 | 0.89 | 0.85 | 0.50 |
| White female | 0.38 | 0.50 | 0.83 | 0.86 | 0.47 |
| Black male | 1.32 | 1.22 | 1.70 | 1.54 | 1.04 |
| Black female | 0.89 | 1.04 | 1.73 | 1.98 | 1.03 |
| Hispanic or Latino male | 1.36 | 1.43 | 1.87 | 1.38 | 1.24 |
| Hispanic or Latina female | 1.03 | 1.00 | 1.54 | 1.68 | 1.20 |

NOTE: All race categories exclude Hispanic.

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

Table B-72. Standard errors for figure 35 estimates (high school sophomores' occupational expectations, by selected racial/ethnic group and sex): 2002

| Educational expectations | Professional I | Professional II | Don't know |
|---------------------------|----------------|-----------------|------------|
| White male | 0.89 | 0.65 | 0.86 |
| White female | 0.77 | 0.79 | 0.90 |
| Black male | 2.03 | 1.30 | 2.06 |
| Black female | 1.52 | 1.73 | 1.54 |
| Hispanic or Latino male | 1.40 | 1.18 | 2.19 |
| Hispanic or Latina female | 1.55 | 1.52 | 1.93 |

NOTE: All race categories exclude Hispanic.

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