Documentation for the 2003–04 Schools and Staffing Survey

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Contents

List of Tables

List of Exhibits

Chapter 1. Overview

The Schools and Staffing Survey (SASS) is conducted by the National Center for Education Statistics (NCES) on behalf of the U.S. Department of Education in order to collect extensive data on American public and private elementary and secondary schools. SASS provides data on the characteristics and qualifications of teachers and principals, teacher hiring practices, professional development, class size, and other conditions in schools across the nation.

SASS is the largest, most extensive survey of K–12 school districts, schools, teachers, and administrators in the United States today. It includes data from public, public charter, private, and Bureau of Indian Affairs (BIA) funded school sectors. Therefore, SASS provides a multitude of opportunities for analysis and reporting on elementary and secondary educational issues.

Background

In the early 1980s, education policymakers became increasingly aware of the need for studies that would provide national data on public and private schools, their programs, teachers, and staffing levels. Such data would inform policymakers about the status of teaching and education, identify the areas that most need improvement, and clarify conflicting reports on issues related to policy initiatives, such as teacher shortages.

The first attempt to address these concerns was a series of surveys that began in 1983 and included five surveys:

- The *Survey of Teacher Demand and Shortage* was conducted in 1983–84 among public and private schools and included questions on teacher demand and incentive plans for teachers.
- The *Public School Survey—School Questionnaire* was conducted in 1984–85 to provide descriptive information about public schools (e.g., enrollment and number of teachers), as well as data on use of teacher incentive plans, volunteers, and computers.
- The *National Survey of Private Schools—School Questionnaire* was conducted in 1985–86 to provide parallel information about private schools.
- The *Public School Survey—Teacher Questionnaire* was conducted in 1984–85 to provide information about teacher characteristics, qualifications, incentives, and opinions concerning policy issues.
- The *National Survey of Private Schools—Teacher Questionnaire* was conducted in 1985–86 to provide parallel information about private school teachers.

Due to methodology and substance problems within these surveys and the increasing demands for more and better education data, NCES initiated a redesign of its elementary/secondary education surveys in 1985. This redesign began with an evaluation of the then-current data system; opinions and advice were solicited from the education policy and research community on matters of context, methodology, and analytic utility. In late 1985, NCES reported the findings of this evaluation under the heading of *Excellence in Schools Surveys and Analysis Study*, which has become a continuing series and was renamed the *Schools and Staffing Survey*.

In response to concern expressed in the evaluation about the scarcity of information on schooling, NCES expanded the purposes of its earlier surveys. These expansions were also responses to conflicting reports of teacher shortages and to increasing public concern about the status of teaching and schools in general.

Under a contract with NCES, the Rand Corporation redesigned the elementary/secondary education surveys to collect information relevant to their expanded purposes and to correct the methodological difficulties affecting the surveys. The outcome of that effort was a set of concurrent and integrated surveys called the *Schools and Staffing Survey* (SASS), which was designed to provide a national snapshot of America's public and private schools. The first administration of these surveys was in the 1987–88 school year. Also, in order to achieve high response rates and to maintain consistency in procedures across types of SASS questionnaires, NCES selected the U.S. Census Bureau to collect and process the data for all parts of the survey.

After the 1987–88 administration of SASS, the survey was conducted again in 1990–91, 1993–94, and 1999–2000. During the 6-year hiatus between the 1993–94 and 1999–2000 administrations, NCES examined the purpose, direction, and use of the survey. Toward this purpose NCES commissioned 12 papers from experts to recommend how to improve and expand the scope and utility of SASS. These papers are compiled in *The Schools and Staffing Survey: Recommendations for the Future* (NCES 97-596) by John E. Mullens and Daniel Kasprzyk. Many of the recommendations in this report were considered for inclusion in SASS, but only some of them were implemented. Factors—such as the burden on the respondent, the need to test new items, how well the recommendations fit into the overall vision for SASS, and cost constraints—had to be balanced in the SASS survey redesign.

As a result of this redesign, the 1999–2000 SASS implemented a new set of questionnaires. The questionnaires for public charter schools were designed to collect some of the same data as the 4-year longitudinal design survey titled "National Study of Charter Schools," funded by the Office of Educational Research and Improvement (renamed the Institute of Education Sciences in 2002). By including public charter schools in SASS, public charter school data could be directly compared to "traditional" public school data for the first time. The availability of a complete universe, or sampling frame, for public charter schools made this development feasible in 1999–2000. The redesign also led to the discontinuation of the student records questionnaire. Although the experimental inclusion of this questionnaire in the 1993–94 SASS provided interesting data, both the sampling methods and the ability to gain the respondent's cooperation in obtaining administrative records on student dropout and behavior proved to be too difficult for continuation in 1999–2000 and beyond.

The 2003–04 SASS provides valuable data for educators, researchers, and policymakers on public school districts (Local Education Agencies); public (including public charter), private, and BIA-funded schools, principals, and teachers; and public and BIA-funded school library media centers. Public charter school data are included with traditional public school data, rather than in separate data files, in the 2003–04 SASS. A sample of public charter schools was implemented because the public charter school frame used for the 1999–2000 SASS was out-of-date and the 2001–02 Common Core of Data (CCD) frame for charter schools was considered to be incomplete. Moreover, funding to continue administering a separate questionnaire for public charter schools was not available. Additionally, the 2003–04 SASS collected data from public charter and BIA-funded schools in the School or Unified School Questionnaires as well as in the School Principal and School Teacher Questionnaires. Chapter 2 includes details on the changes to questionnaires since the 1999–2000 SASS.

Purpose and Content of the Survey

The overall objective of SASS is to collect the information necessary for a comprehensive picture of elementary and secondary education in the United States. The abundance of data collected permits detailed analyses of the characteristics of schools, principals, teachers, school libraries, and public school district policies. The linkage of the SASS questionnaires enables researchers to examine the relationships among these elements of education.

The 2003–04 SASS consisted of five types of questionnaires: a school district questionnaire, principal questionnaires, school questionnaires, teacher questionnaires, and a school library media center questionnaire. The principal, school, and teacher questionnaires were modified slightly between the public versions (Principal Questionnaire, School Questionnaire, Teacher Questionnaire) and private school versions (Private School Principal Questionnaire, Private School Questionnaire, and Private School Teacher Questionnaire) to refer to either the public or private sector correctly. The Private School Questionnaire also incorporated the Private School Universe Survey (PSS) items that were collected at the same time as SASS in 2003–04.[1] The School Library Media Center Questionnaire was administered to public (including public charter) and BIA-funded schools in 2003–04.

School District Questionnaire (Form SASS-1A)

The purpose of the 2003–04 School District Questionnaire was to obtain information about school districts, such as student enrollment, number of full-time equivalent teachers, teacher recruitment and hiring practices, teacher dismissals, existence of a teacher union, length of the contract year, teacher salary schedules, school choice, magnet programs, graduation requirements, and professional development for teachers and principals. The applicable sections (e.g., comparable sections on hiring, etc.) for private schools were added to the Private School Questionnaire. Independent public charter schools, BIA-funded schools, and schools that are the only school in the district were given the Unified School Questionnaire and not the School District Questionnaire. The Unified School Questionnaire includes all of the items included on the School Questionnaire in addition to selected items from the School District Questionnaire.

The 2003–04 School District Questionnaire had these nine sections:

- *Section I—Enrollment Information* obtained grades offered, counts of students by race, the number of days in the school year, participation in the National School Lunch Program, full-time equivalent (FTE) counts of all teachers employed by the school district and counts of teachers by race/ethnicity.
- *Section II—Recruitment and Hiring of Staff* collected information on teacher certification, recruitment incentives, newly hired teachers and principals, dismissal of teachers from the previous school year, and teacher union contractual information.
- *Section III—Teacher Compensation* collected data on salary schedules and benefits.
- *Section IV—School and Student Performance* obtained data on performance reports, assessment programs, and rewards or sanctions to district schools for student achievement.
- *Section V—School Organization* obtained information about the existence of public charter schools and the availability of choice and magnet programs in the district.
- *Section VI—Homeschooling* obtained information about the existence of homeschooled students and the criteria for evaluating their performance.
- *Section VII—Graduation Requirements* collected data on high school graduation requirements, community service requirements, and other assessments necessary for graduation.
- *Section VIII—Professional Development* obtained information on professional development programs, funding, and incentives for participation, along with incentives used to recruit or retain teachers to teach in fields of shortage.

[1] The 2003–04 school year was a survey year for both SASS and the Private School Universe Survey (PSS). PSS is administered by NCES every 2 years to all private K–12 schools in the United States. The SASS Private School Questionnaire was modified to include all the PSS questions so that private schools selected for SASS would not be asked to complete two separate questionnaires.

- *Section IX—Migrant Education* obtained information about the enrollment of migrant students and the services provided for them.

Principal and Private School Principal Questionnaires (Forms SASS-2A and -2B)

The purpose of the 2003–04 principal questionnaires was to obtain information about principal/school head demographic characteristics, training, experience, salary, and judgments about the seriousness of school problems. The questionnaire appeared in two versions that contained minor variations in phrasing to reflect differences between public and private schools in governing bodies and position titles in the schools.

The 2003–04 Principal Questionnaire and Private School Principal Questionnaire had these seven sections:

- *Section I—Experience, Training, and Working Conditions* obtained information about principal work experience, previous positions held, training, and satisfaction with the position.
- *Section II—Goals and Decision Making* obtained attitudinal information about educational goals and school governance.
- *Section III—Teacher and Principal Professional Development* collected information on professional development opportunities and activities for teachers and principals.
- *Section IV—Teacher and School Performance* collected information about teacher performance, barriers to dismissal of underperforming teachers, progress towards school, state, or district performance goals during the previous year, and awards or penalties the school received related to these goals.
- *Section V—School Climate and Safety* obtained information on drug and violence prevention programs, security practices, and health and safety issues at the school.
- *Section VI—Parent or Guardian Involvement* collected information on parent or guardian participation in school events and school resources to encourage parental involvement.
- *Section VII—Demographic Information* obtained information about the principal's highest degree, salary, race/ethnicity, gender, and age.

School Questionnaire (Form SASS-3A)

The purpose of the 2003–04 public school questionnaire was to obtain information about traditional public schools, such as grades offered, number of students enrolled, staffing patterns, teaching vacancies, high school graduation rates, programs and services offered, and college application rates.

The 2003–04 School Questionnaire for public schools had these seven sections:

- *Section I—General Information About This School* obtained information about grade range, race/ethnicity of students, building capacity, attendance, and enrollment.
- *Section II—Admissions, Programs and Performance* collected information on the operation of the school, requirements for admission, school programs (including courses on American Indians and Alaska Natives), and measurement of student performance.
- *Section III—Student and Class Organization* collected information about class and calendar organization, career preparation, and graduation requirements.
- *Section IV—Staffing* obtained information about the number of full- and part-time staff, racial composition of teachers, methods used to cover teaching vacancies, and level of difficulty involved in filling teacher vacancies.

- *Section V—Technology* collected information about the number of computers, access to the Internet, and staff responsible for computer education and support.
- *Section VI—Special Programs and Services* obtained information about the National School Lunch Program, Title I services, Individual Education Plans, and services for limited-English-proficient students and parents.
- *Section VII—Charter School Information* collected information from public charter schools on the creation of the school, the granting of the charter, and support for homeschooled students.

Private School Questionnaire (Form SASS-3B)

The purpose of the 2003–04 private school questionnaire was to obtain information about schools, such as grades offered, number of students enrolled, staffing patterns, teaching vacancies, high school graduation rates, programs and services offered, and college application rates. Private schools received the Private School Questionnaire, an expanded version of the public school questionnaire that included items from the School District Questionnaire (Form SASS-1A).

The 2003–04 Private School Questionnaire had these 11 sections:

- *Section I—General Information About This School* obtained information about grade range, race/ethnicity of students, building capacity, attendance, and enrollment.
- *Section II—School Affiliation* collected information about the religious orientation and affiliation with religious organizations and school accreditation.
- *Section III—Staffing* obtained information about the number of full- and part-time staff members and racial composition of teachers.
- *Section IV—Graduation Requirements* collected data on high school graduation requirements, community service requirements, and other assessments necessary for graduation.
- *Section V—Tuition and Admissions* collected information about student boarding, tuition, and admission requirements.
- *Section VI—Students and Class Organization* collected information about class and calendar organization, curriculum, after-school programs, and career preparation.
- *Section VII—Recruitment and Hiring of Teachers* obtained information about teacher certification, newly hired teachers and principals, teaching vacancies, and dismissal of teachers from the previous school year.
- *Section VIII—Teacher Compensation* collected data on salary schedules, benefits, pay incentives, and recruitment incentives.
- *Section IX—Professional Development* obtained information about professional development programs, funding, and training to prepare teachers to teach in fields of shortage.
- *Section X—Technology* collected information about the number of computers, access to the Internet, and staff responsible for computer education and support.
- *Section XI—Special Programs and Services* obtained information about the National School Lunch Program, Title I services, Individual Education Plans, and services for limited-English-proficient students and parents.

Unified School Questionnaire (Form SASS-3Y)

The purpose of the 2003–04 Unified School Questionnaire was to obtain information about schools, such as grades offered, number of students enrolled, staffing patterns, teaching vacancies, high school graduation rates, programs and services offered, and college application rates. Schools that are the only school in the district, state-run schools (e.g., schools for the blind), charter schools that do not report to a traditional school district, and BIA-funded schools received the Unified School Questionnaire, an

expanded version of the public school questionnaire that included items from the School District Questionnaire (Form SASS-1A).

The 2003–04 Unified School Questionnaire had these 11 sections:

- *Section I—General Information About This School* obtained information about grade range, race/ethnicity of students, building capacity, attendance, and enrollment.
- *Section II—Admissions, Programs and Performance* collected information on the operation of the school, requirements for admission, school programs (including courses on American Indians and Alaska Natives), and measurement of student performance.
- *Section III—Student and Class Organization* collected information about class and calendar organization and career preparation.
- *Section IV—Graduation Requirements* collected data on high school graduation requirements, community service requirements, and other assessments necessary for graduation.
- *Section V—Staffing* obtained information about the number of full- and part-time staff, racial composition of teachers, methods used to cover teaching vacancies, and level of difficulty involved in filling teacher vacancies.
- *Section VI—Recruitment and Hiring of Staff* obtained information about teacher certification, newly hired teachers and principals, principal hiring practices, and dismissal of teachers from the previous school year.
- *Section VII—Teacher Compensation* collected data on salary schedules, benefits, pay incentives, and recruitment incentives.
- *Section VIII—Professional Development* obtained information about professional development programs, funding, and training to prepare teachers to teach in fields of shortage.
- *Section IX—Technology* collected information about the number of computers, access to the Internet, and staff responsible for computer education and support.
- *Section X—Special Programs and Services* obtained information about the National School Lunch Program, Title I services, Individual Education Plans, and services for limited-English-proficient students and parents.
- *Section XI—Charter Schools and Homeschooling* collected information on charter school status and support for homeschooled students.

Teacher and Private School Teacher Questionnaires (Forms SASS-4A and -4B)

The purpose of the 2003–04 teacher questionnaires was to obtain information about teachers, such as education and training, teaching assignment, certification, workload, and perceptions and attitudes about teaching.

The 2003–04 Teacher Questionnaire and Private School Teacher Questionnaire had these 11 sections:

- *Section I—General Information* obtained general information about teaching status, teaching experience, and other professional experiences.
- *Section II—Class Organization* obtained information about class enrollments, organization of classes, and subjects taught.
- *Section III—Educational Background* collected information on academic degrees and teacher preparation programs.
- *Section IV—Certification and Training* obtained information on types of teaching certification held by the teacher, content area, and grades covered by the certification. For new teachers, information was collected on attitudes toward their preparation for teaching, participation in an induction program, and mentoring.

- *Section V—Professional Development* collected information about professional development activities and their impact.
- *Section VI—Resources and Assessments of Students* collected information about student characteristics, resources provided to students, and application of student assessment scores.
- *Section VII—Working Conditions* obtained information about hours worked.
- *Section VIII—Decision Making* collected information about teacher influence on staffing and budgeting, and perceptions of teaching issues.
- *Section IX—Teacher Attitudes and School Climate* obtained attitudinal information on satisfaction with teaching, school safety, collaboration between teachers, and student problems.
- *Section X—General Employment Information* obtained information about teacher salary, supplemental income, union affiliation, gender, age, and race/ethnicity.
- *Section XI—Contact Information* requested that respondents provide personal contact information as well as contact information for two additional people who would be able to reach them in the event that they relocated before the mailing of the Teacher Follow-Up Survey. This information was necessary for the Teacher Follow-Up Survey that was administered the following year.

School Library Media Center Questionnaire (Form LS-1A)

The purpose of the 2003–04 School Library Media Center Questionnaire was to obtain information about public school and BIA-funded library media centers and librarians, such as amount and experience of library staff, and the organization, expenditures, and collections of the library media center.

The 2003–04 School Library Media Center Questionnaire had these six sections:

- *Section I—Facilities* obtained data about the organization, content, and capacity of the library media center.
- *Section II—Staffing* collected data about the number of professional, clerical, and volunteer staff in the library, and the highest degrees held by the professional staff members.
- *Section III—Technology* obtained data about the different technology resources in the school, such as computers, television, DVD, etc.
- *Section IV—2002–03 Collections and Expenditures* collected data about the size, expenditures, and currency of the library media collection.
- *Section V—Scheduling, Transactions, and Policies* obtained data about scheduling, frequency of use, and borrowing policies.
- *Section VI—Information Literacy and Collaboration* collected data about frequency of library media staff collaboration with classroom teachers, and formal information literacy programs.

Target Populations and Estimates

Target Populations

The target populations for the 2003–04 SASS are described below. For more information on sampling see chapter 4.

- *School districts*. The target population included school districts that operated one or more schools, employed elementary and/or secondary level teachers, and were themselves in operation in the 2003–04 school year; for example, public school districts, state agencies that operated schools for special student populations (such as inmates of juvenile correctional facilities), domestic schools under the Department of Defense (DoD), and cooperative agencies that

provided special services to more than one school district. Entities that authorized public charter schools were not included, unless they were also public school districts or operated the charter schools they authorized. Independently operated public charter schools or single school districts received the Unified School Questionnaire, since the school and district respondents were likely to be the same person.

- *Schools*. The target population included public, public charter, private, and BIA-funded schools with students in any of grades 1–12 or in comparable ungraded levels and in operation in school year 2003–04.
- *Principals*. The target population included principals of the targeted school populations.
- *Teachers*. The target population included teachers in the targeted school populations who taught students in any of grades K–12 or in comparable ungraded levels in the 2003–04 school year.
- *School library media centers*. The target population included school library media centers, libraries, or resource centers in public, public charter, and BIA-funded schools that have such a facility. A school library was defined as an organized collection of printed, audiovisual, or computer resources that is administered as a unit, is located in a designated place, and makes resources available to students, teachers, and administrators.

The sampling frame for public schools was an adjusted version of the 2001–02 CCD. The sample of public schools was drawn from the sampling frame for the 2001–02 school year. CCD includes regular public schools, charter schools, DoD-operated domestic military base schools, and special purpose schools, such as special education, vocational, and alternative schools. NCES collects CCD data annually from all state education agencies. Schools outside of the United States and schools that teach only prekindergarten, kindergarten, or postsecondary students were deleted from the CCD frame prior to sampling for SASS. Public schools that closed in the school year 2001–02 or were not yet opened were not included. School districts operating a sampled school were also selected. Prior to stratification and sampling, CCD schools were collapsed to a more inclusive grade range. The purpose and operations of this collapsing activity are discussed in chapter 2.

The sampling frame for private schools is based on a dual frame approach, as described further in chapter 4, since the list frame does not provide complete coverage. The list frame was based on the 2001–02 PSS, updated with private school organizations and state lists collected by the Census Bureau in the autumn of 2002 for updating the 2003–04 PSS list frame. An area frame was used to find schools missing from the list frame, thereby compensating for the incomplete coverage of the list frame.

The BIA frame consisted of a list of elementary, secondary, and combined K–12 schools that BIA operated or funded during the 2001–02 school year. The list was obtained from CCD. All BIA-funded school records that met the SASS definition of a school were included in the SASS sample.

All library media centers in public, public charter, and BIA-funded schools in the SASS sample were asked to complete the School Library Media Center Questionnaire.

The sampling frame for the teacher questionnaires consisted of lists of teachers provided by schools in the SASS sample. Teachers were defined as any long-term staff who taught a regularly scheduled class to students in grades K–12. The Teacher Listing Form was collected by Census Bureau field representatives as early as possible in the 2003–04 school year at all public, private, BIA-funded, and public charter schools in the SASS sample to obtain a complete list of all the teachers employed at each school. The form included space for schools to indicate the following: race/ethnicity of each teacher, whether the teacher was "new," the teacher's assignment (subject matter and/or grade level), and whether the teacher was full- or part-time. The sample of teachers was selected from all of the schools that provided teacher lists.

Estimates

SASS was designed to produce national, regional, and state estimates for public elementary and secondary schools and related components (e.g., schools, teachers, principals, school districts, and school library media centers); national estimates for BIA-funded and public charter schools and related components (i.e., schools, teachers, principals, and school library media centers); and national, regional, and affiliation group estimates for the private school sector (i.e., schools, teachers, and principals). The affiliation groups for private schools were

- Catholic—parochial;
- Catholic—diocesan;
- Catholic—private;
- Amish;
- Assembly of God;
- Baptist;
- Episcopal;
- Jewish;
- Lutheran Church—Missouri Synod;
- Wisconsin Evangelical Lutheran Synod;
- Mennonite;
- Pentecostal;
- Seventh-Day Adventist;
- other religious;
- nonsectarian—regular;
- nonsectarian—special emphasis; and
- nonsectarian—special education.

Comparisons between public and private schools are possible only at the regional and national levels, because private schools were selected for sampling by affiliation group and region rather than by state.

The teacher survey was designed to support comparisons between new and experienced teachers (3 years or less of experience vs. more than 3 years of experience) at the state level. Comparisons between teachers by race and by full-time or part-time status are possible at the national level. The school library media center survey was designed to produce estimates at the state level for public schools.

Periodicity of the Survey

Periodicity is based on the balance between the need for more up-to-date data with the realities of mounting data collection and completing a data collection and processing cycle. A 3-year cycle was maintained for the first three data collections but proved to be too frequent to allow for the analysis of the previous SASS to be incorporated in the next one. Six years separated the 1999–2000 SASS from the previous one, due to a major redesign of the survey. Following this SASS redesign, it was determined that 4 years provided the best balance between data needs and operational needs. The 2003–04 SASS was conducted on a 4-year interval, and this cycle length will be repeated for the upcoming SASS administrations.

Contents

This report contains chapters on changes in SASS design, content, and methodology from 1999–2000, preparation for the 2003–04 SASS, sample design and implementation, data collection, response rates, data processing, imputation procedures, weighting and variance estimation, a review of the quality of SASS data, SASS data files and merging information, and user notes and cautions.

Information in the chapters is supported by material in the following appendixes:

Chapter 2. Changes in SASS Design, Content, and Methodology From 1999–2000 to 2003–04

Several changes in survey sample design, questionnaire content, procedures, and methodology were made for the 2003–04 Schools and Staffing Survey (SASS).

Design Changes

Changes to the Sample Design for 2003–04 SASS

A number of changes were made in the sample design from the 1999–2000 SASS to the 2003–04 SASS. Changes were made to the stratification, sample sizes, sample sort, and school definition. Further details describing why these changes were made are presented in chapter 3. Details on the sampling design used for the 2003–04 SASS are discussed in chapter 4.

Schools

- Rather than surveying all public charter schools, as was done in the 1999–2000 SASS, 303 public charter schools were sampled for the 2003–04 SASS. Since there were over 2,000 public charter schools on the sampling frame, it was decided that sampling was an appropriate method for achieving the overall goals of the survey estimation.

- Affiliation for private schools was redefined and stratified into 17 groups rather than the previous 20 groups. Catholic schools were split into three groups based on typology. Other religious schools were divided into 11 groups corresponding to the 10 largest non-Catholic religious organizations (by school count) and a catch-all "other." Nonsectarian schools were divided into three groups by typology.

- Grade-level stratification in public and private schools was defined purely on the basis of grade level of the school. Schools classified as a type other than "regular school" were no longer placed in the combined school category, which includes schools with some elementary and some secondary grades. Many nonregular schools (i.e., special education, alternative, and vocational schools) cover a specific grade range. To the extent this grade range is known, this seemed a more appropriate method of stratification than placing them all in the combined school strata. Nonregular schools with a grade range that is ungraded or unknown remained in the combined school strata.

- Public schools from the Common Core of Data (CCD) were collapsed into what was perceived to be a better fit with the SASS definition of a school prior to the stratification. See chapter 4 and "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures" for further discussion of how this was done. The sample allocation was correspondingly revised to avoid undersampling schools now classified as the "combined" grade level. In other words, the revision of the sample allocation ensured that the newly combined schools were sampled at the same approximate rate as they would have been prior to the collapsing procedure. In general, the combined school sample size was increased to the point at which the combined school sampling rate equaled the overall state-level sampling rate. For example, if one in five schools were sampled in a particular state, then one in five of the combined schools were sampled rather than using the default sample size of 10 combined schools.

- The sort order for the public and private school sampling was altered to sort on enrollment in a serpentine fashion within higher-level sort variables instead of always sorting in descending order. Serpentine sorting involves sorting in ascending order with respect to higher-level sort variables one time, then sorting in descending order the next time, then ascending, and then descending throughout the file. This reduced the variation in enrollment between adjacent sampled schools and thus reduced the overall sampling error.

School Districts

- Florida and Maryland were added to the list of states where at least one school is selected in each school district. This was done to decrease the standard error of the state-level school district estimates.

Teachers

- Oversampling of bilingual/English as a second language (ESL) teachers was discontinued since a sufficient number of bilingual teachers to produce the desired reliability would be selected in the sample without oversampling.

- Teacher sampling was automated to speed up the distribution of the teacher questionnaires. This, however, reduced the level of control over the sample sizes for the remaining oversampled teacher strata (Asian/Pacific Islander and American Indian/Alaska Native). The automation no longer allowed the sampling rate for these teachers to be periodically revised during the sampling process. If the number of these teachers listed differed from the expected, the sample size goal would no longer be met. See chapter 4 for further discussion of the goals of the teacher sampling.

Other Design Changes

- The School Library Media Center Questionnaire was not administered to private schools for budget reasons.

- There was no separate questionnaire for public charter schools. The reduction in the public charter school sample size from 1,100 in the 1999–2000 SASS to 303 in the 2003–04 SASS meant it was no longer feasible to produce a separate questionnaire since public charter school data could not be published with as much detail (for this SASS, only at the national and regional level). Public charter school data are included with traditional public school data.

- The Unified School Questionnaire is a new questionnaire that contains the public school questions and many of the school district questions. It was administered to most public charter, state-operated (e.g., often schools for the blind or schools located in juvenile detention facilities), and BIA-funded schools, as well as public schools in one-school districts. This change was made to ease the respondent burden in cases where the respondent for the school and school district questionnaires was expected to be the same.

Content Changes

Prior to the 2003–04 administration, extensive pretesting was undertaken. (For a detailed explanation of this testing, please refer to chapter 3.) As a result of this pretesting and changes in priorities for SASS, the following alterations and deletions were made to the SASS questionnaires between 1999–2000 and 2003–04. The specific question numbers from the 1999–2000 and 2003–04 questionnaires, respectively, are

included in parenthesis below. The discussion below begins with the 1999–2000 questionnaires and identifies what modifications, deletions, and additions were made for the 2003–04 questionnaires.

Public School Questionnaire

Public School Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1 and 5 were compiled and placed in the instructions of the 2003–04 SASS.
- Has the school implemented the following items? (22 revised into 24d, 25, 26, 28, 29, 30a, and 30b.)
- Any students enrolled in the 12th grade? (26 revised into 33.)
- Did school use following list of methods to cover vacancies? (35b1–8 revised into 39.)
- Select statement that best describes person at school who helps teachers use technology for teaching/learning. (38a revised into 44.)
- Title I items (41 revised into 59, 60, 61, and 62.)
- Are limited-English-proficient students provided with [the following types of language instruction]? (45b1 and 45b3 revised into 50.)

Public School Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Does school have kindergarten? (8)
- Does school use cafeteria, gymnasium, or other areas for overflow of students? (11)
- Any teachers with no classroom due to lack of space? (12)
- Does school have library or media center? (13)
- Is school operated by a private organization or company? (15)
- Does school have performance reports? (20)
- Does school offer courses on American Indian/Alaska Native topics? (23)
- How many full-time/part-time teachers? (34)
- How many short-term substitute teachers? (37)
- Do most students have internet access through school computers? (42)
- Does school require limited-English-proficient students to pass test of English? (52)
- Are limited-English-proficient students administered assessments? (53)
- Does school have prekindergarten students? (55)
- Is this school a public charter school? (63)
- In what year did school provide instruction as a charter school? (64)
- Who granted charter? (65)
- Is this charter school a newly created school or was it pre-existing? (66)
- Did this charter school provide support for/monitor homeschooling? (67)

Public School Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is institution/organization named on front of questionnaire a school? (3)
- If answered NO to any of 3a–3e, call Census; if answered YES for same, continue. (4)
- What is best estimate of percent of student absenteeism last year? (11a)
- Does school have students in one or more of grades 1–8? (23)
- List of items used to describe organization of classes in core subjects. (24b)
- Select [from list] means of facilitating parent participation in place last school year. (27)
- This school year, does school have following items? (28)

- Does school have drug, alcohol, or tobacco use prevention program? (29)
- Does school have following safety measures? (30)
- Does school have violence prevention program? (31)
- How many full-time/part-time teachers were absent? (34)
- Select statement that best describes person at school who helps teachers with technical setup and maintenance for computers. (38b)
- Are any students eligible for free or reduced-price lunch? (39a)
- How many at first of October were eligible for free or reduced-price lunch? (39b)
- Is this school operating a schoolwide Title I program? (40b)
- For limited-English-proficient students, are instructions to maintain fluency provided? (45b2)
- Any migrant students in this school? (48)
- Were any migrant students receiving services funded in part by the Title I Part C Migrant Education Program (MEP)? (49)

Private School Questionnaire

Private School Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1 and 4 were compiled and placed in the instructions of the 2003–04 SASS.
- What is enrollment capacity of this school? (14 revised into 10 and 11.)
- Does school have community service requirement? (30 revised into 30 and 31.)
- Were any students enrolled in 12th grade? (31 revised into 32 through 34.)
- Does school charge tuition? (33 revised into 36 through 38.)
- Does school have following methods to organize classes/students? (37 revised into 41.)
- Has school implemented following—extended instructional blocks of time? (38a revised into 42.)
- Has school implemented following—before-school/after-school enrichment? (38b revised into 47d.)
- Has school implemented following—academic intersessions for enrichment/acceleration? (38c revised into 48.)
- Are the following programs/services currently available regardless of funding? (43 revised into 47.)
- What is normal yearly base salary for the following [teachers with certain experience and/or degrees]? (52 revised into 60.)
- Does school offer following benefits to teachers? (57 revised into 63.)
- Does school offer the following income in-kind to teachers? (58 revised into 63.)
- Select statement that best describes person at school who helps teachers use technology for teaching/learning. (75a revised into 77.)
- How many students are served by this Title I program? (78 revised into 92.)

Private School Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Does school use cafeteria, gymnasium, or other areas for overflow of students? (12)
- Any teachers with no classroom due to lack of space? (13)
- How many short-term substitute teachers? (27)
- How many teachers were newly hired? (50)
- Are there formal procedures to counsel out poor-performing/incompetent teachers? (55)
- Does this school have paraprofessionals that provide instructional support? (57)
- Are the following criteria used for considering applicants for paraprofessional staff? (58)
- Do most students have internet access through school computers? (75)

- Does this school primarily serve students with disabilities? (79)
- Does school require limited-English-proficient students to pass test of English? (86)
- Are limited-English-proficient students administered assessments? (87)
- Does school provide the following services for parents with limited-English-proficient skills? (88)

Private School Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is institution/organization named on front of questionnaire a school? (2)
- If answered NO to any of 3a–3e, call Census; if answered YES for same, continue. (3)
- What is best estimate of percent of student absenteeism last year? (11)
- How many full-time/part-time teachers were absent? (25)
- Does this school have students in any of grades 1–12 or comparable ungraded levels? (26)
- Does school have requirements that reflect a 3-year/4-year program? (29)
- Does school have students in one or more of grades 1–8? (39)
- List of items used to describe organization of classes in core subjects in grades 9–12. (40b)
- How many newly hired teachers are there for grades K–12 and comparable ungraded levels? (47)
- Has school used following procedures to dismiss poor/incompetent teachers? (48)
- What are estimated benefit rates for the following [types of staff at this school]? (55)
- Does association/institution affiliated with this school make additional contributions for employee benefits for teachers? (56)
- Select [from list] means of facilitating parent participation in place last school year. (69)
- Does school have the following [types of parental involvement options]? (70)
- Does school have drug, alcohol, or tobacco use prevention program? (71)
- Does school have following safety measures? (72)
- Does school have violence prevention program? (73)
- Select statement that best describes person at school who helps teachers with technical setup and maintenance for computers. (75b)
- Are any students eligible for free or reduced-price lunch? (76a)
- How many at first of October were eligible for free or reduced-price lunch? (76b)
- For limited-English-proficient students, are instructions to maintain fluency provided? (86b)
- Are the following methods used to teach limited-English-proficient students? (88)

Indian School Questionnaire[2]

Indian School Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1, 3, and 4 were compiled and placed in the instructions of the 2003–04 SASS.
- List of student ethnicity categories used by respondents to report number of students enrolled in grades K–12 and ungraded levels. (8 revised into 5.)
- What is current capacity of this school? (11 revised into 9 and 10.)
- Does this school use the following requirements for admission? (15 revised into 18b1–7.)
- Are the following programs/services currently available regardless of funding? (17 revised into 24.)
- Does school offer courses on American Indian/Alaska Native topics? (18 revised into 23.)

[2] For the 2003–04 SASS, there was not a separate Indian School Questionnaire. These data were collected on the Unified School Questionnaire (Form SASS-3Y).

- Has school implemented following—academic intersessions for extra assistance to meet academic expectations? (21c revised into 25.)
- Has school implemented following—academic intersessions for enrichment/acceleration? (21d revised into 26.)
- How many part-time/full-time people held the following positions? (31 revised into 36.)
- Of the part-time/full-time teachers, how many of them were [choose from a list of ethnicity options]? (32 revised into 35.)
- Did school use following methods to cover vacancies? (35b1–8 revised into 39.)
- How many students are served by the Title I program? (64a revised into 59.)
- Are limited-English-proficient students provided with the following types of language instruction? (68b revised as 49, 50, and 51.)

Indian School Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Does school have kindergarten? (8)
- Does school use cafeteria, gymnasium, or other areas for overflow of students? (11)
- Any teachers with no classroom due to lack of space? (12)
- Does school have library or media center? (13)
- Is school operated by a private organization or company? (15)
- Does this school have a magnet program? (17)
- Does this school receive performance reports from the district that include students' achievement scores? (19)
- Does this school use a calendar where the number of days for students exceeds the mandatory days per year? (29)
- Last year were any students enrolled in 12th grade? (33)
- How many full-time/part-time teachers? (34)
- How many short-term substitute teachers? (37)
- Do most students have internet access through school computers? (42)
- Does this school primarily serve students with disabilities? (46a)
- Does school require limited-English-proficient students to pass test of English? (52)
- Are limited-English-proficient students administered assessments? (53)
- Does school have prekindergarten students? (55)
- Is this school a public charter school? (63)
- In what year did school provide instruction as a charter school? (64)
- Who granted charter? (65)
- Is this charter school a newly created school or was it pre-existing? (66)
- Did this charter school provide support for/monitor homeschooling? (67)
- What is the name of the person who completed most of this questionnaire? (68)
- What is his/her job title? (69)
- What is his/her telephone number? (70)

Indian School Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is institution/organization named on front of questionnaire a school? (2)
- If answered NO to any of 3a–3e, call Census; if answered YES for same, continue. (3)
- How many days are in the school year for students in this school? (9b)
- What is best estimate of percent of student absenteeism last year? (10a)
- Has school implemented the following [before-school or after-school enrichment programs]? (21b)

- List of items used to describe organization of classes in core subjects in grades 9–12. (23b)
- Does this school grant high school diplomas? (25)
- For high school graduates of the class of 2000, how many years of instruction are required in [each of the following areas]? (26)
- Do these reflect a 3-year/4-year program? (27)
- Does this school have a community service requirement for students? (28)
- Are students required to pass a state assessment to graduate from this school? (29)
- Were any students enrolled in the 12th grade? (30)
- How many full-time/part-time teachers were absent? (33)
- Are the following [criteria] used in considering applicants [for teaching positions at this school]? (34)
- How many teachers were newly hired by this school for grades K–12 and comparable ungraded levels? (37)
- Has this school used the following procedures to dismiss poor or incompetent teachers? (38)
- During the last school year, how many teachers of the following types were dismissed for poor performance? (39)
- How many months is the normal contract year for a teacher in this school? (40)
- Is there a salary schedule for teachers at this school? (41)
- According to the salary schedule, what is the normal yearly base salary for the following [teacher qualifications]? (42)
- If you completed item 42, GO TO item 45 on the next page. (43)
- What is the range of full-time teachers' yearly base salaries at this school? (44)
- According to the school budget for this fiscal year, what is the estimated benefit rate for the following [types of staff at this school]? (45)
- Does an agency or institution other than this school make additional contributions for employee benefits for teachers? (46)
- What is the estimated benefit rate for additional agency or institution contributions for teachers' benefits? (47)
- Does this school offer the following benefits to teachers? (48)
- Does this school offer the following income in-kind to teachers? (49)
- Does this school currently use any pay incentives such as cash bonuses, salary increases, or different steps on the salary schedule to [do the following]? (50)
- Does this school currently use any pay incentives to recruit or retain teachers to teach in fields of shortage? (51)
- Is free training available by this school, regardless of funding source, to prepare staff members to teach in fields with current or anticipated shortages? (52)
- With regard to in-service professional development activities for TEACHERS in this school, who has PRIMARY responsibility for [the following]? (53)
- Are the following sources of funding for teacher professional development activities used at this school? (54)
- Were the following means of facilitating parent participation in place at this school? (55)
- Does this school have the following? (56)
- Does this school currently have a drug, alcohol, and/or tobacco use prevention program? (57)
- Does school have following safety measures? (58)
- Does school have violence prevention program? (59)
- Select statement that best describes person at school who helps teachers with technical setup and maintenance for computers. (61b)
- Are any students eligible for free or reduced-price lunch? (62a)
- How many students at the first of October were eligible for free or reduced-price lunch? (62b)
- Is this school operating a schoolwide Title I program? (63b)
- Are the following methods used to teach limited-English-proficient students? (69)

- Any migrant students in this school? (71)
- Were any migrant students receiving services funded in part by Title I Part C Migrant Education Program (MEP) funds? (72)

Public Charter School Questionnaire[3]

Public Charter School Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1 and 4 were revised and placed in the instructions of the 2003–04 SASS.
- Does this school offer the following programs? (25 revised into 22.)
- Are the following programs/services currently available regardless of funding? (26 revised into 24.)
- Do performance reports include [the following]? (27b revised into 21.)
- Does this school use these performance reports to [do the following]? (27c revised into 21.)
- Has this school implemented academic intersessions or summer school activities for students needing extra assistance to meet academic expectations? (29c revised into 25.)
- Has this school implemented academic intersessions or summer school activities for students seeking academic advancement or acceleration? (29d revised into 26.)
- Last school year, were any students enrolled in 12th grade? (38 revised into 33.)
- Around the first of October, how many staff held part-time/full-time positions or assignments in this school in each of the following categories? (45 revised into 36.)
- How difficult or easy was it to fill the vacancies for this school year in each of the following fields? (49 revised into 38.)
- Which of the following statements best describes the person at this school who helps teachers use technology for teaching and learning? (51a revised into 44.)
- If this school is designated as a targeted assistance school, how many students are served by the Title I program? (54a revised into 59.)
- Are limited-English-proficient students provided with the following types of language instruction? (58b revised into 50.)
- Is this public charter school operated by an organization or company, other than a public school district, that also manages other schools? (61a revised into 15.)

Public Charter School Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Does school have kindergarten? (8)
- Does this school have one or more temporary buildings? (10a)
- Does school use cafeteria, gymnasium, or other areas for overflow of students? (11)
- Any teachers with no classroom due to lack of space? (12)
- Which of the following best describes this school? (14)
- Does this school receive performance reports from the district that include students' achievement scores? (19)
- Does this school offer any course(s) on American Indian or Alaska Native topics? (23)
- This school year, are class periods scheduled to create extended blocks of instruction time at this school? (28)
- How many full-time/part-time teachers? (34)
- How many short-term substitute teachers? (37)

[3] For the 2003–04 SASS, there was not a separate Public Charter School Questionnaire. These data were collected on the Unified School Questionnaire (Form SASS-3Y) or the School Questionnaire (Form SASS-3A).

- Do most students have internet access through school computers? (42)
- Does this school primarily serve students with disabilities? (46a)
- Does school require limited-English-proficient students to pass test of English? (52)
- Are limited-English-proficient students administered assessments? (53)
- Does school have prekindergarten students? (55)
- Does this school participate in the National School Lunch Program (that is, the federal free or reduced-price lunches)? (56)
- Is this charter school a newly created school or was it pre-existing? (66)
- Did this charter school provide support for/monitor homeschooling? (67)
- What is the name of the person who completed most of this questionnaire? (68)
- What is his/her job title? (69)
- What is his/her telephone number? (70)

Public Charter School Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is the institution/organization named on the front of questionnaire a school? (2a)
- Is the school on the front of this questionnaire still in operation? (2c)
- Does this school teach students in one or more of grades 1 to 12, or comparable ungraded levels? (2d)
- Is this school's name the same as that shown on the front page? (2e)
- If answered NO to any of 2a–2e, call Census; if answered YES for same, continue. (3)
- From the start of the regular school year through the summer session, were any migrant students enrolled in this school? (7)
- During the regular school year, did the migrant students in this school receive services covered at least in part by Title I Part C Migrant Education Program (MEP) funds under school control? (8)
- How many days are in the school year for students in this school? (11b)
- During the last school year what is your best estimate of the percent of students in this school who were absent for the following number of days? (12a)
- Is this charter school facility [any of the following]? (14)
- When was this school's charter granted? (15a)
- Does your school's charter include waivers or exemptions from the following state or district policies? (18)
- What type of public charter school is this? (19)
- Has this school implemented before-school or after-school enrichment programs? (29b)
- Does this school have students in one or more of grades 1–8? (30)
- Which of the following best describes the organization of classes in core subjects for regular students in grades 9–12? (31b)
- Does this school grant high school diplomas? (33)
- For high school graduates of the class of 2000, how many years of instruction are required in each of the following areas? (34)
- Do these requirements reflect a 3-year or 4-year program? (35)
- Does this school have a community service requirement for students in the class of 2000? (36)
- Are students required to pass a state assessment to graduate from this school? (37)
- Were the following means of facilitating parent participation in place at this school? (39)
- Are parents or family members required to participate or volunteer at this school? (40)
- Does this school have the following [types of parental involvement options]? (41)
- Does this school currently have a drug, alcohol, and/or tobacco use prevention program? (42)
- Does school have following safety measures? (43)
- Does school have violence prevention program? (44)
- How many full-time/part-time teachers were absent on the most recent school day? (47)

- Which of the following statements best describes the person at this school who helps teachers with technical computer set-up and maintenance? (51b)
- Are any students eligible for free or reduced-price lunch? (52a)
- How many students at the first of October were eligible for free or reduced-price lunch? (52b)
- Is this school operating a schoolwide Title I program? (53b)
- Are the following methods use to teach limited-English-proficient students? (59)
- Is this school part of (district name)? (61b)
- Is this public charter school part of another public school district? (61c)
- Are the following criteria used for considering applicants for teaching positions in this public charter school? (62)
- For this school year, how many teachers were newly hired by this public charter school for grades K–12 and comparable ungraded levels? (63)
- Has this public charter school used the following procedures to dismiss poor or incompetent teachers? (64)
- During the last school year, how many teachers of the following types were dismissed for poor performance? (65)
- Does this public charter school have an agreement with a teachers' union or organization for the purpose of collective bargaining or meet-and-confer discussions? (66)
- How many months is the normal contract year for a teacher at this charter school? (67)
- Is there a salary schedule for teachers at this public charter school? (68)
- According to the salary schedule, what is the normal yearly base salary for [the following]? (69)
- What is the range of full-time teachers' yearly base salaries at this school? (70)
- According to the school budget for this fiscal year, what is the estimated benefit rate for [the following]? (71)
- Does a state, city, or county agency other than this school make additional benefit rate contributions for employee benefits for teachers? (72)
- Does this school offer the following benefits to teachers? (73)
- Does this school offer the following income in-kind to teachers? (74)
- Does this state reward public charter schools for student achievement? (75)
- Does this state sanction public charter schools for poor student achievement? (76)
- With regard to the in-service professional development activities for teachers in this school, who has primary responsibility for [the following]? (77)
- Are the following sources of funding for teacher professional development activities used at this school? (78)
- Does this school currently use any pay incentives such as cash bonuses, salary increases, or different steps on the salary schedule to [do the following]? (79)
- Does this school currently use any pay incentives to recruit or retain teachers to teach in fields of shortage? (80)
- Is free training available by this school, regardless of funding source, to prepare staff members to teach in fields with current or anticipated shortages? (81)
- Does this school have a formal arrangement with another school or a public library to provide library media services to your students and staff? (83)
- Does your school use internet resources to access reference materials, rather than a library media center? (84)
- Does this school's library media center have any paid library aides or clerical workers? (85)
- Does this school's library media center have paid professional staff who are not certified as library media specialists? (86)
- Does this school's library media center have paid professional staff who are certified in this state as library media specialists? (87)
- Do any volunteers provide services for the library media center? (88)

- During the most recent full week of school, approximately how many students used the library media center? (89)
- At the end of the 1998–99 school year, approximately what was the total number of books held in the library media center? (90)
- At the end of the 1998–99 school year, approximately what was the total number of current periodical subscriptions? (91)

Public School Principal Questionnaire

Public School Principal Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1, 3, and 4 were compiled and placed in the instructions of the 2003–04 SASS.
- How many years employed in each of following positions? (5 revised into 1 and 2.)
- What importance do you place on [list of educational goals]? (8 revised into 14.)
- How much actual influence do you think … has on decisions? (10 revised into 15.)
- Are the following items a problem or not in school? (11 revised into 36 and 37.)
- Are the following considerations barriers to dismissal of poor or incompetent teachers? (18 revised into 25.)
- List of professional development items for which principals are asked about their participation. (19 revised into 21.)
- Performance goals and consequences/rewards concerning such. (22 revised into 26.)
- Does school have formal improvement plan? (23 revised into 26.)
- Are you of Hispanic origin? (28 revised into 42.)

Public School Principal Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- What are total hours during full week spent on all school-related activities? (10)
- What are total hours during full week spent interacting with students? (11)
- How many months is the contract year for your position as principal? (12)
- An opinion/attitude question indicating how principals feel about working in that school. (13)
- Are instructional aides provided with time for professional development? (17)
- Are you a member of a national professional association of principals? (23)
- Does school currently have a drug, alcohol, or tobacco use prevention program? (31)
- Does school currently have a violence prevention program? (32)
- Last school year, how many students were expelled? (33)
- What was total number of suspensions last school year? (34)
- Did school implement safety measures (metal detectors, etc.) or have students wear uniforms, require clear or ban book bags? (35)
- What percent of parents/guardians participated in listed events? (38)
- Were the following things offered to parents/guardians? (39)
- Does school have list of parental involvement elements? (40)

Public School Principal Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is (the school named on the cover page) still in operation? (2)
- An opinion/attitude question regarding if school is accomplishing list of items regarding specific goals. (9)
- An opinion/attitude question regarding in-service professional development activities. (12)

- Does school have a decisionmaking body? (20)
- How often did you engage in the following list of events? (21)

Private School Principal Questionnaire

Private School Principal Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1 and 4 were compiled and placed in the instructions of the 2003–04 SASS.
- Are the following items a problem or not in school? (11 revised into 30 and 31.)
- Are the following considerations barriers to dismissal of poor or incompetent teachers? (17 revised into 24.)

Private School Principal Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- What are total hours during full week spent on all school-related activities? (9)
- What are total hours during full week spent interacting with students? (10)
- How many months is the contract year for your position as principal? (11)
- How much actual influence do you think …. has on decisions? (12)
- Does school have budget for professional development that YOU control? (15)
- Are instructional aides provided with time for professional development? (16)
- Are a member of professional association of principals/school heads? (22)
- Does school currently have a drug, alcohol, or tobacco use prevention program? (25)
- Does school currently have a violence prevention program? (26)
- Last school year, how many students were expelled? (27)
- What was total number of suspensions last school year? (28)
- Did school implement safety measures (metal detectors, etc.) or have students wear uniforms, require clear or ban book bags? (29)
- What percent of parents/guardians participated in listed events? (32)
- Were the following things offered to parents/guardians? (33)
- Does school have list of parental involvement elements? (34)

Private School Principal Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is (the school named on the cover page) still in operation? (2)
- If marked NO for either above items, do not complete this questionnaire. (3)
- List of items indicating criteria regarding goals. (9)
- An opinion/attitude question involving in-service professional development activities. (12)
- Is there a decisionmaking body? (19)
- List of activities engaged in past year used in question. (20)

Indian School Principal Questionnaire[4]

Indian School Principal Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1 and 4 were compiled and placed in the instructions of the 2003–04 SASS.
- Prior to current position how many years as principal in specific locations? (5 revised into 1 and 2.)
- List of items that are believed to be a problem used in question (11 revised into 36 and 37.)

Indian School Principal Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- What are total hours during full week spent on all school-related activities? (10)
- What are total hours during full week spent interacting with students? (11)
- How many months is the contract year for your position as principal? (12)
- An opinion/attitude question indicating how principals feel about working in that school. (13)
- Are instructional aides provided with time for professional development? (17)
- Are you a member of a national professional association of principals? (23)
- Has either district/state established school performance standards? (27)
- Which of the following best describes this school's performance last year? (28)
- As a result of meeting these goals, did the school [do the following]? (29)
- As a result of not meeting some or all of your performance standards last year, was this school [any of the following]? (30)
- Does school currently have a drug, alcohol, or tobacco use prevention program? (31)
- Does school currently have a violence prevention program? (32)
- Last school year, how many students were expelled? (33)
- What was total number of suspensions last school year? (34)
- Did school implement safety measures (metal detectors, etc.) or have students wear uniforms, require clear or ban book bags? (35)
- What percent of parents/guardians participated in listed events? (38)
- Were following things offered to parents/guardians? (39)
- Does school have list of parental involvement elements? (40)

Indian School Principal Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is (the school named on the cover page) still in operation? (2)
- If marked NO for either above items, do not complete this questionnaire. (3)
- List of items indicating criteria regarding goals. (9)
- An opinion/attitude question involving in-service professional development activities. (12)
- Is there a decisionmaking body? (20)
- List of activities engaged in past year used in question. (21)

[4] For the 2003–04 SASS, there was not a separate Indian School Principal Questionnaire. These data were collected on the Principal Questionnaire (Form SASS-2A).

Public Charter School Principal Questionnaire[5]

Public Charter School Principal Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Items 1 and 4 were compiled and placed in the instructions of the 2003–04 SASS.
- Prior to current position how many years as principal in specific locations? (5 revised into 1 and 2.)
- List of items that are believed to be a problem used in question. (11 revised into 36 and 37.)

Public Charter School Principal Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- What are total hours during full week spent on all school-related activities? (10)
- What are total hours during full week spent interacting with students? (11)
- How many months is the contract year for your position as principal? (12)
- An opinion/attitude question indicating how principals feel about working in that school. (13)
- Are instructional aides provided with time for professional development? (17)
- Are you a member of a national professional association of principals? (23)
- Does this school have a formal school improvement plan? (26)
- Does school currently have a drug, alcohol, or tobacco use prevention program? (31)
- Does school currently have a violence prevention program? (32)
- Last school year, how many students were expelled? (33)
- What was total number of suspensions last school year? (34)
- Did school implement safety measures (metal detectors, etc.) or have students wear uniforms, require clear or ban book bags? (35)
- What percent of parents/guardians participated in listed events? (38)
- Were following things offered to parents/guardians? (39)
- Does school have list of parental involvement elements? (40)

Public Charter School Principal Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is (the school named on the cover page) still in operation? (2)
- If marked NO for either above items, do not complete this questionnaire. (3)
- List of items indicating criteria regarding goals used in question. (9)
- An opinion/attitude question involving in-service professional development activities. (12)
- Is there a decisionmaking body? (20)
- List of activities engaged in past year used in question. (21)

Public School Teacher Questionnaire

Public School Teacher Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Item c was moved to the Instruction section, and information was deleted. (Revised into e.)
- What kind of work were you doing? (4c revised into 6b.)
- What were your most important activities or duties at that job? (4d revised into 6c.)

[5] For the 2003–04 SASS, there was not a separate Public Charter School Principal Questionnaire. These data were collected on the Principal Questionnaire (Form SASS-2A).

- How many years have you worked as a full-time elementary or secondary teacher in public schools? (6a revised into 9a.)
- How many years have you worked as a part-time elementary or secondary teacher in public schools? (6b revised into 9b.)
- Do you have a bachelor's degree? (8a revised into 20a.)
- What was your major field of study for each degree? (11c revised into 23b.)
- In what year did you receive each degree? (11d revised into 23d.)
- In what year did you begin your first teaching position, either full-time or part-time, at the elementary or secondary level? (19a revised into 8.)
- In the last 12 months, have you participated in the following activities related to teaching…? (27 revised into 39 and 47.)
- In the past 12 months, have you participated in any professional development activities that focused on in-depth study of the content in your main teaching assignment field? (28 revised into 40 through 44.)
- Of all the students you teach at this school, how many have disabilities or are special education students, that is, how many have an Individual Education Plan (IEP)? (39a revised into 49.)
- Using the scale 1–5 where 1 is "Not at all" and 5 is "To a great extent," to what extent do you use state or district standards to guide your instructional practice in your main teaching assignment field? (44 revised into 56.)
- Do you receive your students' scores on state or local achievement tests? (47a revised into 54.)
- Using the scale 1–5, where 1 is "Not at all" and 5 is "To a great extent," to what extent do you use the information from your students' test scores [to rank the following]? (47b revised into 55.)
- Using the scale of 1–5, where 1 means "No influence" and 5 means "A great deal of influence," how much actual influence do you think teachers have over school policy at this school in each of the following areas? (57 revised into 61.)
- Using the scale of 1–5, where 1 means "No control" and 5 means "Complete control," how much control do you think you have in your classroom at this school over each of the following areas of your planning and teaching? (58 revised into 62.)
- Do you agree or disagree with each of the following statements? (59 revised into 63.)
- To what extent is each of the following a problem in your school? (60 revised into 64 and 65.)

Public School Teacher Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Error correction to name in the instruction section.
- This school year, what is your main teaching assignment field at this school [added for teachers who marked box 1 or 2 for item 12]? (17)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (20c)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (22c)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (23c)
- Have you taken any of the following tests? (24)
- Have you ever taken any graduate or undergraduate courses that focused on teaching methods or teaching strategies? (27)
- How many of these courses did you complete before you started teaching at the elementary or secondary level? (28)
- Which of the following describes how you obtained the teaching methods or teaching strategies coursework? (29)

- How many hours are you required to work to receive base pay during a typical full week at this school? (59)
- During this school year, do you or will you [do any of the following items]? (60)
- To what extent do you agree or disagree with each of the following statements? (66)

Public School Teacher Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Items a and b from the instruction section were not included.
- Is this school a public charter school? (3)
- Did you have a minor study field? (8f)
- Thinking about all of the professional development you have participated in over the past 12 months, how useful was it? (29)
- Are you a Title I teacher, that is, are you paid in full or in part by federal funds under the Elementary and Secondary Education Act? (43)
- Do you use different groupings of students in your classroom to teach students who learn at different rates? (45)
- Are students assigned to your classes on the basis of achievement or ability level? (46)
- Do students in any of your classes use computers during class time? (48)
- In your main teaching assignment field, do students in your classes use computers during class time? (49)
- On answering items 50a–e below, first designate one of your classes in your main teaching assignment field that uses computers during class time. Items 50a–e refer to this designated class. (50)
- In your most recent full week of teaching, how much scheduled school time did you have for planning? (52)
- During your most recent full week of teaching, how many hours did you spend after school, before school, and on the weekend on each of the following types of activities? (53)
- During your most recent full week of teaching at this school [did student incidents occur]? (54)

Private School Teacher Questionnaire

Private School Teacher Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Do you have a teaching certificate in this state in your other teaching assignment field at this school? (16 revised into 32.)
- Do you currently hold any additional regular or standard state certificate or advanced professional teaching certificate in this state or any other state? (17 revised into 32.)
- Was your first year of teaching, reported in item 19a above, before the 1995–96 school year? (19b revised into 33.)
- Did your preparation for teaching include [the following]? (19c revised into 25.)
- In your first year of teaching, how well prepared were you to [do the following]? (21 revised into 34.)
- Were the following duties part of your first-year teaching assignment? (24 revised into 37.)
- In the past 12 months, have you participated in the following activities related to teaching? (27 revised into 40.)
- In the past 12 months, have you participated in any professional development activities that focused on uses of computers for instruction? (28d revised into 42.)
- In the past 12 months, have you participated in any professional development activities that focused on discipline and management of the classroom? (28f revised into 44.)

- Which category best describes the way your classes at this school are organized? (34 revised into 12 and 13.)
- At this school, what is the total number of students enrolled in the class you taught during your most recent full week of teaching? (35 revised into 14.)
- Do you receive your students' scores on state or local achievement tests? (47 revised into 55 and 56.)
- How many hours were you required to be at this school during your most recent full week of teaching? (51 revised into 58.)
- Has a student from this school ever threatened to injure you? (55 revised into 69.)
- Has a student from this school ever physically attacked you? (56 revised into 70.)
- Do you agree or disagree with each of the following statements [pertaining to teaching satisfaction]? (59 revised into 64.)
- To what extent is each of the following a problem in your school? (60 revised into 65 and 66.)

Private School Teacher Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Error correction to name in the instruction section.
- This school year, what is your main teaching assignment field at this school [added for teachers who marked box 1 or 2 for item 12]? (17)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (20c)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (22c)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (23c)
- Have you taken any of the following tests? (24)
- Have you ever taken any graduate or undergraduate courses that focused on teaching methods or teaching strategies? (27)
- How many of these courses did you complete before you started teaching at the elementary or secondary level? (28)
- Which of the following describes how you obtained the teaching methods or teaching strategies coursework? (29)
- Do you currently hold regular or full certification by an accrediting or certifying body other than the state? (30)
- In the past 12 months, have you participated in any professional development activities that focused on reading instruction? (43)
- In the past 12 months, did you do any of the following [professional development items]? (48)
- How many hours are you required to work to receive base pay during a typical full week at this school? (59)
- How many hours a week do you spend delivering instruction to a class of students? (60)
- During this school year, do you or will you [any of the following activities]? (61)
- To what extent do you agree or disagree with each of the following statements [that describe teacher satisfaction]? (67)
- Are you a member of a teacher's union or an employee association similar to a union? (77)

Private School Teacher Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Did you have a minor study field? (8f)
- What was your minor field of study? (8g)

- Did you mark box 1 or 2 in item 13b above? (13c)
- How did you earn this certificate in your main teaching assignment field? (13d)
- Are you currently in a program to obtain state certification on your main teaching assignment field? (14)
- This school year, are you assigned to teach classes in other fields at this school in addition to your main teaching assignment field? (15)
- What was your main teaching assignment field from last school year? (18)
- In the past 12 months, have you participated in any professional development activities that focused on methods of teaching? (28c)
- In the past 12 months, have you participated in any professional development activities that focused on student assessment, such as methods of testing, evaluation, performance assessments, etc.? (28e)
- In the past 12 months, have you participated in any professional development activities that focused on other topics not included in 28a–28f above? (28g)
- Are you a Title I teacher, that is, are you paid in full or in any part by federal funds under the Elementary and Secondary Education Act? (43)
- Are students assigned to your classes on the basis of achievement or ability level? (46)
- Do students in any of your classes use computers during class time? (48)
- In your main teaching assignment field, do students in your classes use computers during class time? (49)
- On answering items 50a–e below, first designate one of your classes in your main teaching assignment field that uses computers during class time. Items 50a–e refer to this designated class. (50)
- In your most recent full week of teaching, how much scheduled school time did you have for planning? (52)
- During your most recent full week of teaching, how many hours did you spend after school, before school, and on the weekend on each of the following types of activities? (53)
- During your most recent full week of teaching at this school [did student incidents occur]? (54)

Indian School Teacher Questionnaire[6]

Indian School Teacher Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Do you have a master's degree? (10 revised into 22.)
- Was your first year of teaching, reported in item 19a above, before the 1995–96 school year? (19b revised into 32.)
- In your first year of teaching, how well prepared were you to [do the following]? (21 revised into 33.)
- Did you receive the following kinds of support during your first year of teaching? (23 revised into 35.)
- Were the following duties part of your first year teaching assignment? (24 revised into 36.)
- In the past 12 months, have you participated in the following activities related to teaching? (27 revised into 39.)
- Which category best describes the way your classes at this school are organized? (34 revised into 12 and 13.)
- During your most recent full week of teaching, approximately how many hours did you spend teaching each of these subjects at this school? (36 revised into 16.)

[6] For the 2003–04 SASS, there was not a separate Indian School Teacher Questionnaire. These data were collected on the Teacher Questionnaire (Form SASS-4A).

- During your most recent full week of teaching, how many separate classes (or sections) did you teach at this school? (37 revised into 18.)
- For each class (or section) that you taught during your most recent full week of teaching at this school…. (38 revised into 19.)
- Do you receive your students' scores on state or local achievement tests? (47a revised into 54.)
- Using the scale 1–5, where 1 is "Not at all" and 5 is "To a great extent," to what extent do you use the information from your students' test scores [to rank the following]? (47b revised into 55.)
- How many hours were you required to be at this school during your most recent full week of teaching? (51 revised into 57.)
- Do you agree or disagree with each of the following statements [that describe teacher satisfaction]? (59 revised into 63.)
- To what extent is each of the following a problem in your school? (60 revised into 64 and 65.)

Indian School Teacher Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Error correction to name in the instruction section.
- This school year, what is your main teaching assignment field at this school [added for teachers who marked box 1 or 2 for item 12]? (17)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (20c)
- What this degree awarded by a university's department or college of education, or a college's department or school of education? (22c)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (23c)
- Have you taken any of the following tests? (24)
- Have you ever taken any graduate or undergraduate courses that focused on teaching methods or teaching strategies? (27)
- How many of these courses did you complete before you started teaching at the elementary or secondary level? (28)
- Which of the following describes how you obtained the teaching methods or teaching strategies coursework? (29)
- Some certificates may allow you to teach in multiple content areas. In what content area(s) does the teaching certificate marked above allow you to teach in this state? (30b)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 31a on page 22. (30c)
- Some certificates may allow you to teach in multiple content areas. In what content area(s) does the teaching certificate marked in 30a allow you to teach in this state? (30d)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 31a on page 22. (30e)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 31a on page 22. (30f)
- In what content area(s) does this current teaching certificate, marked in 31b above, allow you to teach in this state? (31c)
- If there is an additional content area that the certificate described above allows you to teach, please list it in 31e on page 23. Otherwise, GO TO item 32 on page 24. (32d)
- In what content area(s) does this current teaching certificate, marked in 31b, allow you to teach in this state? (32e)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 32 on page 24. (32f)

- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 32 on page 24. (32g)
- In the past 12 months, have you participated in any professional development activities that focused on reading instruction? (42)
- In the past 12 months, did you do any of the following [professional development items]? (48)
- How many hours are you required to work to receive base pay during a typical full week at this school? (58)
- How many hours a week do you spend delivering instruction to a class of students? (59)
- During this school year, do you or will you [do any of the following items]? (60)
- To what extent is each of the following a problem in this school? (65)
- To what extent to you agree or disagree with each of the following statements? (66)

Indian School Teacher Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is this school a public charter school? (3)
- Did you have a minor study field? (8f)
- What was your minor field of study? (8g)
- Do you have a teaching certificate in this state in your main teaching assignment field? (13a)
- Did you mark box 1 or 2 in item 13b above? (13c)
- How did you earn this certificate in your main teaching assignment field? (13d)
- Are you currently in a program to obtain state certification on your main teaching assignment field? (14)
- This school year, are you assigned to teach classes in other fields at this school in addition to your main teaching assignment field? (15)
- Do you currently hold any additional regular or standard state certificate or advanced professional teaching certificate in this state or any other state? (17)
- What was your main teaching assignment field from last school year? (18)
- In the past 12 months, have you participated in any professional development activities that focused on methods of teaching? (28c)
- Thinking about all of the professional development you have participated in over the past 12 months, how useful was it? (29)
- Are you a Title I teacher, that is, are you paid in full or in part by federal funds under the Elementary and Secondary Education Act? (43)
- Do you use different groupings of students in your classroom to teach students who learn at different rates? (45)
- Are students assigned to your classes on the basis of achievement or ability level? (46)
- Do students in any of your classes use computers during class time? (48)
- In your main teaching assignment field, do students in your classes use computers during class time? (49)
- On answering items 50a–e below, first designate one of your classes in your main teaching assignment field that uses computers during class time. Items 50a–e refer to this designated class. (50)
- In your most recent full week of teaching, how much scheduled school time did you have for planning? (52)
- During your most recent full week of teaching, how many hours did you spend after school, before school, and on the weekend on each of the following types of activities? (53)
- During your most recent full week of teaching at this school [did student incidents occur]? (54)

Public Charter School Teacher Questionnaire[7]

Public Charter School Teacher Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Was your first year of teaching, reported in item 19a above, before the 1995–96 school year? (19b revised into 32.)
- In your first year of teaching, how well prepared were you to…? (21 revised into 33.)
- Did you receive the following kinds of support during your first year of teaching? (23 revised into 35.)
- Were the following duties part of your first year teaching assignment? (24 revised into 36.)
- In the past 12 months, have you participated in the following activities related to teaching? (27 revised into 39.)
- Which category best describes the way your classes at this school are organized? (34 revised into 12 and 13.)
- During your most recent full week of teaching, approximately how many hours did you spend teaching each of these subjects at this school? (36 revised into 16.)
- During your most recent full week of teaching, how many separate classes (or sections) did you teach at this school? (37 revised into 18.)
- For each class (or section) that you taught during your most recent full week of teaching at this school…? (38 revised into 19.)
- Do you receive your students' scores on state or local achievement tests? (47a revised into 54.)
- Using the scale 1–5, where 1 is "Not at all" and 5 is "To a great extent," to what extent do you use the information from your students' test scores [to rank the following]? (47b revised into 55.)
- How many hours were you required to be at this school during your most recent full week of teaching? (51 revised into 57.)
- Do you agree or disagree with each of the following statements [that describe teacher satisfaction]? (59 revised into 63.)
- To what extent is each of the following a problem in your school? (60 revised into 64 and 65.)

Public Charter School Teacher Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Error correction to name in the instruction section.
- This school year, what is your main teaching assignment field at this school [added for teachers who marked box 1 or 2 for item 12]? (17)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (20c)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (22c)
- Was this degree awarded by a university's department or college of education, or a college's department or school of education? (23c)
- Have you taken any of the following tests? (24)
- Have you ever taken any graduate or undergraduate courses that focused on teaching methods or teaching strategies? (27)
- How many of these courses did you complete before you started teaching at the elementary or secondary level? (28)

[7] For the 2003–04 SASS, there was not a separate Public Charter School Teacher Questionnaire. These data were collected on the Teacher Questionnaire (Form SASS-4A).

- Which of the following describes how you obtained the teaching methods or teaching strategies coursework? (29)
- Some certificates may allow you to teach in multiple content areas. In what content area(s) does the teaching certificate marked above allow you to teach in this state? (30b)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 31a on page 22. (30c)
- Some certificates may allow you to teach in multiple content areas. In what content area(s) does the teaching certificate marked in 30a allow you to teach in this state? (30d)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 31a on page 22. (30e)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 31a on page 22. (30f)
- In what content area(s) does this current teaching certificate, marked in 31b above, allow you to teach in this state? (31c)
- If there is an additional content area that the certificate described above allows you to teach, please list it in 31e on page 23. Otherwise, GO TO item 32 on page 24. (32d)
- In what content area(s) does this current teaching certificate, marked in 31b, allow you to teach in this state? (32e)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 32 on page 24. (32f)
- If there is an additional content area that the certificate described above allows you to teach, please list it below. Otherwise, GO TO item 32 on page 24. (32g)
- In the past 12 months have you participated in any professional development activities that focused on reading instruction? (42)
- In the past 12 months, did you do any of the following [professional development items]? (48)
- How many hours are you required to work to receive base pay during a typical full week at this school? (58)
- How many hours a week do you spend delivering instruction to a class of students? (59)
- During this school year, do you or will you [do any of the following items]? (60)
- To what extent is each of the following a problem in this school? (65)
- To what extent do you agree or disagree with each of the following statements? (66)

Public Charter School Teacher Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Is this school a public charter school? (3)
- Did you have a minor study field? (8f)
- What was your minor field of study? (8g)
- Do you have a teaching certificate in this state in your main teaching assignment field? (13a)
- Did you mark box 1 or 2 in item 13b above? (13c)
- How did you earn this certificate in your main teaching assignment field? (13d)
- Are you currently in a program to obtain state certification in your main teaching assignment field? (14)
- This school year, are you assigned to teach classes in other fields at this school in addition to your main teaching assignment field? (15)
- Do you currently hold any additional regular or standard state certificate or advanced professional teaching certificate in this state or any other state? (17)
- What was your main teaching assignment field from last school year? (18)
- In the past 12 months, have you participated in any professional development activities that focused on methods of teaching? (28c)

- Thinking about all of the professional development you have participated in over the past 12 months, how useful was it? (29)
- Are you a Title I teacher, that is, are you paid in full or in part by federal funds under the Elementary and Secondary Education Act? (43)
- Do you use different groupings of students in your classroom to teach students who learn at different rates? (45)
- Are students assigned to your classes on the basis of achievement or ability level? (46)
- Do students in any of your classes use computers during class time? (48)
- In your main teaching assignment field, do students in your classes use computers during class time? (49)
- On answering items 50a–e below, first designate one of your classes in your main teaching assignment field that uses computers during class time. Items 50a–e refer to this designated class. (50)
- In your most recent full week of teaching, how much scheduled school time did you have for planning? (52)
- During your most recent full week of teaching, how many hours did you spend after school, before school, and on the weekend on each of the following types of activities? (53)
- During your most recent full week of teaching at this school [did student incidents occur]? (54)

School District Questionnaire

School District Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- Around the first of October, what was the total number of students enrolled in this district in all grade levels? (5 revised into 2 and 3.)
- Around the first of October, how many students in grades K–12 and comparable ungraded levels were [choose from a list of ethnicity options]? (6 revised into 4.)
- Regardless of whether this district participates in the National School Lunch Program, around the first of October, were any students in this district eligible for free or reduced-price lunches? (7 revised into 6.)
- Around the first of October, how many part-time and full-time teachers employed by this district for grades K–12 and comparable ungraded levels were [the following]? (9 revised.)
- Are the following criteria used in considering applicants for teaching positions in this district? (11 revised into 13.)
- Does this district have an agreement with a teachers' union or organization for the purpose of collective bargaining or meet-and-confer discussions? (15 revised into 17.)
- Is there a salary schedule for teachers in this district? (17 revised into 24.)
- According to the salary schedule, what is the normal yearly base salary for [the following]? (18 revised into 25.)
- Does this district offer the following benefits to teachers? (23 revised into 28.)
- Does this district offer the following income in-kind to teachers? (24 revised into 28.)
- Does this district have performance reports that include [the following]? (25 revised into 29.)
- Does this district require schools to participate in a district-level assessment program? (28 revised into 31.)
- Does this state reward districts or schools for student achievement? (29 revised into 36 through 41 series.)
- Does this district reward schools for student achievement? (30 revised into 36 through 41 series.)
- Skip pattern item. (31 revised into 36 through 41 series.)
- During the last 12 months, how many schools in this district received the following rewards or sanctions for student achievement? (32 revised into 36 through 41 series.)

- During the last 12 months, has this district [been involved in an action pertaining to achievement goals]? (33 revised into 36 through 41 series.)
- Does this district have a public school "choice" program in which students can choose to enroll in either their assigned school or another school within the district? (35 revised into 43, with "b" deleted.)
- Does this district have a public school "choice" program in which students, at no tuition cost to themselves or their families, can enroll in a school in another district? (36 revised into 44, with "b" deleted.)
- Does this district offer the following public school "choice" programs? (39 revised into 41h.)
- Are homeschooled students required to perform at or above the same specific level as public school students on state or district achievement tests? (42 revised into 54.)
- Are homeschooled students required to perform at or above a specified level on another achievement test, other than the above state or district tests? (43 revised into 55.)
- Are homeschooled students required to submit evidence of grade level performance other than achievement testing? (44 revised into 56.)
- Does this district have a community service requirement for students in the class of 2000? (48 revised into 59 and 60.)
- Are students required to pass a state or district assessment to graduate from high school? (49 revised into 61.)
- Are the following sources of funding for teacher professional development activities used in this district? (53 revised into 65.)

School District Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- Does this district offer all of grades K–12? (1)
- Does this district have any prekindergarten students? (5)
- Around the first of October, how many principals were employed by this district for grades K–12 and comparable ungraded levels? (10)
- Does this district have a district-wide library media center coordinator? (11)
- Does this district currently use the following to recruit teachers? (14)
- For this school year, how many principals were newly hired by this district for grades K–12 and comparable ungraded levels? (19)
- Are the following criteria used in considering applicants for principal positions in this district? (20)
- Does this district currently use any incentives to recruit principals? (21)
- Does this district hire paraprofessionals who provide instructional support? (22)
- Are the following criteria used in considering applicants for paraprofessional staff who provide instructional support in this district? (23)
- Are any students in this district given state or district required assessments in mathematics? (32)
- Are any students in this district given state or district required assessments in English, reading, and/or language arts? (33)
- Are any students in this district given state or district required assessments in science? (34)
- Are any students in this district given state or district required assessments in social studies and/or history? (35)
- Does this district have a school "choice" program in which students from this district can choose to enroll in a private school using state or district funds? (45)
- Does this district offer supplemental educational services to underperforming students at no cost to themselves or their families? (49)
- Last school year (2002–03), were there any homeschooled students in this district? (51)
- Does this district provide any of the following to homeschooled students and their families? (52)

- During the 2003 summer session, what was the total cumulative enrollment of migrant students? (76)

School District Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Please record the time that you begin. (3)
- Of the newly hired teachers, how many of the job offers to these teachers were made [choose from a list of time frames]? (12b)
- Has this district used the following procedures to dismiss poor or incompetent teachers? (13)
- According to the district budget for this fiscal year, what is the estimated benefit rate for [types of staff at this school]? (21)
- Does a state, city, or county agency other than this school district make additional contributions for employee benefits for teachers? (22)
- Does this district distribute school-level performance reports to the schools? (27)
- Are homeschooled students in this district required to meet state or district accountability standards? (41)
- Do these requirements reflect a 3-year or a 4-year program? (47)
- During the last regular school year, were Title I Part C Migrant Education Program (MEP) funded services provided by [the following entities]? (60)
- Approximately what percentage of your district's migrant students attended schools in your district for the entire 1998–99 regular school year, excluding the 1999 summer session? (62)
- Now consider just the migrant students who spent less than the entire 1998–99 regular school year in one of your schools. About how many spent less than the entire regular school year because of an agricultural-related move? (63)
- During the 1999 summer school session, were Title I Part C Migrant Education Program (MEP) funded services provided by [the following entities]? (65)
- During the 1999 summer school session, were any of the following staff positions in this district funded in whole or in part with Title I Part C Migrant Education Program (MEP) funds? (66)

Public School Library Media Center Questionnaire

Public School Library Media Center Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- For this item: count each professional staff member only once. Report each person by his/her highest degree earned. If no paid professional staff have a particular degree as their highest degree, mark the "None" box for that degree. Do not include library aides or clerical staff. If this library media center does not have any paid professional staff, skip to item 10a on page 7. (9 revised into 8.)
- Is the following equipment located within this library media center? (13 revised.)
- During the 1998–99 school year, what were the total holdings, additions, and expenditures for the library media center for each of the following kinds of materials? (22 revised into 18.)
- During the 1998–99 school year, what was the total expenditure for the types of materials listed above (in item 22) for this library media center? (23 revised into 22.)
- When may students use the library media center independently? (31 revised into 29.)
- During the most recent full week of school, how many times was the library media center space used by groups for nonlibrary related activities? (34 revised into 32.)
- Does this school have any of the following school board-approved policies? (40 revised into 35.)

Public School Library Media Center Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- How many of the paid professional library media center staff have earned a master's degree in a library-related education field such as librarianship, educational media, instructional design, instructional technology, library science, or information science? (9)
- How many computer workstations does this library media center have for student and staff use? (14)
- If this library media center was not in existence last school year (2002–03), please mark (X) this box and go to item 25 on page 13. Otherwise, continue below. (17)
- During the 2002–03 school year, did this library media center subscribe to any current magazines, journals, or newspapers (in any format)? (19)
- During the 2002–03 school year, did this library media center have access to electronic databases of periodical articles provided by a state agency or a school district at no charge to the school? (20)
- During the 2002–03 school year, did this library media center purchase access to any electronic databases? (21)
- During the 2002–03 school year, were any computer hardware donations, grants, or other contributions received by this library media center? (23)
- During the 2002–03 school year, were any audio-visual equipment donations, grants, or other contributions received by this library media center? (24)
- How much influence do you think each group or person has on scheduling classes in this library media center? (27)
- During the most recent full week of school, was this library media center used as a classroom, due to a classroom shortage? (32)
- In the past 12 months, have any staff in this school received formal training on information literacy instruction? (37)
- Does this school follow formal state or district content standards in information literacy? (38)
- Does this school follow a formal state or district information literacy curriculum? (39)
- Does this library media center receive formal feedback on students' information literacy skills? (40)
- During the 2002–03 school year, what percent of teachers in this school collaborated with the library media center staff to plan and deliver instruction? (41)

Public School Library Media Center Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- Do you have a district library media center coordinator? (12)
- Are the following electronic services available in the library media center either through stand-alone terminals, library local area network (LAN), building-wide LAN, or district wide area network (WAN)? (14)
- Does this school have any television sets or video monitors? (15)
- How does this school receive its television programming? (16)
- Does this library media center have multimedia production facilities (a computer using any text, full color, images and graphics, video, animation, and sound)? (17)
- Does this library media center use prerecorded video tapes? (18)
- Does this school have in-house television production facilities? (20)
- Does this school participate in distance learning? (21)
- For each of the following Dewey decimal numbers or categories, how many volumes were purchased for this library media center during the 1998–99 school year? (25)

- During the 1998–99 school year, how many volumes did this library media center purchase for its professional collection for teachers (e.g., curriculum development, instructional practice, educational psychology)? (26)
- During the 1998–99 school year, what was the total expenditure for computer hardware, other than communications equipment, for this library media center? (27)
- During the 1998–99 school year, what was the total expenditure for other audio-visual equipment for this library media center? (28)
- Who makes library media center scheduling decisions? (30)
- During the most recent full week of school, how many times was this library media center used by the following kinds of school groups? (32)
- During the most recent full week of school, how many students used the library media center? (35)
- During the most recent full week of school, what was the total number of books and other materials checked out from the library media center? (36)
- What is the maximum number of books that a student may take out of the library media center at a time? (37a)
- Are you a library media specialist or school librarian? (39)

Indian School Library Media Center Questionnaire[8]

Indian School Library Media Center Questionnaire—Questions That Collected the Following Data Were Significantly Altered for the 2003–04 SASS

- For this item: count each professional staff member only once. Report each person by his/her highest degree earned. If no paid professional staff have a particular degree as their highest degree, mark the "None" box for that degree. If this library media center does not have any paid professional staff, skip to item 10a on page 6. Do not include library aides or clerical staff. (9 revised into 8.)
- Is the following equipment located within this library media center? (12 revised into 13.)
- During the 1998–99 school year, what were the total holdings, additions, and expenditures for the library media center for each of the following kinds of materials? (21 revised into 18.)
- During the 1998–99 school year, what was the total expenditure for the types of materials listed above (in item 21) for this library media center? (22 revised into 22.)
- When may students use the library media center independently? (30 revised into 29.)
- During the most recent full week of school, how many times was the library media center space used by groups for non-library related activities? (33 revised into 32.)

Indian School Library Media Center Questionnaire—Questions That Collected the Following Data Were Added to the 2003–04 SASS

- How many computer workstations does this library media center have for student and staff use? (14)
- If this library media center was not in existence last school year (2002–03), please mark (X) this box and go to item 25 on page 13. Otherwise, continue below. (17)
- During the 2002–03 school year, did this library media center subscribe to any current magazines, journals, or newspapers (in any format)? (19)

[8] For the 2003–04 SASS, there was not a separate Indian School Library Media Center Questionnaire. These data were collected on the School Library Media Center Questionnaire (Form LS-1A).

- During the 2002–03 school year, did this library media center have access to electronic databases of periodical articles provided by a state agency or a school district at no charge to the school? (20)
- During the 2002–03 school year, did this library media center purchase access to any electronic databases? (21)
- During the 2002–03 school year, were any computer hardware donations, grants, or other contributions received by this library media center? (23)
- During the 2002–03 school year, were any audio-visual equipment donations, grants, or other contributions received by this library media center? (24)
- How much influence do you think each group or person has on scheduling classes in this library media center? (27)
- During the most recent full week of school, was this library media center used as a classroom, due to a classroom shortage? (32)
- Does this school have any of the following school board-approved policies? (35)
- In the past 12 months, have any staff in this school received formal training on information literacy instruction? (37)
- Does this school follow formal state or district content standards in information literacy? (38)
- Does this school follow a formal state or district information literacy curriculum? (39)
- Does this library media center receive formal feedback on students' information literacy skills? (40)
- During the 2002–03 school year, what percent of teachers in this school collaborated with the library media center staff to plan and deliver instruction? (41)

Indian School Library Media Center Questionnaire—Questions That Collected the Following Data in the 1999–2000 SASS That Were Not Included in the 2003–04 SASS

- How many of the paid professional library media center staff have earned an education specialist or professional diploma (at least one year beyond the master's level) as their highest degree? (9b)
- How many of the paid professional library media center staff have a master's degree in a library related field PLUS a second master's degree as their highest degree? (9e)
- Are the following electronic services available in the library media center either through stand-alone terminals, library local area network (LAN), building-wide LAN, or district wide area network (WAN)? (13)
- Does this school have any television sets or video monitors? (14)
- How does this school receive its television programming? (15)
- Does this library media center have multimedia production facilities (a computer using any text, full color, images and graphics, video, animation and sound)? (16)
- Does this library media center use prerecorded video tapes? (17)
- Does this school have in-house television production facilities? (19)
- Does this school participate in distance learning? (20)
- For each of the following Dewey decimal numbers or categories, how many volumes were purchased for this library media center during the 1998–99 school year? (24)
- During the 1998–99 school year, how many volumes did this library media center purchase for its professional collection for teachers (e.g., curriculum development, instructional practice, educational psychology)? (25)
- During the 1998–99 school year, what was the total expenditure for computer hardware, other than communications equipment, for this library media center? (26)
- During the 1998–99 school year, what was the total expenditure for other audio-visual equipment for this library media center? (27)
- Who makes library media center scheduling decisions? (29)

- During the most recent full week of school, how many times was this library media center used by the following kinds of school groups? (31)
- During the most recent full week of school, how many students used the library media center? (34)
- During the most recent full week of school, what was the total number of books and other materials checked out from the library media center? (35)
- What is the maximum number of books that a student may take out of the library media center at a time? (36a)
- Are you a library media specialist or school librarian? (38)

Methodological and Procedural Changes

Field-Based Data Collection

The data collection procedures for all questionnaires administered at the schools changed substantially for the 2003–04 SASS. In previous administrations of SASS, self-administered questionnaires were mailed to the selected schools. Nonrespondents were contacted by telephone, using a computer-assisted telephone interviewing (CATI) instrument. Finally, remaining nonrespondents were assigned to field representatives who contacted them by telephone and/or by personal visits. Under that methodology, most respondents completed self-administered questionnaires, while some were interviewed by telephone (12 to 23 percent, depending on the questionnaire type).

During the 2003–04 SASS, field representatives were responsible for all of the SASS data collection for each of the sampled schools, and nearly all questionnaires were completed directly by respondents (fewer than 900 cases were attempted as telephone interviews). The field activities included

- mailing an advance postcard to the schools;
- telephoning the school and using a computer-assisted personal interviewing (CAPI) instrument (the SASS Teacher Listing instrument) to verify school information and set up appointments;
- visiting the school to meet the school principal, school head(s), and/or other school contact person(s) to explain the 2003–04 SASS, to pick up the teacher roster (or make arrangements to obtain it), and to drop off questionnaires for the principal, school, and school library media center;
- entering the teacher roster information into the SASS Teacher Listing instrument, which selected a sample of teachers;
- passing out questionnaires to the selected teachers; and
- following up on all questionnaires via telephone calls and return personal visits, if needed.

Chapter 5 on data collection provides details on the fieldwork. A brief evaluation of the field-based methodology is included at the end of chapter 5.

Advance Work with School Districts

In prior administrations of SASS, school districts were contacted before data collection began to obtain the name of the person to whom the School District Questionnaire should be mailed. Additional efforts to contact school districts were made for the 2003–04 SASS, because of concerns that the district's participation impacts not only the response rate on the School District Questionnaire but also the participation of schools within the district. School district participation in SASS is critical because a refusal from the school district can lower response rates for multiple school, principal, teacher, and school

library media center questionnaires as well as lower the school district response rate. The new field-based methodology had the potential to impact the participation of the school districts in two ways:

- *Decrease school-level response*. A field representative contacted schools in each school district individually. If a school requested approval by the school district as a condition for participation, and the school district refused, all of the schools in the district could become nonrespondents. In the past, many schools completed their questionnaire before the school district had a chance to refuse.
- *Increase school participation*. By sending people with extensive knowledge of the area and good communication skills to the schools and districts, the participation rate within schools could increase.

Since the impact of the new methodology was unknown, two approaches to deal with school districts were implemented. First, school districts that were in the sample in the past and had special procedures for allowing participation, or were known to have research applications with deadlines before the field period would begin, were identified. These were referred to as "special districts" and efforts were made to contact them for approval prior to the field period. These efforts are documented in "Appendix L. Report on Results of Special Contact Districts."

Second, to better understand how districts would respond to precontact and what implications it would have on the cost and timing of SASS, a small experiment was embedded in this implementation of SASS. Three of the 12 Census Bureau Regional Offices were selected to participate in this experiment. All of the school districts in these areas, except the "special districts," were assigned either to the test group or the control group. Those in the test group were called prior to the field period to determine if they had any research requirements or paperwork that must be completed before a field representative could visit their schools. If they did have requirements, efforts were made to meet them and gain approval prior to the field period. During the survey, field representatives kept detailed logs of their efforts in completing data collection at the schools in each of these districts, in order to provide data to ascertain the impact of the precontacts. The results of the experiment are covered in "Appendix M. School District Experiment Findings."

Early Detection of Out-of-Scope Schools

In previous administrations of SASS, schools' self-reported grade ranges, addresses, and/or number of teachers differed from the variables recorded on the Common Core of Data (CCD). These differences impact whether a school was in-scope or out-of-scope for SASS (i.e., eligible for SASS). In previous SASS administrations, these discrepancies were identified during post-data collection processing. Identifying these discrepancies during processing delayed the final completion of previous administrations of SASS. To reduce processing time and burden on out-of-scope schools, the Census Bureau reengineered the process to start with the use of the SASS Teacher Listing instrument that determined if a school was in-scope or out-of-scope. Details on the SASS Teacher Listing instrument are covered in chapter 5.

Early Start to the Teacher Survey

In previous administrations of SASS, the Teacher Listing Form was mailed to schools in order to obtain a list of teachers' names and additional information on the teachers' subject matter and grades taught, full-time/part-time status, race/ethnicity, experience level (whether in first 3 years of teaching or not), and whether they taught students with limited-English proficiency. Once enough Teacher Listing Forms were received and keyed, the information was used to sample teachers and mail the appropriate teacher questionnaires. Mailout of teacher questionnaires occurred in waves, with the first wave occurring several

weeks after the other survey forms were mailed. Follow-up of the teacher questionnaires continued through the end of the school year. The Census Bureau reengineered the process by having the field representative obtain Teacher Listing Form information as early as possible, and key the teacher names and information into CAPI, which then selected the teachers for each school, enabling the teacher questionnaires to be distributed much earlier than in previous administrations of SASS. The data collection was substantially completed by February 2004.

Promotional Materials

To encourage response, the 2003–04 SASS used several promotional materials, including brochures, pens, and CD-ROMs. The brochures, which contained summaries of the results from the 1999–2000 SASS, were provided to the school's principal during the first meeting at the school. The purpose of the brochures was to emphasize to educators the importance of their participation in SASS. Public schools were given *A Brief Profile of America's Public Schools* (NCES 2003-418) and private schools were given *A Brief Profile of America's Private Schools* (NCES 2003-417). All schools also were given an informational brochure, *Schools and Staffing Survey: 2003–04* (NCES 2003-409), and a CD-ROM containing the *Statistical Abstract of the United States: 2002*.

Individual respondents (i.e., principals, teachers, and library media center specialists) were provided pens inscribed with the "Schools and Staffing Survey" and the SASS website.

Internet Reporting Option

There was no internet reporting option for the 2003–04 SASS. The 1999–2000 SASS offered an internet reporting option for the School Library Media Center Questionnaire.

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Chapter 3. Preparation for the 2003–04 SASS

The National Center for Education Statistics (NCES) and the U.S. Census Bureau continually work to improve questionnaires and procedures for the Schools and Staffing Survey (SASS). Prior to the administration of the 2003–04 SASS, the survey and methodology were tested iteratively and improved. Methodology changes were based on experience conducting previous SASS studies and on debriefings conducted with Census Bureau field staff (field representatives). Decisions on revisions to items were informed by a number of sources, including qualitative research, item response rates from previous surveys, results of reinterview studies, and review of data issues from previous studies. A summary of the research conducted is presented in exhibit 1, and the full reports are included as appendixes C through J.

Exhibit 1. Summary of research conducted for 2003–04 SASS

Title	Methodology	Study period	Respondent(s)	Key areas of focus
Report on 2001–02 SASS Pretest and Recommendations for 2003–04 SASS	Field test	10/2001–3/2002	ALL	Methodology
Report of Findings From a Test on the SASS Teacher Listing Instrument	Field test/ Telephone	1/2003	ALL	Methodology
Report on SASS Cognitive Interviews of Teachers in Two Panels	In-person cognitive interview	12/2002–1/2003	Teacher	Most areas—working conditions, certification, degrees
Report on a Follow-up Cognitive Testing to the 2003–04 SASS Teacher Questionnaire	Telephone cognitive interview	3/2003	Teacher	Teacher certification
Report on SASS Focus Groups	Focus groups	3/2003	Public school and principal	Overcrowding, time use, staffing, school lunch, and Title 1
Results of the Cognitive Pretest on SASS Public School Questions	In-person cognitive interview	3/2003–4/2003	Public school	All except some counts
Report on a Follow-up Cognitive Testing to Select 2003–04 SASS Principal Items	Telephone cognitive interview	3/2003–4/2003	Public school principal	Time use, professional development, and performance standards
Results of the Cognitive Pretest on SASS School Library Media Center Questions	Telephone cognitive interview	3/2003	Library	Information literacy, computers, staffing, and certification

Research on New SASS Methodology

SASS Field Pretest

For the 1999–2000 SASS, selected schools were sent questionnaires by mail. Nonrespondents were contacted first by telephone (using computer-assisted telephone interviewing [CATI] instruments for most questionnaires) and ultimately by field representatives. In an attempt to shorten the data collection period

for SASS and increase response rates, a new methodology was proposed for the 2003–04 SASS. The new methodology was essentially a shift to an in-person field-based methodology that would begin with a personal visit to each school by a field representative, with all subsequent follow-up conducted by the field representative. The purpose of the pretest was to see if this new approach was advantageous in terms of timing, response, data quality, and cost. The field test was conducted between October 2001 and March 2002. A complete description of the methodology and detailed findings can be found in "Appendix C. Report on 2001–02 SASS Pretest and Recommendations for 2003–04 SASS."

Methods

Three Census Bureau Regional Offices—Seattle, Atlanta, and Denver—were selected to participate in the pretest. A total of 29 field representatives across the three Regional Offices were trained on the procedures to conduct the SASS interviews. Over 300 schools were selected to participate in this test. An advance letter was sent to the schools that were selected to participate informing them that a field representative would contact them. Field representatives attempted to contact schools via telephone and gain the school's participation in SASS. Field representatives also returned to schools to pick up completed questionnaires. A debriefing was held at the end of the field pretest. The response rates are presented in table 1.

Table 1. Response rates (in percent) for the SASS field pretest, by regional office: 2001–02

Questionnaire	Total response rates	Regional office response rates		
		Seattle	Atlanta	Denver
Teacher Listing Form	88.1	83.8	91.5	89.2
Principal	84.4	81.2	88.8	83.2
School	83.0	77.8	88.0	83.3
School Library Media Center	84.8	78.9	87.0	88.5
Teacher	86.7	87.4	92.6	80.2

SOURCE: U.S. Census Bureau, Schools and Staffing Survey (SASS) 2001–02 Pretest.

Key Findings

- Surveys potentially could be completed 6 to 8 months earlier using the new methods.
- The response rates for schools in the pretest were lower than the rates achieved on the 1999–2000 SASS, but higher for teachers. The lower school-level rates occurred because several schools that may have participated in a full-scale SASS refused to participate in the pretest.
- There was no clear improvement in data quality. However, there were indications that the data from the Teacher Listing Form were less problematic and that a few questions on the other SASS questionnaires may have had better item response rates.

Test of SASS Teacher Listing Instrument

In previous administrations of SASS, screening of schools to determine if they were in-scope or out-of-scope was embedded in the Teacher Listing Form and school questionnaires. The screening process sometimes yielded inaccurate or inconsistent information about the school's status. For example, a private school might report that it is public, because it receives tuition money from a public school district on behalf of some students. The methodology itself added significant time to the data collection. Although the SASS operation typically started in October, the last teacher questionnaires were mailed out in the spring, leaving little time in the school year for nonresponse follow-up. In an attempt to improve the screening process and reduce the time required to conduct SASS, a computer-assisted personal interviewing (CAPI) instrument, called the SASS Teacher Listing instrument, was developed that could

screen schools and select a sample of teachers from eligible schools. The instrument was designed to screen schools by phone for in-scope and out-of-scope status. Next, the field representative was instructed to set up an appointment with the school to collect the Teacher Listing Form data. The field representative could then key these data into the instrument and a sample of teachers was selected. This allowed the field representative to sample teachers and hand questionnaires to the selected teachers all in one visit to the school. In order to verify that the SASS Teacher Listing instrument and procedures would work in a field setting, a two-part test was conducted prior to the full-scale SASS administration.

The instrument and procedures were modified based on findings from the test. The test was conducted in early January 2003. Detailed information on the study can be found in "Appendix D. Report of Findings From a Test on the SASS Teacher Listing Instrument."

Methods

One hundred and eighty schools in states likely to be problematic[9] (Oklahoma, Montana, and South Dakota) and the Washington, DC metropolitan area (Virginia, Pennsylvania, the District of Columbia, and Maryland) were selected to participate in this test. For details on sampling, please refer to "Chapter 4. SASS Frame Creation and Sample Selection Procedures." In order to ensure that a variety of scenarios were encountered (e.g., merged or split schools), some of the schools selected had their sampling frame information altered (grade ranges or enrollment counts were modified to create discrepancies). Following normal SASS procedures, an advance letter was sent to schools prior to interviewing. Five field representatives and members of Census Bureau telephone interviewing staff were trained to administer the SASS Teacher Listing instrument and conduct a debriefing with respondents about their experience. A standardized debriefing form was used to structure the feedback. Twenty cases in the DC area were selected for in-person visits. All other interviews were conducted by telephone. Daily debriefing sessions were held at the Census Bureau to identify issues and solutions during the test period.

Key Findings

- The instrument was not able to handle breaks in grade range. For example, a high school that had a kindergarten would have needed to be reported as 9–12. It was recommended that grade range handling be improved to allow this flexibility.
- The instrument moved slowly during the keying operation. It was recommended that improvements be made to the performance of the Teacher Listing Form portion of the instrument.
- The instrument was successful at identifying in-scope and out-of-scope schools and collecting teacher lists from schools. It was recommended that a modified instrument be used in the full-scale SASS.
- The test indicated that Regional Offices should conduct a prefield clean-up operation of the listing file before field interviewing begins.
- The test identified many procedural recommendations:
    - Training for field representatives should be modified to improve their understanding of how to use the instrument and contact schools.
    - Field representatives should review every Teacher Listing Form with a knowledgeable person at the school before keying the form into the instrument. During the pretest, field representatives did not check the quality of the Teacher Listing Form before leaving the school, which led to the inclusion of nonteachers in the sample.

[9] In previous SASS administrations, it was more common to find a discrepancy between grade ranges on the Common Core of Data (CCD) and actual grade ranges identified in SASS for schools in Oklahoma, Montana, and South Dakota than it was for schools in other states.

- Greater flexibility should be built into the instrument so that field representatives could change demographic fields such as name and address during the interview.

Research on the Teacher Questionnaire

In an effort to develop questionnaire items that would accurately capture teachers' responses to the key questionnaire items, Census Bureau analysts conducted a series of cognitive interviews (such as "think-aloud" sessions) to identify problems that could be corrected prior to the survey's official release. The results from this first study were used to make revisions, and a second, small-scale study was conducted to test some of these key revisions.

Study One

An initial round of cognitive interviews was conducted on key items from the teacher questionnaire from December 2002 through February 2003. The study evaluated some items from the 1999–2000 administration of SASS that were deemed problematic, as well as new items that were being considered for addition to the 2003–04 administration. Details on methodology and findings can be found in "Appendix E. Report on SASS Cognitive Interviews of Teachers in Two Panels."

The test included items on

- background and work status;
- class organization;
- degrees obtained and their source (education program);
- certification and preparation for teaching;
- working conditions;
- professional development;
- resources and assessment of students; and
- school climate.

In addition, the study tested a different approach to the certification section that was included in the 1999–2000 teacher questionnaire. The series was revised to ask first about the teacher's certification and content area rather than asking for the teacher's main assignment first followed by items on certification status in the assignment area. All other items were tested as written in the 1999–2000 teacher questionnaire.

Methods

Due to the number of questions and subquestions in these sections, the test was conducted in two panels. Both panels included sections on background, work status, and working conditions. Panel A contained items on class organization, educational background, certification, and preparation for teaching. Panel B contained additional items on professional development, school climate, resources, and assessment of students. There were 16 participants in panel A and 14 participants in panel B for a total of 30 participants.

Interviewers followed a protocol but were free to vary from the protocol as necessary. The protocol utilized a variety of cognitive techniques, including think-aloud, probing, and retrospective probes. Respondents received a cash incentive for their participation in the study.

Key Findings

- Confusion about certification items should be resolved by asking respondent to first identify their school level (e.g., elementary or secondary) and then identify the area of specialization or endorsement.
- The items concerning hours worked at the school should be revised to better capture how teachers spend their time at their school each week. This includes adding additional instructions that clarify which specific activities to include in the hours reported for each of these items.
- The items on standardized testing should be revised for content and worded more clearly so that respondents can accurately reflect testing in schools.

Study Two

The teacher questionnaire was revised based on recommendations from the previous study. As a result, a small-scale test was conducted on some of the key revisions. Complete findings and methodology can be found in "Appendix F. Report on a Follow-up Cognitive Testing to the 2003–04 SASS Teacher Questionnaire."

Methods

This research was conducted through telephone interviewing during March 2003. Schools were contacted by phone and asked to nominate a teacher to participate in the study. A questionnaire was then faxed to the school and an appointment was set for the researcher to call the teacher directly. A concurrent interview was conducted by phone following a structured protocol. The interviewer was free to deviate from the protocol as required. The form contained revised items on certification, preparation for teaching, and source of degree. The initial proposed certification questions were administered to three respondents. The form was revised based on these interviews and an additional six interviews were conducted with this second form. Interviews lasted 15 to 25 minutes. Teachers were offered a copy of the *Schools and Staffing Survey, 1999–2000: Overview of the Data for Public, Private, Public Charter, and Bureau of Indian Affairs Elementary and Secondary Schools* (NCES 2002-313) as an incentive for participation.

Key Findings

- Certification items should be revised to focus on certification areas instead of endorsements, which caused confusion.
- The research indicated that teachers have a difficult time recalling their specific certification.
- Certification requirements varied by state and changed from year to year within states.
- Items on the types of assessments taken by teachers and the results of those tests suffered from recall issues and order effects.

Research on the School and Principal Questionnaires

New items on principal's time use, paraprofessionals, hiring and dismissal of teachers, and testing were proposed for the 2003–04 administration of SASS. Additionally, items on overcrowding and attendance were found to be unreliable in a reinterview study conducted on the previous SASS administration. (For more details see "Appendix H. Response Variance in the 1999–2000 Schools and Staffing Survey," in the *1999–2000 Schools and Staffing Survey Data File User's Manual*, NCES 2004-303.) A two-pronged approach was used to study these issues. First, a series of exploratory focus groups was conducted to look at the constructs of interest. The focus groups were followed by small-scale, questionnaire specific, cognitive research.

Focus Groups

Traditionally, SASS has used techniques such as cognitive interviewing and behavior coding to validate and revise existing questions. The weakness of these methods is that they start from the researcher's initial question wording. For this test, focus groups were conducted with the target population to learn how they think about and verbalize the constructs before the SASS questions were presented to them. The research focused on the proposed new series of items as well as existing questions on overcrowding, the free- and reduced-price school lunch program, staffing, average daily attendance, Title I programs, and participation in SASS. For details on methodology and complete findings, see "Appendix G. Report on SASS Focus Groups."

Methods

Four focus groups were conducted in March 2003 to understand respondents' perspectives on these issues. Two groups contained principals and two other groups were comprised of what SASS defines as "other knowledgeable persons" (usually school secretaries). A trained facilitator moderated the focus groups. Participants were recruited from multiple school systems in the Baltimore-Washington metropolitan area. Participants were provided an incentive for participating in the research.

Key Findings

- Gaining support from the district and providing an incentive are likely to increase participation.
- The term "paraprofessional" was not interpreted universally.
- As indicators of overcrowding in a school, participants recommended asking whether noninstructional areas are used for instruction or portable facilities are used for classroom space and how many teachers are without a classroom.
- Some aspects of teacher hiring and firing are handled at the district level and should be moved to that questionnaire.
- Participants were not able to answer questions on the number of students eligible for the free- or reduced-price lunch program. However, participants could easily provide the number of students receiving free- or reduced-price lunch.
- Principals are more accurately able to provide information on Title I than other knowledgeable respondents, suggesting that these items should be moved to the principal questionnaire.

School Questionnaire

Questions for the school questionnaire were revised based on focus group findings. An additional study was conducted to evaluate the revisions. The test used a modified version of the school questionnaire that omitted items on student and staffing counts by race. Interviews focused on the revised items related to average daily attendance, limited-English-proficiency students, and measures of school overcrowding as well as the pre-existing school questionnaire items. For complete methods and findings, please see "Appendix H. Results of the Cognitive Pretest on SASS Public School Questions."

Methods

During March and April 2003, 12 cognitive style interviews with public school principals were conducted. A trained interviewer followed a protocol and utilized concurrent think-aloud and retrospective probing techniques for this study. Respondents received an incentive for participating in this study.

Key Findings

- Respondents were better able to report the school's average daily attendance as a percentage than as the number of students present.
- Emphasis on transitional grades led respondents to underreport the presence of kindergarten.
- Guidelines for determining school capacity change over time, so the question should probe for specific measures, such as current capacity of the building, presence of temporary buildings, and number of classrooms.
- Some items, such as drug and violence prevention programs, would be more appropriate on the principal questionnaire.
- The series on academic intersessions should be revised to improve the reference period and clarify eligible populations.

Principal Questionnaire

Following the focus groups, items on state and district performance standards, time use, and professional development were revised. A small-scale test was conducted to ensure that respondents could accurately respond to the revised items. For complete details and findings, see "Appendix I. Report on a Follow-up Cognitive Testing to Select 2003–04 SASS Principal Items."

Methods

In order to test proposed revisions to the principal questionnaire, a small-scale qualitative study was conducted during March 2003. Low and high performing schools were identified through state and district internet sites. Principals were contacted by phone and asked if they would be willing to participate in a brief telephone interview. A total of four principals agreed to participate in this study and set an appointment to talk with an interviewer (table 2). The study questions were faxed to principals in advance of the interview. At the scheduled times, the interviewer contacted the principals and asked them to read aloud and think-aloud as they answered each question. The interviewer probed following a protocol. Principals were sent a copy of the *Schools and Staffing Survey, 1999–2000: Overview of the Data for Public, Private, Public Charter, and Bureau of Indian Affairs Elementary and Secondary Schools* (NCES 2002-313) as an incentive for participation. This was a small-scale qualitative study, and caution should be used in interpreting the findings.

Table 2. Respondent characteristics for principal questionnaire qualitative study: 2003

Respondent	State	School type	Performance on standards
1	Ohio	Middle/high	Low
2	Missouri	Elementary	Low
3	Arizona	Elementary	High
4	Missouri	High	High

SOURCE: *Report on a Follow-Up Cognitive Testing to Select 2003–04 SASS Principal Items*, U.S. Census Bureau, April 2003.

Key Findings

- The instruction to include time away from school in calculation of hours worked should be more apparent.
- Nonprofessional development activities (e.g., coaching and serving as the department head) were included when answering about methods for providing time for professional development.
- Respondents were able to understand and answer the items on state/district standards.

Research on the School Library Media Center Questionnaire

In order to test proposed changes to the school library media center questionnaire, researchers conducted a small qualitative research study during March 2003. Complete details on the research can be found in "Appendix J. Results of the Cognitive Pretest on SASS School Library Media Center Questions."

Methods

Schools were contacted by phone and asked if their librarian would participate in the study. When contact was established with the school librarian, he or she was asked the following questions:

- Are you familiar with the term information literacy?
- What does information literacy mean to you?

A questionnaire was then faxed to the school and an appointment was set for the researcher to call the librarian directly. A concurrent interview was conducted by phone following a structured protocol. The interviewer was free to deviate from the protocol as required. Interviews lasted 25 to 98 minutes. Librarians were offered a copy of the *Schools and Staffing Survey, 1999–2000: Overview of the data for Public, Private, Public Charter, and Bureau of Indian Affairs Elementary and Secondary Schools* (NCES 2002-313) as an incentive for participation.

Key Findings

- Respondents did not interpret the term "information literacy" in a uniform manner.
- All respondents had trouble answering budget questions for computer hardware and audiovisual equipment.
- Most respondents confused specific questions about information literacy in standardized testing with general standardized testing.
- Some items in the scheduling table were either not applicable to respondents or needed clarification.

Chapter 4. SASS Frame Creation and Sample Selection Procedures

This chapter discusses how the sampling frame was created and how cases were sampled for the 2003–04 Schools and Staffing Survey (SASS). The first major section discusses the creation of the frame for public and Bureau of Indian Affairs (BIA) funded schools, including schools deleted, added, and otherwise edited. Next, the public and BIA-funded school sampling procedure is described. This is followed by the district sampling, which is simply a by-product of the school sampling. The next major section covers the private school frame creation and sampling. The final major section discusses teacher sampling.

Public and BIA-Funded School Sampling Frame and Sample Selection

Public and BIA Frame Creation

The foundation for the 2003–04 SASS public and BIA-funded school frame was the 2001–02 Common Core of Data (CCD) file. CCD is based on survey data collected annually by the National Center for Education Statistics (NCES) from each state education agency. For the 2001–02 school year, state education agencies used their administrative record data to report information for 97,623 schools. NCES and the state education agencies worked cooperatively to ensure comparability between the elements reported. CCD is believed to be the most complete public school listing available. The frame includes regular and nonregular schools (special education, alternative, vocational, or technical), public charter schools, and BIA-funded schools.

Due to an accelerated survey schedule, the preliminary 2001–02 CCD file was used as the basis for the SASS sampling frame rather than the final version. When the final CCD file became available, the two files were compared and any major updates were added to the frame. The updates that were added consisted of school locale codes and public charter school flags.

In SASS, a school was defined as an institution or part of an institution that provides classroom instruction to students; has one or more teachers to provide instruction; serves students in one or more grades (1–12) or the ungraded equivalent and is located in one or more buildings. It was possible for two or more schools to share the same building; in this case they were treated as different schools if they had different administrations (i.e., principals).

The SASS definition of a school was generally similar to CCD with some exceptions. CCD included some schools that did not offer teacher-provided classroom instruction that included academic subjects in grades 1–12 or the equivalent ungraded. In some instances, schools in CCD were essentially administrative units that may have overseen entities that provided classroom instruction, or the school on CCD may have provided funding and oversight only. SASS collapsed CCD schools where the location, address, and phone number were the same on the assumption that the respondent would consider this to be all one school. (Further discussion of this issue is provided later in this Public and BIA Frame Creation section—see the “School Collapsing” subsection.) CCD required only that schools have an assigned administrator, but since SASS allowed schools to define themselves, Census Bureau staff observed that schools generally reported as one entity in situations where the administration of two or more schools on CCD was the same. SASS was confined to the 50 states plus the District of Columbia and excluded territories and overseas schools.

To illustrate, some examples of the differences between SASS and CCD are presented below:

- In California, CCD listed the special education program at each county office of education as a school, whereas SASS tried to determine which special education programs were operated by each office.
- Homebound school programs that are publicly-supported were included in CCD but not SASS.
- Schools overseas that are operated by the Department of Defense (DoD) were included in CCD but not in SASS.
- Multiple CCD schools at the same address and with the same phone number were considered one school in SASS.
- Multiple CCD schools each with a unique administrator who reports to the high school principal were considered one school in SASS if the respondent said the school covered multiple CCD grade ranges.

Frame Deletions

Since CCD and SASS differ in scope and their definition of a school, some records were deleted, added, or modified in order to provide better coverage and a more efficient sample design for SASS. The following types of school records were deleted from the CCD during the creation of the SASS sampling frame:

- There were 1,413 schools that were closed as of the 2001–02 school year and deleted from the frame. These schools were identified by the status code found on the CCD file. They are carried on the CCD for one additional year for completeness but are clearly designated as not operating.
- There were 1,851 schools located outside the 50 states and the District of Columbia that were deleted. These schools were identified as having a Federal Information Processing Standards (FIPS) state code of 58 (overseas DoD), 60 (American Samoa), 66 (Guam), 69 (Northern Marianas), 72 (Puerto Rico), or 78 (U.S. Virgin Islands).
- There were 250 Home School or Homebound school programs that were deleted. These schools and programs were clerically identified from a list of schools from CCD that had "HOME SCHOOL" or "HOMEBOUND" in the name. Since they did not provide classroom instruction, they were not eligible for SASS.
- Twelve BIA-funded dormitories that were listed on CCD as schools were deleted. These schools were identified by comparing the 1999–2000 SASS BIA-funded schools to the current CCD list of BIA-funded schools. These dormitories exist in support of BIA-funded schools but do not actually provide instruction.
- Ten regular public schools that were also listed as BIA-funded schools were deleted. These schools were identified during the above BIA comparison. Since they were duplicated between the BIA-funded list and the state-funded list, the public school record was deleted to ensure each case would have only one chance of selection.
- Twenty-four schools reported as closed or not providing classroom instruction were deleted when contacted for other reasons, such as to obtain grade range where it was missing.
- There were 124 school records that were actually administrative units in California and Pennsylvania that were deleted. Schools operated by these administrative units were subsequently added as described in the upcoming subsection on frame additions. These records were clerically identified based on previous experience. Pennsylvania records that had the term "Penn Department of Data Services" in the school name were deleted. California records were deleted if they had "County Office of Education" as part of the district name or "Special Education," "Juvenile," "Community," "Alternative," or "Opportunity" as part of the school name and were associated with a county office of education on the district file.

  - These records were deleted from the school file because they were not schools but were offices that oversaw certain types of education within the county. This type of education is often provided at a number of locations within a particular county, but not necessarily at schools listed on CCD. To avoid confusion, these records were taken off the school file, contacted by phone, and requested to provide a list of the schools they oversaw. These lists were subsequently matched to CCD. If any of the schools from these lists were not already on CCD, they were added at that time.
- There were 1,361 schools that offered kindergarten or less as the highest grade that were deleted. These schools were identified using the school's highest grade offered as provided on CCD.

School Collapsing

There were 2,872 school records that were "collapsed" into other school records at the building level and deleted. Past data collections have shown that there are sampled schools that report survey data for the entire building when there is one head principal instead of reporting only for the part of the school that has been sampled. This issue occurs most often in certain states, in rural areas, or in schools that offer grades K–12 in the same building with one head principal. The problem lies in the conflicting definition of a school as held by the schools themselves and as reported by states to CCD. The schools often consider themselves one cohesive unit while the state does not. For accounting or other administrative purposes, the states artificially split these schools by grade level and report them as two or three separate schools.

If a CCD school within the associated school districts is selected for SASS, then the school often reports for all of grades K–12. This has caused substantial overreporting in SASS reports of state aggregates, such as enrollment and teacher counts, because these schools were sampled based on the particular grade range as reported on CCD but these schools then responded based on a much broader grade range (matching how they perceived themselves). In other words, these schools had unrecognized multiple chances of selection for sampling. The unrecognized chances of selection refer to the fact that regardless of which CCD record in the building was selected, the school was likely to report for the whole. Thus, the entity that reports could be selected via multiple CCD records. In the past, SASS data were edited after the field data collection to conform to the CCD grade range. This method was costly and time-consuming. Furthermore, many school respondents have reported they do not keep records at the school level as reported on CCD, making it difficult for them to respond to SASS in this manner. For this reason, it was decided for 2003–04 SASS to collapse the CCD records whenever it was believed that this problem was likely to occur.

The Census Bureau and NCES jointly determined a set of rules for school collapsing to apply during frame creation. In order to make the sampling frame more consistent with the school's actual grade range, these potential problem schools were identified and collapsed to the appropriate building level. When the school records were collapsed together, the student and teacher counts, grade range, and name as reported to CCD were all modified to reflect the change. The complete set of collapsing rules and the results of the procedure are presented in "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures."

Frame Additions

The following types of school records were added to the original CCD while creating the SASS sampling frame:

- Thirteen records that were listed on CCD as districts with no associated school records were determined to be newly-opened schools, based on the name, teacher, and enrollment counts, and were added.
- A total of 520 school records, primarily alternative, special education, and juvenile justice facilities, identified by contacting the deleted county or regional administrative units in California (415 schools) and Pennsylvania (105 schools), were also added.

After the addition, deletion, and collapsing of school records, the SASS school sampling frame consisted of 87,764 traditional public, 2,309 public charter, and 166 BIA-funded schools. From this point on, this is considered the 2003–04 SASS public school sampling frame. Table 3 shows the totals by state during each step in the frame creation process.

Table 3. Total number of public and BIA-funded school records during frame creation, by each step in frame creation process and state: 2003–04

State	Preliminary 2001–02 CCD[1] file	After deletions (ineligible and duplicate school records)	After additions (Pennsylvania and California eligible school records)	Final public school universe (after collapsing procedure)
Total	97,623	92,578	93,111	90,239
BIA-funded schools[2]	189	166	166	166
Domestic DoD schools[3]	59	58	58	58
Alabama	1,544	1,515	1,515	1,507
Alaska	524	521	521	512
Arizona	1,863	1,774	1,785	1,760
Arkansas	1,164	1,144	1,144	948
California	8,974	8,769	9,184	9,152
Colorado	1,680	1,623	1,623	1,544
Connecticut	1,259	1,039	1,039	1,036
Delaware	202	194	194	193
District of Columbia	200	196	196	196
Florida	3,453	3,352	3,352	3,343
Georgia	1,990	1,963	1,963	1,957
Hawaii	279	279	279	279
Idaho	699	680	680	670
Illinois	4,418	4,234	4,234	4,111
Indiana	1,992	1,955	1,955	1,947
Iowa	1,543	1,499	1,499	1,322
Kansas	1,447	1,423	1,423	1,382
Kentucky	1,550	1,427	1,427	1,405
Louisiana	1,559	1,517	1,517	1,514
Maine	717	705	705	703
Maryland	1,394	1,359	1,359	1,358
Massachusetts	1,933	1,849	1,849	1,843
Michigan	4,065	3,895	3,895	3,849
Minnesota	2,461	2,307	2,307	2,122
Mississippi	1,049	1,034	1,034	1,032

See notes at end of table.

Table 3. Total number of public and BIA-funded school records during frame creation, by each step in frame creation process and state: 2003–04—Continued

State	Preliminary 2001–02 CCD[1] file	After deletions (ineligible and duplicate school records)	After additions (Pennsylvania and California eligible school records)	Final public school universe (after collapsing procedure)
Missouri	2,391	2,326	2,326	2,027
Montana	885	869	869	583
Nebraska	1,370	1,279	1,279	1,107
Nevada	532	523	523	511
New Hampshire	530	461	461	436
New Jersey	2,453	2,389	2,389	2,389
New Mexico	798	779	779	737
New York	4,386	4,281	4,281	4,281
North Carolina	2,252	2,232	2,232	2,229
North Dakota	580	562	562	436
Ohio	3,954	3,878	3,878	3,841
Oklahoma	1,839	1,806	1,808	1,484
Oregon	1,320	1,300	1,300	1,293
Pennsylvania	3,285	3,228	3,333	3,333
Rhode Island	336	320	320	320
South Carolina	1,160	1,135	1,135	1,134
South Dakota	777	756	756	514
Tennessee	1,664	1,636	1,636	1,636
Texas	7,931	7,608	7,608	7,493
Utah	797	789	789	787
Vermont	395	356	356	355
Virginia	2,115	2,066	2,066	2,064
Washington	2,351	2,165	2,165	2,138
West Virginia	841	814	814	813
Wisconsin	2,228	2,156	2,156	2,036
Wyoming	396	387	387	356
Other jurisdictions[4]	1,851	0	0	0

[1] CCD refers to the Common Core of Data.
[2] BIA refers to the Bureau of Indian Affairs.
[3] DoD refers to the U.S. Department of Defense.
[4] Other jurisdictions include American Samoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency Universe Survey," 2001–02, version 1a; Schools and Staffing Survey (SASS), "Public School Frame File" before, during, and after frame creation activities, 2003–04.

Frame Corrections

As mentioned above, the preliminary version of the 2001–02 CCD file was used as the basis for the 2003–04 SASS sampling frame. Using this file required the correction of variables necessary for sampling or conducting the survey, such as grade range, enrollment, teacher count, enrollment by race, school county code, school name, address information, and phone number. The following section outlines the steps taken to correct those variables.

If the school's grade range was missing from the CCD file, three methods were applied, in the following hierarchical order, to resolve the issue:

- taking data from earlier CCD files or SASS data;
- assigning a generic grade range based on the school's name; or
- calling the school for clarification. NOTE: During this calling process a few schools were discovered to be closed or otherwise out-of-scope and were deleted from the sampling frame, as described in the prior "Frame Deletions" subsection.

The student and teacher counts were imputed for those schools missing this information by applying one of the methods listed below, in the following hierarchical order:

- pulling information from previous CCD data for that school;
- extrapolating from current CCD student-teacher ratios and averages for the state; or
- using data that were collected in the 1999–2000 SASS for that particular school.

NOTE: BIA-funded schools as well as the state education agencies in Massachusetts and Tennessee did not report teacher counts to CCD for any schools in 2001–02.

The enrollment by race information was used to identify the schools in which American Indian or Alaska Native students composed at least 19.5 percent of the enrollment. These schools were sampled at a different rate than other public schools, so they needed to be identified during the SASS frame creation. These schools were identified using one of the following methods:

- examining the current CCD enrollment by race information, if present;
- examining previous CCD enrollment by race information; or
- reviewing the characteristics of the surrounding schools. If most of the surrounding schools in the county were flagged as having a high American Indian or Alaska Native enrollment, the school in question was also flagged.

Another important component used in conducting SASS was the school's physical location. The sampled schools were grouped by location and then broken into smaller segments (workloads) and assigned to an individual field representative to contact. The county information was not available on the school file, but was on the school district file. The county information was copied onto the record of the appropriate schools and then compared to the school's location ZIP code. This comparison was done because it is possible for the school and its associated district to be in different counties. If the county information was not valid for that particular ZIP code, it was corrected to reflect the school's physical location.

In instances where the school name implied considerably fewer grades than it actually offered, the name was modified to eliminate inappropriate descriptions. These schools were identified by comparing the school's name to the grades currently offered. If the name differed considerably from the grade range (e.g., the name contained "High School," but the grades offered were K–12), then the name was modified accordingly.

Due to time constraints, missing address information and phone numbers were filled in after the school sample was selected. These fields were not crucial to the selection of the school sample.

District Frame Creation

The public school district frame consisted of those districts that were operating within the United States and that oversaw at least one school on the 2003–04 SASS school universe file. The 2001–02 CCD included 17,276 district records, of which 16,042 were presumed to be eligible for SASS according to these rules. The following types of records were deleted from the 2001–02 CCD district file:

- the 18 districts listed on the CCD file that operated outside of the United States;
- the 24 BIA regional offices that did not meet the SASS definition of a school district—while they do provide funding to the schools, they often are not involved in hiring, firing, or setting policies; and
- districts on the CCD file that were presumed not to operate schools. Comparing the district file to the school file identified these records. There were 1,192 districts without at least one corresponding school that were deleted from the file.

Table 4 shows the state totals for all districts by state during the frame creation.

Table 4. Total number of public school districts (includes public charter and single school districts), by frame creation stage and state: 2003–04

State	Preliminary 2001–02 CCD[1] file	After deletions (outlying, closed, and BIA[2] districts)	Final public district universe (ineligible districts deleted)
Total	17,276	17,234	16,042
BIA districts[2]	24	0	0
Alabama	133	133	133
Alaska	55	55	55
Arizona	531	531	492
Arkansas	338	338	325
California	1,058	1,058	1,049
Colorado	202	202	189
Connecticut	198	198	193
Delaware	30	30	30
District of Columbia	34	34	34
Florida	73	73	73
Georgia	183	183	183
Hawaii	1	1	1
Idaho	116	116	115
Illinois	1,063	1,063	1,009
Indiana	328	328	308
Iowa	389	389	371
Kansas	304	304	304
Kentucky	198	198	180
Louisiana	88	88	88
Maine	325	325	236

See notes at end of table.

Table 4. Total number of public school districts (includes public charter and single school districts), by frame creation stage and state: 2003–04—Continued

State	Preliminary 2001–02 CCD[1] file	After deletions (outlying, closed, and BIA[2] districts)	Final public district universe (ineligible districts deleted)
Maryland	24	24	24
Massachusetts	480	480	373
Michigan	806	806	794
Minnesota	500	500	456
Mississippi	162	162	162
Missouri	530	530	530
Montana	532	532	378
Nebraska	698	698	550
Nevada	18	18	18
New Hampshire	257	257	164
New Jersey	679	679	642
New Mexico	89	89	89
New York	788	788	763
North Carolina	219	219	213
North Dakota	275	275	259
Ohio	825	825	775
Oklahoma	568	568	544
Oregon	221	221	204
Pennsylvania	695	695	679
Rhode Island	41	41	40
South Carolina	107	107	105
South Dakota	199	199	187
Tennessee	138	138	138
Texas	1,256	1,256	1,233
Utah	46	46	42
Vermont	354	354	271
Virginia	207	207	194
Washington	305	305	296
West Virginia	57	57	57
Wisconsin	452	452	437
Wyoming	59	59	57
Other jurisdictions[3]	18	0	0

[1] CCD refers to the Common Core of Data.
[2] BIA refers to the Bureau of Indian Affairs.
[3] Other jurisdictions include American Samoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District Frame," 2003–04; Common Core of Data (CCD), "Local Education Agency Universe Survey," 2001–02, version 1a.

Sample Allocation

The goals for the public and BIA-funded school sample of the 2003–04 SASS were similar to those of the 1999–2000 SASS and were as follows:

- Use the 2001–02 CCD school file as the sample frame with exceptions noted in the previous "Public and BIA Frame Creation" section.
- Produce state estimates of public school characteristics.
- Produce state/elementary and state/secondary estimates of the number of public schools and associated public school characteristics.
- Produce national estimates of combined-grade public schools, meaning schools that offer grades that span both elementary and secondary levels.
- Produce national estimates by various geographic (e.g., region and locale) and school characteristics for public schools.
- Minimize the overlap between the 2003–04 SASS and the 2004 follow-up of the Education Longitudinal Study of 2002 (ELS:2002) in order to reduce respondent burden.
- Oversample schools with 19.5 percent or greater American Indian or Alaska Native enrollment, in order to be able to produce national estimates of these schools and selected school characteristics.
- Produce national and regional estimates of public charter schools and selected school characteristics.
- Select all BIA-funded schools.

Methodology

The SASS sample is not a simple random sample, but rather is a stratified probability proportionate to size sample. The first level of stratification for public and BIA-funded schools was school type: (A) BIA-funded schools were selected with certainty (automatically in sample); (B) schools with high American Indian or Alaska Native student enrollment (schools with 19.5 percent or more American Indian or Alaska Native students); (C) schools in Delaware, Maryland, Florida, Nevada, and West Virginia, where at least one school from each district in the state was selected as described in the following "Sample Selection" section; (D) public charter schools; and (E) all other schools. Schools falling into more than one category were assigned to types A, B, D, C, and E in that order.

The second level of stratification varied within school type. All of the type A schools were selected for the sample so no additional stratification was needed. Type B schools were stratified by state (Arizona, California, Montana, New Mexico, Washington, the remaining Western states, Minnesota, North Dakota, South Dakota, the remaining Midwestern states, North Carolina, Oklahoma, and the remaining states except Alaska[10]). Type C schools were stratified first by state and then school district. Type D schools were stratified by state (Arizona, California, Colorado, the remaining Western states, Michigan, Ohio, Wisconsin, the remaining Midwestern states, Florida, North Carolina, Texas, the remaining Southern states, Pennsylvania, and the remaining Northeastern states). The type E schools were stratified by state (all remaining states including the District of Columbia).

Each of school types B through E was then stratified by grade level (elementary, secondary, and combined) as defined below:

Elementary = lowest grade $\leq$ 6 and highest grade $\leq$ 8;
Secondary = lowest grade $\geq$ 7 and highest grade $\leq$ 12; and
Combined = lowest grade $\leq$ 6 and highest grade > 8, or school is ungraded.

[10] Alaska was excluded because most schools have a high Alaska Native enrollment and because the sampling rate applied to Alaska schools was higher than the sampling rate applied to other schools with high American Indian or Alaska Native student enrollment.

The 2003–04 SASS sample was allocated so that state-level elementary and secondary public school estimates and national estimates of combined public schools could be made. The sample was allocated to each state by grade range and school type (traditional public, public charter, and schools with high American Indian enrollment). A full description of the allocation procedure is located in "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures."

Sample Sort

To facilitate the calculation of school district weights, it was important that within a stratum all schools belonging to the same school district were listed together. This could have been achieved by sorting first by the school district's identification variable (LEA ID). However, to increase the efficiency of the school sample design, it was better to sort by other variables before LEA ID. To achieve both these goals, the ZIP code variables were recoded to make them the same for every school within a stratum/school district. After the ZIP code was recoded, the non-BIA-funded schools were sorted by the following variables:

1. School Stratum code as defined in the "Methodology" subsection above
2. State
3. Locale code
   1 = large central city
   2 = midsize central city
   3 = urban fringe of large central city
   4 = urban fringe of mid-size central city
   5 = large town
   6 = small town
   7 = rural, outside Metropolitan Statistical Area (MSA)
   8 = rural, inside MSA
4. Recoded ZIP code (all schools in stratum/district have the same value for this variable)
5. District ID as defined on CCD
6. School's highest grade offered (in descending order)
7. Recoded percent minority enrollment (in descending order) and defined as:
   1 = less than 5.5 percent minority enrollment or unknown
   2 = at least 5.5 percent but less than 20.5 percent minority enrollment
   3 = at least 20.5 percent but less than 50.5 percent minority enrollment
   4 = at least 50.5 percent minority enrollment
8. Total enrollment (in serpentine sort order, which was defined as enrollment being sorted first in ascending then descending order within the other sort variables)
9. CCD school ID

This sort order differed slightly from the sort used in previous SASS administrations. A discussion of the steps taken to determine the sort order for the non-BIA-funded schools is listed in "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures." The first four variables allowed a geographic balance to be achieved within locale for each state. The fifth variable guaranteed that schools within a district and school stratum stayed together. The sixth variable (school's highest grade) allowed the sample size requirements for middle schools to be met. Since middle schools were not stratified explicitly into one grade level stratum, some of them were classified as elementary and some as secondary. To better control the actual number of middle schools selected, this sort achieved that aim by placing middle schools at the end of the secondary stratum and at the beginning of the elementary school stratum. The seventh variable (recoded minority) allowed a balance with respect to ethnicity. The eighth variable (school enrollment) also encouraged a balance with respect to school size.

Sample Selection

Schools

Within each stratum, all non-BIA-funded schools were systematically selected using a probability proportionate to size algorithm. The measure of size used for the schools was the square root of the number of full-time-equivalent teachers reported for each school or imputed during sampling frame creation. Any school with a measure of size greater than the sampling interval (the inverse of the rate at which the sample is selected) was included in the sample with certainty and automatically excluded from the probability sampling operation. The BIA-funded schools were also selected for the sample with certainty. This produced a non-BIA-funded school sample of 10,202 (455 high American Indian enrollment schools, 303 public charter schools, and 9,444 other traditional public schools) and a BIA-funded school sample of 166 schools for a total of 10,368 sampled public and BIA-funded schools in 2003–04 SASS.[11]

Table 5 shows both the allocated and selected sample sizes for traditional public schools (excludes public charter, high American Indian or Alaska Native enrollment, and BIA-funded schools). The public charter and high American Indian or Alaska Native enrollment schools are listed in subsequent tables (tables 6 and 7). The difference in these two sample sizes is attributable to the use of conditional probabilities of selection to achieve the minimization of overlap with ELS as described in "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures."

Table 5. Final selected sample sizes for traditional public schools at different school levels (allocated sample sizes in parenthesis if different) and percentage of frame in sample, by state: 2003–04

State	School level			Total sampled schools	Percentage of state's frame in sample
	Elementary	Secondary	Combined		
Total	4,453	3,780 (3,715)	1,211 (1,208)	9,444	10.95
Alabama	80	81 (80)	26	187	12.46
Alaska	80	53	53	186	37.42
Arizona	80	85 (80)	20	185	14.80
Arkansas	80	81 (80)	36	197	20.91
California	227	80	50	357	4.10
Colorado	80	82 (80)	19 (20)	181	12.49
Connecticut	80	81 (80)	20	181	17.73
Delaware	73	25 (24)	13	111	60.99
District of Columbia	70	18	10	98	60.12
Florida	80	83 (80)	48	211	6.68
Georgia	80	82 (80)	24 (23)	186	9.65
Hawaii	80	31	5	116	45.14
Idaho	80	82 (80)	20	182	28.04
Illinois	80	88 (86)	20	188	4.60
Indiana	80	82 (80)	20	182	9.35

See notes at end of table.

[11] After the certainty schools were removed, the sampling interval was recalculated as the sum of the measures of size of the noncertainty schools divided by the desired remaining sample (the stratum total sample size minus the number of certainty schools). The noncertainty schools' probabilities were then calculated as the measure of size divided by the new sampling interval.

Table 5. Final selected sample sizes for traditional public schools at different school levels (allocated sample sizes in parenthesis if different) and percentage of frame in sample, by state: 2003–04—Continued

State	School level			Total sampled schools	Percentage of state's frame in sample
	Elementary	Secondary	Combined		
Iowa	80	81 (80)	21 (20)	182	13.78
Kansas	80	81 (80)	19	180	13.17
Kentucky	80	83 (80)	20	183	12.90
Louisiana	80	82 (80)	22	184	12.37
Maine	80	81 (80)	9	170	24.28
Maryland	80	84 (80)	20	184	13.55
Massachusetts	80	80	20	180	10.01
Michigan	98	81 (80)	20	199	5.51
Minnesota	136	81 (80)	63	280	14.16
Mississippi	80	80	22 (23)	182	17.65
Missouri	92	82 (80)	40	214	10.67
Montana	80	53 (52)	28	161	31.14
Nebraska	80	81 (80)	33	194	17.75
Nevada	80	67	12	159	32.32
New Hampshire	80	43	8	131	30.05
New Jersey	80	80	20	180	7.70
New Mexico	80	81 (80)	20	181	29.87
New York	112	82 (80)	21 (20)	215	5.09
North Carolina	80	83 (80)	20	183	8.68
North Dakota	80	43	37	160	41.34
Ohio	93	81 (80)	20	194	5.17
Oklahoma	80	82 (80)	21	183	20.56
Oregon	80	80	20	180	14.38
Pennsylvania	110	81 (80)	20	211	6.48
Rhode Island	80	38	2	120	38.10
South Carolina	80	81 (80)	12	173	15.31
South Dakota	80	37 (38)	42	159	37.32
Tennessee	80	82 (80)	21 (20)	183	11.19
Texas	80	175 (170)	62	317	4.37
Utah	80	81 (80)	19	180	23.68
Vermont	80	41	26	147	41.41
Virginia	146	83 (80)	20	249	12.08
Washington	80	80	20	180	8.65
West Virginia	80	80	14 (13)	174	21.40
Wisconsin	96	83 (80)	20	199	10.45
Wyoming	80	52 (51)	13	145	42.03

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Documentation Data File," 2003–04.

Table 6. Final selected sample sizes for public charter schools at different school levels (allocated sample sizes in parenthesis if different) and percentage of frame in sample, by state: 2003–04

State	School level			Total sampled schools	Percentage of state's frame in sample
	Elementary	Secondary	Combined		
Total	139	81	83 (82)	303	13.45
Arizona	14	18 (17)	9	41	12.16
California	21	11 (12)	14	46	13.77
Colorado	6	2	5	13	15.29
Florida	12	3	4	19	10.44
Michigan	16	5	10 (9)	31	15.42
North Carolina	7	2	2	11	12.22
Ohio	7	3	3	13	15.29
Pennsylvania	5	3	4	12	16.00
Texas	7	8	15	30	12.45
Wisconsin	4	4	2	10	10.10
Remaining Western states	4	4	3	11	10.47
Remaining Midwestern states	7	5	4	16	13.01
Remaining Southern states	12	9	2	23	16.79
Remaining Northeastern states	17	4	6	27	16.98

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public Charter School Documentation Data File," 2003–04.

Table 7. Final selected sample sizes for schools with high American Indian or Alaska Native enrollment at different school levels (allocated sample sizes in parenthesis if different) and percentage of frame in sample, by state: 2003–04

State	School level			Total sampled schools	Percentage of state's frame in sample
	Elementary	Secondary	Combined		
Total	219	155 (152)	81	455	28.67
Arizona	25	25 (24)	3	53	30.81
California	8	7	2	17	14.05
Minnesota	5	5	4	14	18.67
Montana	9	3	6	18	27.27
New Mexico	21	14	3	38	34.23
North Carolina	12	3 (5)	1	16	34.04
North Dakota	3	5	5	13	28.89
Oklahoma	87	61 (60)	41	189	32.31
South Dakota	10	5	6	21	23.60
Washington	6	5	2	13	22.81
Remaining Western states	11	9 (8)	2	22	26.83
Remaining Midwestern states	14	7 (6)	4	25	27.17
Remaining Southern states and Northeastern states	8	6 (5)	2	16	35.56

NOTE: BIA refers to the Bureau of Indian Affairs. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School and BIA School Documentation Data Files," 2003–04.

Districts

Two methods were used for sampling districts within specific states. Districts in five states were selected differently than those in the remaining states, so the sampling procedure for most states is described first followed by the sampling procedure for the exceptional states.

1. Districts outside Delaware, Florida, Maryland, Nevada, and West Virginia. During the initial design development of SASS, consideration was given to selecting the school districts first and then selecting schools within these districts. It was hypothesized that doing this would reduce the reliability of both school and teacher estimates but might be offset by the improvement in reliability of school district estimates. Simulations done on the reliability of school district estimates when the districts were selected first confirmed the loss of reliability in school and teacher estimates. The simulations also showed that selecting schools first would produce only slightly less accurate district estimates. For these reasons the SASS sample design selects the schools first.

Therefore, the school district sample consists of the set of districts that were associated with the SASS public school sample. This provides the linkage between the district and the school. Table 8 provides the number of school districts selected by state. This can be compared with the number of districts on the frame in each state as presented earlier in table 4. Note that district totals for some states appear higher than expected due to the inclusion of public charter school districts. In parts of Maine, Vermont, and New Hampshire, some of the districts were dropped and the sampled schools were instead associated with their Supervisory Unions. This was done because evidence indicated that the Supervisory Union handled the day-to-day administration of the schools rather than the school districts. There were not any districts without schools selected for the 2003–04 sample as had been done in some previous SASS cycles since most of these districts did not have associated teachers, and thus were ineligible for the survey.

2. Districts inside Delaware, Florida, Maryland, Nevada, and West Virginia. In 2003, a simulation study was done for each state to assess the reliability of SASS school district estimates. The complete results of this study are presented in "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures." The study showed that standard errors from Delaware, Florida, Maryland, Nevada, and West Virginia were high relative to the sampling rate. To reduce the standard error, all districts in these states were defined as school sampling strata. This placed all districts in each of these five states in the school district sample thus reducing the standard error to zero, if all districts respond.

Table 8. Number of sampled public school districts (includes district-level data from one-school districts and public charter schools), by state: 2003–04

State	Number of sampled districts	State	Number of sampled districts
Total	5,437		
Alabama	96	Missouri	149
Alaska	40	Montana	132
Arizona	153	Nebraska	120
Arkansas	130	Nevada	17
California	281	New Hampshire	84
Colorado	76	New Jersey	154
Connecticut	103	New Mexico	69
Delaware	22	New York	149
District of Columbia	7	North Carolina	96
Florida	73	North Dakota	100
Georgia	95	Ohio	171
Hawaii	1	Oklahoma	233
Idaho	82	Oregon	105
Illinois	142	Pennsylvania	175
Indiana	127	Rhode Island	35
Iowa	136	South Carolina	70
Kansas	118	South Dakota	105
Kentucky	101	Tennessee	79
Louisiana	62	Texas	250
Maine	108	Utah	32
Maryland	24	Vermont	58
Massachusetts	133	Virginia	102
Michigan	197	Washington	111
Minnesota	168	West Virginia	57
Mississippi	108	Wisconsin	155
		Wyoming	46

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District Documentation Data File," 2003–04.

Private School Frame Creation and Sample Selection

List and Area Frames Creation

The 2003–04 SASS private school sample consisted of schools selected from a list frame and an area frame. The SASS private school sample size was 3,622 of which 3,443 schools were from the list frame and 179 were from the area frame. The area frame serves as coverage improvement since the list frame omits about 8 percent of eligible private schools.

List Frame

Most of the SASS private school sample comes from a list frame, which is a frame constructed from matching lists of private schools. The base list for the 2003–04 SASS list frame was the 2001–02 Private School Universe Survey (PSS). In order to provide coverage of private schools founded since 2001 and to

improve coverage of private schools existing in 2001, membership lists were collected from private school associations and religious denominations. The associations were asked to include schools that met the PSS school definition when they provided lists. The 50 states and the District of Columbia were also asked to provide lists of private schools meeting the PSS definition of a school. Schools on private school association membership lists and the state lists were compared to the base list. Any school that did not match a school on the base list was added to the existing list frame as a list frame birth. This is the usual method that is followed to create a revised PSS list frame every 2 years.

This updating process was conducted specifically for the 2003–04 PSS, but was used as the starting point for the sampling frame for SASS private schools. To create the SASS sampling frame, schools with a highest grade of kindergarten, which are schools by the PSS definition but not the SASS definition, were deleted.

Area Frame

The source for the 2003–04 SASS area frame schools was the 2001–02 PSS area frame, excluding schools with a highest grade of kindergarten. To create the 2001–02 PSS area frame, the United States was divided into 2,054 primary sampling units (PSUs). Each PSU consisted of a single county, independent city, or cluster of geographically contiguous areas with a minimum population of 20,000 according to population projections for 1988, which was when the PSUs were first formed. To avoid having PSUs covering too large a land area, the minimum population standard was relaxed in sparsely-populated areas.

Due to time constraints, the Census Bureau did not have time to wait for the 2003–04 PSS area frame schools to be identified. The PSS area frame operation was conducted several weeks after data collection began for SASS. The 2003–04 SASS area frame consists only of those schools in noncertainty PSUs in the 2001–02 PSS area frame that had not already been added to the 2003–04 PSS list frame as part of the 2003–04 PSS list frame updating operation (described in the "List Frame" section above). Noncertainty PSUs are those counties not guaranteed to be included in the PSS area frame and thus subject to a random sampling process. Schools from the noncertainty PSUs in the 2001–02 PSS area frame that were also 2003–04 PSS list frame births were identified and dropped from the area frame. Schools that could be defined as only teaching kindergarten as the highest grade, or only teaching adult education or postsecondary, were also removed from the frame.

Using these PSUs, the 2001–02 PSS area frame was designed to produce approximately 50 percent overlap with the previous PSS. By maintaining a 50 percent overlap of PSUs, the reliability of estimates of change was maintained at a reasonable level. Consequently, the area frame consisted of two sets of sample PSUs: 1) a subsample of the 1999–2000 PSS area frame sample PSUs (overlap); and 2) a sample of PSUs selected independently from the 1999–2000 PSS sample (nonoverlap).

A total of 124 distinct PSUs were in the 2001–02 PSS area sample. The eight PSUs (certainty PSUs) that are included in every PSS area sample remained in the 2001–02 PSS area frame with certainty. All 58 PSUs that had been in the 1999–2000 PSS area frame for the first time and not previously included in the overlap sample were selected again for the 2001–02 PSS, resulting in a total overlap sample of 66 PSUs. An additional 58 PSUs were selected independently.

The strata for selecting the nonoverlap PSUs were defined the same as the 1999–2000 PSS area frame design. Initially, 16 strata were created as had been done for prior cycles of PSS. The strata include region (Northeast, Midwest, South, West), metro/nonmetro status, and high/low percent private enrollment within metro/nonmetro status (i.e., above or below the median within each metro/nonmetro status). The high/low cutoffs were then adjusted so as to more nearly equalize the expected variance between the two

strata. The purpose of this was to try to lower the PSS or SASS standard errors resulting from the PSU sampling.

Sample sizes were determined for each metro/nonmetro status within each region, proportional to the sum of the square root of the PSU-estimated PSS private school enrollment. Some adjustments were made so that each sample size was an even number and that sample size was evenly distributed between the high and low percent private enrollment groups. This was done in order to have an even number of cases in each stratum (with a minimum of two) for pairing purposes for the PSS or SASS variance estimation.

Within each of the 124 PSUs, the Census Bureau attempted to find all private schools eligible for PSS. A block-by-block listing of all private schools in a sample of PSUs was not attempted. Rather, Regional Office field staff created the frame by using yellow pages, local Catholic dioceses, religious institutions, local education agencies, and local government offices. Once the area search lists of schools were constructed, they were matched with the PSS list frame school universe. Schools not found on the list frame were considered part of the area frame.

Complete Private School Frame Creation

The list and area frames were combined to create the complete frame. At this point, the frame still contained ineligible school records and records that were missing vital information.

Frame Deletions

The following types of records were deleted from the PSS list and area frames to create the SASS sample frames:

- schools not previously appearing on the 2003–04 list frame (births) that were identified from the early childhood center frame (a PSS operation whereby states are specifically asked for schools with kindergarten as the highest grade);
- schools from noncertainty PSUs of the 2001–02 PSS area frame that were added to the 2003–04 PSS list frame;
- schools with kindergarten as the highest grade level; and
- schools that were determined to be out-of-scope for the 2001–02 PSS (i.e., closed, prekindergarten only, not providing classroom instruction).

Frame Corrections

There were several school records that were missing information needed during the school sample selection. The school grade range and affiliation variables were used in stratifying schools during the private school sampling process. The number of teachers was used to form the measure of size in the private school sampling process. Finally, the number of students was used in sorting private school records during sampling. Values were assigned for any of these fields if the data were missing in the manner discussed below.

The school's grade range was assigned in one of four ways:

- taking information from earlier PSS data;
- using the school's name to assign a generic grade range;
- calling the school to assign a specific grade range; or
- assigning a grade level of combined (both elementary and secondary levels), as a last resort.

The school's affiliation stratum was assigned by

- using information from earlier PSS data;
- using the school's name to assign an affiliation stratum; and
- assigning the rest to the "All Other" category.

The school's student and teacher counts were imputed in the following ways:

- using previous PSS data for that school; and
- using current SASS frame student-teacher ratios and averages by grade level and affiliation strata.

Sample Allocation

The goals for the 2003–04 SASS private school sample size allocation for the most part remained the same as the 1999–2000 goals:

- Produce detailed private school affiliation strata estimates for each of the 17 affiliations. (NOTE: Some new affiliations were added to the list since 1999–2000 and some others were deleted, changing the total number of affiliations from 20 to 17.)
- Produce national private sector estimates.
- Produce national private sector school level estimates.
- Produce estimates for national public versus private sector comparisons.

The affiliation strata were redefined so as to create larger groups that would more readily lend themselves to publication. Catholic schools were split by parochial, diocesan, and private. Other religious schools were reorganized into 11 groups corresponding to the 11 largest religious affiliations. Nonsectarian schools were split by regular, special emphasis, and special education.

List Frame Methodology

The list frame was partitioned into an initial set of cells using affiliation stratum (17 groups), grade level (three groups), and Census region (four groups). These cells were defined using the 2001–02 PSS data. For any variables with missing values for variables used in the assignment, the data were imputed.

The first level of stratification was school affiliation stratum (17 groups):

- Catholic—parochial;
- Catholic—diocesan;
- Catholic—private;
- Amish;
- Assembly of God;
- Baptist;
- Episcopal;
- Jewish;
- Lutheran Church—Missouri Synod;
- Wisconsin Evangelical Lutheran Synod;
- Mennonite;
- Pentecostal;
- Seventh-Day Adventist;

- other religious;
- nonsectarian—regular;
- nonsectarian—special emphasis; and
- nonsectarian—special education.

Within each affiliation stratum, schools were stratified by grade level (elementary, secondary, and combined schools). The definitions are provided below:

Elementary = lowest grade ≤ 6 and highest grade ≤ 8;
Secondary = lowest grade ≥ 7 and highest grade ≤ 12; and
Combined = lowest grade ≤ 6 and highest grade > 8, also includes ungraded schools.[12]

Within affiliation stratum/grade level, schools were stratified by four Census regions: Northeast, Midwest, South, and West.

The private school sample size selected from the list frame was 3,443 schools. The goal was to select an overall sample of 3,421 private sample schools from the list frame. This difference can be explained by the school's conditional probability of selection used to minimize the overlapping sample schools with other surveys. This procedure introduces some variability into the sample size, which can result in a sample size slightly larger or smaller than the allocated sample size. The allocation process consists of the steps outlined in "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures." Table 9 shows the allocated sample sizes by selected characteristics.

[12] Ungraded schools refer to schools that serve students whose grade levels are not defined as grade 1 through 12. For example, special education centers and alternative schools often classify their students as ungraded.

Table 9. Allocated private school list frame stratum sample sizes, by region, school level, and affiliation stratum: 2003–04

Affiliation stratum	Northeast				Midwest			
	Total	Elementary	Secondary	Combined	Total	Elementary	Secondary	Combined
Total	857	449	135	273	856	546	107	203
Catholic—parochial	155	139	10	6	183	163	12	8
Catholic—diocesan	98	66	28	4	128	94	27	7
Catholic—private	52	16	27	9	41	11	24	6
Amish	55	45	0	10	35	29	0	6
Assembly of God	15	8	0	7	14	5	2	7
Baptist	25	6	2	17	33	5	2	26
Episcopal	14	6	5	3	6	2	2	2
Jewish	74	32	18	24	11	6	2	3
Lutheran—Missouri Synod	8	4	2	2	54	47	5	2
Wisconsin Evangelical Lutheran Synod	0	0	0	0	81	68	9	4
Mennonite	52	24	2	26	19	9	1	9
Pentecostal	14	5	0	9	24	6	2	16
Seventh Day Adventist	13	8	2	3	17	10	2	5
Other religious	84	35	5	44	116	51	8	57
Nonsectarian—regular	106	31	25	51	46	17	4	25
Nonsectarian—special emphasis	37	21	4	12	34	21	3	10
Nonsectarian—special ed.	55	3	6	46	14	2	2	10

Affiliation stratum	South				West			
	Total	Elementary	Secondary	Combined	Total	Elementary	Secondary	Combined
Total	1,053	462	90	501	655	343	79	233
Catholic—parochial	92	81	5	6	59	54	2	3
Catholic—diocesan	71	48	19	4	50	34	13	3
Catholic—private	40	12	19	9	25	7	13	5
Amish	8	5	1	2	2	2	0	0
Assembly of God	41	13	2	26	30	14	2	14
Baptist	109	30	2	77	28	10	2	16
Episcopal	65	38	5	22	16	9	2	5
Jewish	16	9	2	5	13	8	3	2
Lutheran—Missouri Synod	19	15	2	2	19	15	2	2
Wisconsin Evangelical Lutheran Synod	6	4	0	2	13	10	2	1
Mennonite	22	8	2	12	7	3	0	4
Pentecostal	43	9	2	32	19	6	1	12
Seventh Day Adventist	36	22	3	11	34	18	3	13
Other religious	250	83	8	159	151	64	9	78
Nonsectarian—regular	152	48	12	92	107	51	16	40
Nonsectarian—special emphasis	55	33	3	19	59	35	6	18
Nonsectarian—special ed.	28	4	3	21	23	3	3	17

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Documentation Data File," 2003–04.

List Frame Sample Sort

Within each stratum, sorting took place on the variables listed below. Sorting serves to improve the efficiency of the overall design.

1. State (one for each state and the District of Columbia)
2. Highest grade in the school
3. Locale code based on 1990 Census geography
   1 = large central city
   2 = mid-size central city
   3 = urban fringe of large city
   4 = urban fringe of mid-size city
   5 = large town
   6 = small town
   7 = rural, outside Metropolitan Statistical Area (MSA)
   8 = rural, inside MSA
4. ZIP code
5. Enrollment as reported in the 2001–02 PSS (or imputed)
6. PIN number (the PIN number is a unique number assigned to identify the school on PSS)

Area Frame

There were 179 area frame schools identified in the 2001–02 PSS area frame within noncertainty PSUs that had not already been added as part of the 2003–04 PSS list frame updating operation. All 179 area frame cases (in the noncertainty PSUs) remained in the area frame and were in sample.

Sample Selection

List Frame

Within each stratum, private schools in the list frame were systematically selected using a probability proportionate to size algorithm. The measure of size used was the square root of the 2000–01 PSS number of teachers in the school. Any school with a measure of size larger than the sampling interval was excluded from the probability sampling process and included in the sample with certainty.[13]

Table 10 shows the number of private schools that were allocated for sampling from the list frame, the number of schools actually sampled, and the percentage of the frame that was sampled for each affiliation stratum. Table 11 shows the number of private schools sampled from the list frame by school level and Census region as well as the percentage of the frame that was sampled within these categories.

[13] After the certainty schools were removed, the sampling interval was recalculated as the sum of the measures of size of the noncertainty schools divided by the desired remaining sample (the stratum total sample size minus the number of certainty schools). The noncertainty schools' probabilities were then calculated as the measure of size divided by the new sampling interval.

Table 10. Number of private school list frame as allocated and as actually selected and the proportion selected, by affiliation stratum: 2003–04

Affiliation stratum	Sample size		Percentage of stratum's frame in sample
	Allocated	Actual	
Total	3,421	3,443	11.8
Catholic—parochial	489	492	11.6
Catholic—diocesan	347	353	12.5
Catholic—private	158	166	15.7
Amish	100	100	15.6
Assembly of God	100	101	21.3
Baptist	195	194	9.2
Episcopal	101	102	27.0
Jewish	114	114	13.7
Lutheran—Missouri Synod	100	100	9.0
Wisconsin Evangelical Lutheran Synod	100	101	26.7
Mennonite	100	98	28.3
Pentecostal	100	101	27.3
Seventh Day Adventist	100	100	10.5
Other religious	601	603	9.4
Nonsectarian—regular	411	414	11.8
Nonsectarian—special emphasis	185	185	7.8
Nonsectarian—special education	120	119	9.3

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Documentation Data File," 2003–04.

Table 11. Proportion of private school list frame selected in SASS sample, by school level and region: 2003–04

School level and region	Sample size	Percentage of frame in sample
Total	3,443	11.8
School level		
Elementary	1,800	10.9
Secondary	429	15.7
Combined	1,214	12.1
Region		
Northeast	862	12.5
Midwest	861	11.8
South	1,061	11.9
West	659	10.6

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Documentation Data File," 2003–04.

Area Frame

All area frame private schools were selected for the sample.

SASS Teacher Frame and Sample Selection

Frame Creation

In previous SASS administrations, sampled schools were asked to provide a list of their teachers primarily by mail. This accumulated list of teacher rosters formed the teacher sampling frame. For the 2003–04 SASS, sampled schools provided teacher rosters to field representatives during personal visits. The field representatives keyed the roster information into a laptop and teachers were selected from each cooperating sampled school, sometimes during the same personal visit.

Along with the names of its teachers, sampled schools were asked to provide the following descriptive characteristics of each teacher:

- *New/Experienced*. Teachers in their 1st, 2nd, or 3rd year of teaching were classified as new teachers.
- *Teaching status*:
  - Part time; or
  - Full time.
- *Race/Ethnicity*:
  - White (non-Hispanic);
  - Black (non-Hispanic);
  - Hispanic—regardless of race;
  - Asian or Pacific Islander; or
  - American Indian or Alaska Native.
- *Subject matter taught*. Teachers were classified as special education, general elementary, math, science, English/language arts, social studies, vocational/technical, or other.

Stratification

Within each sample school, teachers were stratified into one of four teacher types in the following hierarchical order:

1. Asian or Pacific Islander;
2. American Indian or Alaska Native;
3. New (3 years or fewer in the teaching profession); and
4. Experienced (more than 3 years of teaching).

To illustrate the hierarchical ordering, if a teacher was both new and Asian, that teacher would be classified as Asian.

Sample Allocation

The goals of the teacher sampling were as follows:

- Select at least 1,600 Asian or Pacific Islander teachers and 1,600 American Indian or Alaska Native teachers.
- Select a minimum of 2,300 new teachers by sector. For new teachers in public schools, oversampling was not required due to the large number of sampled schools with new teachers. Therefore, teachers were allocated to the new and experienced categories proportional to their numbers in the school. However, for private school teachers, new teachers were oversampled to

ensure that there would be enough new private school teachers in both the 2003–04 SASS and the 2004–05 Teacher Follow-up Survey. In private schools, new teachers were oversampled by a factor of 1.5.
- Select a minimum of one and a maximum of 20 teachers per school.
- Minimize the variance of teacher estimates within school stratum by attempting a self-weighting design. This constraint was relaxed to accommodate the other goals of teacher sampling.
- Select an average of three to eight teachers per school depending upon grade range and sector. The average teacher sample size was limited to this to avoid overburdening the schools, while allowing for a large enough teacher sample to meet the reliability requirements.

Before teachers were allocated to the new/experienced strata, schools were first allocated an overall number of teachers to be selected. This overall sample size was chosen so as to equalize the teacher weights within school stratum (state/level for public schools, association stratum/level/region for private schools). Teacher weights within stratum were not always equalized, however, due to the differential sampling for Asian or Pacific Islander and American Indian or Alaska Native teachers.

Table 12 provides the average number of new and experienced teachers to be selected within each public and private school by school level. These averages do not include Asian or Pacific Islander or American Indian or Alaska Native teachers.

Table 12. Average expected number of new and experienced teachers selected per school, by school level and type: 2003–04

	School level		
School type	Elementary	Secondary	Combined
Public	3.8	7.5	5.7
Private	3.8	4.7	2.8

NOTE: These averages do not include Asian or Pacific Islander or American Indian or Alaska Native teachers.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

Given the numbers in table 12, the new/experienced teacher sample size was chosen to equalize the teacher weights within a school stratum. Since the school sample was selected proportional to the square root of the number of teachers in the school, an equally-weighted teacher sample within a school stratum was obtained by selecting t_i new or experienced teachers in school i.

$$t_i = W_i * T_i(C/Y)$$

where:

W_i is the school weight for school i (the inverse of the school selection probability),
T_i is the number of new and experienced teachers in school i, as reported on the Teacher Listing Form,
C is the average teacher cluster size in the frame/grade level category (see table 12); and
Y is the simple average of the school's base-weighted number of teachers over all schools in the school stratum.

Given the allocation of teachers, t_i, teachers were allocated to the new/experienced strata, t_n and t_{ei}, respectively, in the following manner.

$$t_{ni} = (A*T_{ni}*t_i)/(T_{ei}+A*T_{ni}), \text{ and}$$

$$t_{ei} = (T_{ei} * t_i)/(T_{ei} + A * T_{ni})$$

where:

- A is the oversampling factor for new teachers (A = 1.0 for public school teachers and A = 1.5 for private school teachers);
- T_{ni} is the number of new teachers in school i; and
- T_{ei} is the number of experienced teachers in school i.

The new and experienced teacher sample sizes were constrained to force the sample size to be between one and twice the average cluster size for that type of school.

The Asian or Pacific Islander and American Indian or Alaska Native teachers were allocated in the following manner:

$$t_{pi} = (W_i * T_{pi})/R$$
$$t_{ai} = (W_i * T_{ai})/H$$

where:

- W_i is the school weight for school i (the inverse of the school selection probability);
- T_{pi} is the number of Asian or Pacific Islander teachers in school i;
- T_{ai} is the number of American Indian or Alaska Native teachers in school i;
- R is the national sampling interval to ensure that at least 1,600 Asian or Pacific Islander teachers are selected nationwide (R = 17.74); and
- H is the national sampling interval to ensure that at least 1,600 American Indian or Alaska Native teachers are selected nationwide (H = 5.42).

The Census Bureau estimated the R and H factors conservatively so that there would be more than the designated number of oversampled teachers.

To make sure a school was not overburdened, the maximum number of teachers per school was set at 20. When the number of sample teachers exceeded 20 in a school, Asian or Pacific Islander and American Indian or Alaska Native teachers were proportionally reduced to meet the maximum requirement. In all such cases, at least five Asian or Pacific Islander or American Indian or Alaska Native teachers would have remained in sample, since the sum of the new and experienced teacher sample could not exceed 15.

Sample Selection

Teacher records within a school were sorted by the teacher stratum code, the teacher subject code, and the teacher line number code. The teacher line number is a unique number assigned to identify the teacher within the list of teachers keyed by the field representative. Within each teacher stratum in each school, teachers were selected systematically with equal probability. Table 13 shows the actual number of teachers selected as described above.

Table 13. Number of selected public and private school teachers in SASS sample, by school type and teacher stratum: 2003–04

Teacher stratum	Total	School type	
		Public	Private
Total	63,135	53,188	9,947
American Indian or Alaska Native	1,530	1,435	95
Asian or Pacific Islander	1,814	1,466	348
New	10,528	8,032	2,496
Experienced	49,263	42,255	7,008

NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

The actual sample may differ from the desired sample due to the fact that in allocating the sample, the average of the school's weighted measure of size over all schools in the school stratum was based on universe files of teacher counts from 2 years prior (CCD for public, PSS for private) instead of reported teacher counts from the school just prior to data collection. Also, the response rate for the completed Teacher Listing Forms may be somewhat different than expected, changing the number of schools from which to select sampled teachers. About 16 percent of the in-scope private schools and 11 percent of the in-scope public schools did not provide teacher lists. For these schools, no teachers were selected. A factor in the teacher weighting was used to adjust the weights to reflect the fact that some schools did not provide teacher lists. These factors may cause the overall average number of teachers per school to be slightly different than the target numbers.

To reduce the variance of teacher estimates, one goal of the teacher selection was to make the teacher sample self-weighting (i.e., equal probabilities of selection), within teacher and school stratum, but not across strata. The goal was generally met. However, since the sample size of teachers was altered due to the minimum constraint (i.e., at least one teacher per school) or maximum constraint (i.e., no more than either twice the average stratum allocation or 20 teachers per school) in some schools, this goal was not fully achieved in all schools.

Field Sampling Activities

Once a sample school was contacted, the grade range was verified. Occasionally, the grade range differed considerably due to a difference in the school's actual grade range and how it was reported on the sampling frame. When a considerable difference occurred, if the school reported fewer grades than expected, the sample school was considered a split and one school was randomly subsampled from the list of schools covering the expected grade range. The base weights were adjusted upward accordingly as described in chapter 9. If the school reported having more grades than expected, the respondent was interviewed, but the sampling frame was reviewed to see if the responding school corresponded to more than one sampling frame record. When this occurred, the sampled school was considered a merged school, and the base weight was adjusted downward to account for the fact that the respondent could have fallen into the sample through more than one sampling frame record.

Chapter 5. Data Collection

The 2003–04 Schools and Staffing Survey (SASS) utilized a field-based methodology for the principal, school, school library media center, and teacher data collection (school-level data collection). Census Bureau field representatives were responsible for all data collection at the sampled schools. The field representatives' work was coordinated by staff at 12 Census Bureau Regional Offices. The Regional Office staff was responsible for making assignments, supervising fieldwork, checking-in completed questionnaires, editing questionnaires, and implementing quality control procedures.

The collection of the school district data was conducted separately and accomplished first by mailout, with field representatives following up with nonrespondents. Advance work with school districts and schools was done to accommodate both collection efforts.

An overview of the purpose and content of each questionnaire is discussed in chapter 1. The changes in methodology from the 1999–2000 SASS are described in chapter 2. A brief evaluation of the field-based methodology is included at the end of this chapter.

Advance Work With School Districts

School districts were contacted prior to the beginning of data collection for four main reasons.

First, approval for conducting the SASS needed to be obtained from 77 school districts that were known to have a formal approval process in order for their schools to participate. These efforts began in February 2003 and continued throughout data collection. Depending upon the requirements of each district, a cover letter, a research application or standard proposal for research, and copies of the SASS surveys were sent to each district. The background, methods, findings, and recommendations of this operation are contained in detail in "Appendix L. Report on Results of Special Contact Districts."

Second, school districts were verified as "one-school districts," or districts having only one school. These schools received the SASS Unified School Questionnaire, which contains questions from the School Questionnaire in addition to some items from the School District Questionnaire. (See chapter 2 for a more detailed explanation of this questionnaire.) During June and July of 2003, approximately 1,300 school districts were contacted by phone. These included districts that contained only one school (after the collapsing of schools from the Common Core of Data (CCD) frame, discussed in more detail in chapter 4), districts containing only public charter schools, and districts identified to be state agencies, such as the Department of Corrections (in these cases calls were made to the schools). The intent of the calls was to identify entities that would receive the SASS Unified School Questionnaire and those that had an entity separate from the school that should receive the School District Questionnaire. The calling operation resulted in the identification of 744 one-school districts. The calls revealed that many of the state agencies did not function as "districts," so the schools were redesignated as one-school districts. Some schools listed as one-school districts in New England states were found to be operated by "supervisory unions" rather than by the entity identified as the district on CCD. These "supervisory unions" replaced the district named by CCD on the sample file for those schools. (See chapter 4 for details.)

Third, the National Center for Education Statistics (NCES) wanted to determine if other school districts had formal approval processes in order for their schools to participate in SASS. During June and July of 2003, 650 school districts were called. These efforts were the first step in a test embedded in this administration of SASS to better understand how districts respond to precontacts, and what implications this has on the cost and timing of SASS. The results of the experiment are covered in "Appendix M.

School District Experiment Findings." Precontacting the districts had no significant impact on district or school response rates, or on cost or timing of the data collection.

Finally, NCES wanted to obtain and/or verify contact information. In August 2004, remaining school districts were called to determine the best persons to receive the School District Questionnaire and to obtain their mailing address and telephone number. The calls made to school districts during June and July of 2003 to verify one-school districts also obtained this information.

Timing of School District Data Collection

The schedule for the school district data collection is presented in table 14.

Table 14. Data collection time schedule for public school districts: 2003–04

Activity	Month of activity
Advance work with some school districts to inquire about and respond to requirements by the school districts to approve surveys	Feb.–Aug. 2003
Telephone operation to some schools and school districts to determine which ones would receive the Unified School Questionnaire and to determine if some school districts had requirements to approve surveys	Jun.–Jul. 2003
Telephone operation to obtain contact person information for the School District Questionnaire	Aug. 2003
Introductory letters mailed to school districts, and approximately 1 week later, School District Questionnaires mailed to school districts	Sept. 2003
Continuation of work with some school districts to inquire about and respond to their requirements to approve participation in surveys	Sept. 2003–Feb. 2004
Mailing of reminder postcard to school districts that were mailed a School District Questionnaire	Oct. 2003
Second mailing of School District Questionnaire to nonresponding school districts	Nov. 2003
Field follow-up of remaining nonresponding school districts	Dec. 2003–Apr. 2004

SOURCE: *Documentation for the 2003–04 Schools and Staffing Survey*, Schools and Staffing Survey (SASS), 2003–04, U.S. Department of Education, National Center for Education Statistics.

Details of School District Data Collection

Advance Letters to School Districts

On September 19, 2003, advance letters were mailed to school districts, with the exception of the school districts designated to receive the Unified School Questionnaire in lieu of the School District Questionnaire and the school districts that refused to participate during the precontact operations. Two versions of the advance letter were used. Most school districts were sent a letter that described SASS, requested the school district's participation, provided the legislation authorizing the survey and information on confidentiality, and informed them that they would be receiving a questionnaire. This letter also informed school district personnel that a field representative would contact the sampled schools to ask for a list of teachers. A brief letter was sent to 34 school districts with research application requirements that agreed to participate during the precontact operations. This letter thanked them for agreeing to participate, provided the collection authority and confidentiality information, and informed them that they would be receiving a questionnaire and that a Census Bureau field representative would contact the sampled schools to ask for a list of teachers.

Questionnaire Mailings and Reminder Postcards to School Districts

The first mailout of the School District Questionnaires to the sampled school districts was on September 23, 2003, which was 4 days after the advance letters. As with the advance letters, questionnaires were not mailed to school districts designated to receive the Unified School Questionnaire or to school districts that refused to participate during the precontact operations. The questionnaires were addressed to the contact person whose name had been provided in the advance contact, or, if no name had been provided, to the "Superintendent." The eligible respondent for the School District Questionnaire included any knowledgeable school district employee. (For some school districts, the data were provided by several staff members.)

Reminder postcards were mailed in October 2003, approximately 1 week after the initial mailout. On November 10, 2003, a second copy of the questionnaire was mailed to each school district that had not returned the original form. Another reminder postcard was mailed to them on November 17, 2003.

Nonresponse Follow-up of School Districts

Beginning in October, refusals from the premailout contact operations were assigned to field representatives in an attempt to obtain interviews. Field staff was given an instruction manual to conduct follow-up and to check in and edit completed questionnaires.

From December 8, 2003, through February 27, 2004, all nonresponding school districts were assigned to field representatives for telephone and/or personal visit follow-up. During March, follow-up of a few large school districts continued. In addition, nonresponding districts with special research requirements that indicated that they would respond during the precontact operations received additional follow-up. During March and April, some additional follow-up efforts were made selectively to increase state-level response rates.

Regional Office staff closely tracked 298 large school districts that have a significant impact on state level estimates (e.g., refusals from these districts would undermine the estimates produced for that state). The Regional Offices assigned potential refusals to senior staff with the most experience in the refusal conversion process.

Overview of School Data Collection

An advance look-up operation was conducted by field staff prior to data collection to verify school name and address information and to obtain principals' names. Beginning in September 2003, field representatives were responsible for all data collection at the sampled schools. These included

- mailing an advance postcard to the schools;
- telephoning the school and asking questions using a computer-assisted personal interviewing (CAPI) instrument—the SASS Teacher Listing instrument—to verify school information and set up appointments;
- visiting the school to meet the school principal and/or other school contact person(s) to explain the 2003–04 SASS, to pick up a teacher roster (or make arrangements to obtain one), and to drop off the appropriate principal, school, and school library media center questionnaires;
- entering the teacher roster information into the SASS Teacher Listing instrument, which selected a sample of teachers;
- passing out questionnaires to the selected teachers; and
- following up on all questionnaires via telephone calls and return personal visits, if needed.

Experienced field representatives were trained by using an interactive self-study guide that covered procedures, questionnaires, and use of the laptop questionnaire for the survey. Newly hired field representatives received 2 days of classroom training covering topics in more detail.

Advance Work With Schools

An advance look-up operation was conducted by Census Bureau Regional Office staff beginning June 4, 2003, and ending July 1, 2003. The purpose of the address look-up operation was to verify school names and other critical information and to identify and resolve sampling frame issues before the survey began on September 24, 2003. In addition, during this look-up operation staff members were to obtain the name of the principal for the schools whenever possible. The look-up operations were conducted in the Regional Office using an online interactive database, internet searches, Phonedisc software, various local resources, and the staff's general local knowledge of the area. Any name changes or major discrepancies that were discovered were investigated by Census Bureau staff with in-depth knowledge of the sampling frame.

Overall Timing of School Data Collection

The 2003–04 SASS principal, school, school library media center, and teacher data were collected during the 2003–04 school year. Table 15 summarizes the specific data collection activities and the time frame within which each occurred. Later in this chapter, the response by questionnaire and details on the timing of follow-up efforts of each questionnaire are presented.

Table 15. Data collection time schedule for schools: 2003–04

Activity	Month of activity
Advance work to verify school name and address information and to obtain principals' names	June 2003
Introductory letters mailed to schools	Sept. 2003
Field representatives mailed notification postcards to schools informing them that they would be calling	Sept.–Oct. 2003
Approximately 4 days after mailing postcards, field representatives called schools to verify school information and set up appointments	Sept.–Oct. 2003
Field representatives visited schools to distribute principal questionnaires; distribute school questionnaires; distribute school library media center questionnaires in public schools; and obtain a roster of teachers, sample teachers, and distribute teacher questionnaires	Oct. 2003–Jan. 2004
Field representatives followed up on all distributed principal, school, library media center, and teacher questionnaires	Oct. 2003–May 2004

SOURCE: *Documentation for the 2003–04 Schools and Staffing Survey*, Schools and Staffing Survey (SASS), U.S. Department of Education, National Center for Education Statistics.

Details of School Data Collection

Preparation of Questionnaires and Associated Materials

All questionnaires and associated field materials, including handouts and promotional materials for school staff, were prepared in advance by the Census Bureau clerical processing staff. Each school's materials were enclosed in zip-lock bags and included

- an advance postcard to mail to the principal before calling the school;

- all labeled SASS questionnaires for the school: principal, school, school library media center (private schools were not included in the school library media center survey), and the expected number of teacher questionnaires (teacher questionnaires were inserted in envelopes for the teachers);
- for each respondent, one copy of the appropriate NCES booklet—either *A Brief Profile of America's Public Schools* (NCES 2003-418) or *A Brief Profile of America's Private Schools* (NCES 2003-417);
- optional form SASS-16—an unlabeled Teacher Listing Form[14] on which schools could list their teachers;
- two sets of extra peel-off labels that might be needed for replacement questionnaires;
- a copy of the school advance letter that was sent to each of the sampled schools;
- a copy of the advance letter that was sent to each public school's school district;
- a SASS overview, *Schools and Staffing Survey: 2003–04* (NCES 2003-409), providing general information, topics covered in the SASS, and resources available;
- a CD-ROM of the *Statistical Abstract of the United States: 2002*; and
- "Schools and Staffing Survey" pens with the SASS website.

Advance Letter and Postcard to Schools

On September 19, 2003, the Census Bureau clerical processing staff mailed advance letters to schools. The letter was not personalized, but addressed to the "principal/school head." The letter described SASS, encouraged their participation, provided the collection authority and confidentiality information, and informed them that they would be called by a field representative to set up a meeting, request a list of teachers, and deliver questionnaires. Beginning September 24, 2004, field representatives mailed hand-addressed postcards to the school, using the name of the principal/school head. The postcard provided the name and phone number of the field representative and informed the principal/ school head that the school would be called in order to set up an appointment.

Screening Schools for Eligibility and Making Appointments to Visit Schools

A few days after mailing postcards to schools, field representatives called schools to administer the SASS Teacher Listing instrument. Once they reached the school by phone, they utilized the SASS Teacher Listing instrument to ascertain whether the school was in-scope or out-of-scope for SASS, and to make appointments to visit schools. In some cases, when field representatives were unable to reach the school by phone to administer the questions, they completed this part of the SASS Teacher Listing instrument at the school.

In previous administrations of SASS, many cases were identified where schools had self-reported addresses, grade ranges, or numbers of teachers that differed from that provided in other collections of data by NCES. These differences impact whether a school is in-scope or out-of-scope for SASS. The screening section of the SASS Teacher Listing instrument verified the school name and address, school type, and grade range in order to determine if the school was in-scope.

The name/address verification section of the SASS Teacher Listing instrument obtained each school's correct name, physical address, and mailing address. In some instances it was possible to establish that the school had closed or did not meet the SASS definition of a school. The physical address of the school may or may not have differed from the mailing address. In some districts, mail is addressed to a central

[14] Schools were asked to provide teacher information for field representatives to enter into the SASS Teacher Listing instrument. While many schools generated listings with the requested information, others used this optional form to record the information.

location and then is distributed internally so the mailing address will not agree with the location. In some rural areas, all mail is addressed to P.O. boxes, so it was necessary to collect physical location information.

The question verifying the school's type provided the respondent with six categories from which to choose: public, private, public charter, Bureau of Indian Affairs (BIA), homeschool, or only web-based instruction.[15] The SASS Teacher Listing instrument compared this reported information with the preloaded designation from the sampling process (discussed in more detail in chapter 4) in order to determine if the school should be made out-of-scope. Homeschools and schools with only web-based instruction were considered out-of-scope for SASS. If the "public" or "private" designation was incorrect, the school was coded as out-of-scope.

The instrument also prompted the field representative to check grade ranges to confirm that the school in question was the correct school. If the grade range differed completely from the expected grade range, then the instrument collected the information and instructed the field representative to report the information to the sampling frame staff. This staff checked the source files to determine whether the school was in-scope or out-of-scope. If the respondent reported that grade ranges of the school differed significantly from the preloaded grade ranges from the sampling process, then there was a possible problem. In situations where the reported grade range was significantly less than expected, the instrument presented questions to find out if the anticipated grade range was covered by more than one school in the local community. These situations could arise because of an error in the source file or because the original sampled school was split into two or more schools. Once the information for these additional schools was entered, the instrument randomly selected ONE of the schools as the in-scope school for the survey. In that instance, the instrument instructed the field representative how to proceed. In situations where the reported grade range was significantly more than expected, the instrument presented a question to probe for a reason. For example, the school of interest may have merged with another school or the source may have been incorrect. In either instance, however, the school remained in-scope. If the grade range differed by no more than one grade range at either end of the range (e.g., a school with grades 3–5 was reported as having grades 2–4), then the instrument simply collected the new grade range of the school. More detail on these operations is contained in "Appendix K. Details of SASS Frame Creation and Sample Selection Procedures."

If the school was determined to be out-of-scope, the instrument made all questionnaires for the school out-of-scope. If the instrument determined that the school was in-scope, then it led the field representative through a series of questions to set up an appointment to visit the school to collect a roster of teachers and hand out the questionnaires.

Confirming School Appointments and Making Arrangements to Obtain Rosters of Teachers

When field representatives called schools to administer the instrument prior to visiting the school, the school staff was alerted that they would be asked to provide a roster of teachers when the field representative came to the school. They were told whom to include and to exclude as teachers. Field representatives explained that for each teacher they needed to obtain

- the subject taught by each teacher;
- the teacher's full-time or part-time status at the school;
- the teacher's race/ethnicity; and

[15] Definitions of school types are provided in "Appendix A. Key Terms for SASS." Homeschools are not included in SASS. Organizations or institutions that provide support for homeschooling but do not offer classroom instruction for students also are not included.

- whether the teacher had taught for more than 3 years at any school (teacher's experience).

After field representatives completed making appointments with their schools, they alerted the staff in their Regional Office. Some of the staff from Regional Offices faxed appointment confirmations to the schools. These faxes included a paper version of the Teacher Listing Form, which is the form that was used in previous rounds of the SASS to collect the teacher roster information by mail. In this SASS, the Teacher Listing Form was provided by fax so that the school staff could see which data items were needed for each teacher.

Distributing Principal, School, and School Library Media Center Questionnaires

Beginning in early October 2003, field representatives went to the schools to explain the survey operations, provide promotional materials (NCES brochures, CD-ROM of the *Statistical Abstract of the United States*, SASS pens), and obtain the list of teachers. If they had set up an appointment in advance, they requested to meet with the principal. Usually the meeting did include the principal, but in some cases the meeting was with an assistant principal or other school staff. The field representatives used the various handouts and promotional materials to explain the purpose and timing of the survey and to gain cooperation. The appropriate principal questionnaire was given to or left for the principal, the only eligible respondent, to complete. In most cases the school questionnaire also was provided to the principal during the meeting at the school. However, the respondent for the school questionnaire could be any knowledgeable school staff member (e.g., assistant principal or school secretary), and efforts were made to establish who would be the specific respondent.

In public schools (including BIA-funded and public charter schools), the School Library Media Center Questionnaire was provided during the visit. Field representatives attempted to locate the school library to deliver it to the school librarian or another school staff member who was familiar with the library. If they were not allowed to walk through the school, they left the questionnaire with the principal or other staff with whom they were meeting.

The field procedures allowed the field representative to decide whether to return to the institution to pick up completed questionnaires or whether to leave a return envelope in which each respondent could mail completed questionnaires to the Census Bureau Regional Offices. Regional Office staff provided guidelines for the field representatives; in general, if the school was more than 50 miles away from the field representative, an envelope was left at the school to have respondents mail back the forms.

After questionnaires were distributed, field representatives used an automated case management system on their laptops to indicate that each of the questionnaires had been distributed, along with notes indicating the intended respondent's name and contact information, and the plan for completing the questionnaire. In the event that the school had no library, they made the School Library Media Center Questionnaire out-of-scope.

The questionnaire distribution meetings were completed on a flow basis, with 45 percent completed in October 2003, 31 percent completed in November, and 12 percent completed in December. The remaining schools were completed during follow-up visits in January and February 2004.

Sampling Teachers and Distributing Teacher Questionnaires

During the school visit, field representatives attempted to obtain the roster of teachers. In many cases the person who would produce the roster was not included in the initial meeting, so the field representatives had to make arrangements for another meeting. They sought to obtain the teacher roster during this first visit or, when that was not possible, to make specific arrangements to return after it was completed. Once

they received the information, the teachers' names and associated data from the list that the school provided were entered into the SASS Teacher Listing instrument, which then selected the sample of teachers for each school. The teacher questionnaires were distributed to the sampled teachers.

The specific arrangement for completing the Teacher Listing Form generally depended on the size of the school.

- At smaller schools, the principal or knowledgeable respondent could dictate the list of teachers, which the field representative then entered into the instrument. Alternatively, the respondent provided a handwritten list of teachers.
- At some schools, the respondent completed the optional Teacher Listing Form before the field representative arrived at the school or once the field representative got there.
- At larger schools, the information often was stored in a database, and respondents preferred to provide a printout of their teacher roster.

Before the field representatives entered the teacher roster information, they reviewed the roster for completeness and accuracy. They went through the list of teachers and verified that the correct teachers were listed (e.g., that the teachers listed taught in the sampled grade range). Once they finished entering all information into the SASS Teacher Listing instrument, the instrument selected up to 20 teachers, based on the sampling process. An average of five teachers per school was selected. (See chapter 4 for more information on the sampling.)

Once the teachers were selected, the field representatives took prelabeled teacher questionnaires with the control numbers matching the control numbers assigned to each teacher by the instrument. On each, they entered the teacher's name on the front of the questionnaire. An envelope containing the teacher questionnaire, return envelopes, promotional material, and a note indicating whether the field representative intended to pick up the questionnaire or have the teacher mail it back was prepared for each teacher. In most cases, this envelope was left in teachers' mailboxes or with administrative staff to be distributed to the teachers. Field representatives used the case management system on their laptops to indicate that each of the questionnaires was distributed, along with notes indicating the contact information, and the plan for returning the questionnaire.

Nonresponse Follow-up of Principal, School, Teacher, and School Library Media Center Questionnaires

When questionnaires were distributed, respondents were requested to return them within 2 weeks. In many cases, field representatives made arrangements to return to the school to pick up completed questionnaires and then FedEx them to the Regional Office. Otherwise, return envelopes were provided so that respondents could mail back questionnaires to the Regional Offices. Regional Office staff provided guidelines to the field representative—generally, if the school was more than 50 miles away from the field representative, an envelope would be left in order for the respondents to mail back the forms. However, some Regional Offices emphasized one approach over the other. For example, the Atlanta and Dallas Regional Offices emphasized picking up questionnaires, and the Denver Regional Office emphasized returning the questionnaires by mail.[16]

Follow-up efforts began approximately 2 weeks after questionnaires were distributed. Follow-up efforts consisted of telephone calls and personal visits to schools to obtain completed questionnaires or verify that they had been mailed. Each time field representatives contacted a school, they first checked the case

[16] The Census Bureau has Regional Offices located in Atlanta, Boston, Charlotte, Chicago, Dallas, Denver, Detroit, Kansas City, Los Angeles, New York, Philadelphia, and Seattle.

management on their laptop, which indicated the status of each questionnaire assigned to the school. Then they would follow up on all questionnaires that had not been completed. After taking a follow-up action (e.g., leaving a message or note, picking up a questionnaire, verifying that the questionnaire had been mailed), they would indicate what had occurred by changing outcome codes and entering notes into the case management system. Field representatives were supplied with extra preprinted labels in the event that respondents needed a new blank questionnaire to complete; they would peel off the label for that respondent, affix it to the questionnaire, and provide it to the respondent.

Regional Offices received mail returns from respondents and questionnaires that were FedExed by field representatives. They edited questionnaires for completeness and worked with their field representatives to resolve incomplete questionnaires. Once complete, they used scanning equipment to check the questionnaires in as "completed," which updated the case management system. They boxed completed questionnaires and sent them to the Census Bureau clerical processing staff for data capture. Regional Office staff also administered a quality control program, which was designed to detect and deter falsification by field representatives; this is discussed in "Appendix N. Results From the Quality Control Reinterview of the 2003–04 Schools and Staffing Survey."

The original plan for data collection had specific goals for completion: (1) teacher listing/sampling would be completed by the end of November 2003; (2) principal, school, and school library media center questionnaires would be completed by the end of December 2003; and (3) teacher questionnaires would be completed by the end of January 2004. These goals turned out to be overly ambitious. Table 16 shows the response rates of each questionnaire by month, and table 17 shows the approximate percentage of interviews that were completed by the key milestone dates.

Table 16. Cumulative response rates (in percent) during data collection, by date and questionnaire: 2003–04

Questionnaire	11/4/03	12/2/03	1/2/04	2/2/04	3/1/04	4/16/04	Adjusted final rate (unweighted)
Principal	15.2	45.1	65.2	77.5	83.1	84.2	82.4
Private School Principal	14.8	40.7	57.0	70.7	76.2	76.8	73.8
School	14.0	43.0	62.4	75.6	82.4	83.6	80.5
Private School	14.8	40.6	56.9	70.7	76.4	77.2	74.4
Unified School (all)	11.6	32.7	54.9	73.7	81.9	85.7	84.7
Unified School (BIA-funded schools only[1])	3.6	23.6	42.3	56.2	64.8	74.1	89.5
School Library Media Center	13.7	41.2	60.5	74.2	81.5	83.2	78.2
Public Teacher Listing	44.9	75.6	85.2	88.2	88.9	88.9	89.4
Private Teacher Listing	43.0	69.4	79.5	83.1	83.6	83.6	84.1
Teacher	13.9	43.7	65.5	80.2	87.8	89.1	84.0
Private School Teacher	16.2	46.5	65.1	79.8	86.3	87.3	81.6

[1] BIA refers to the Bureau of Indian Affairs.
NOTE: The 11/4/03 through 4/16/04 response rates were based on preliminary field data. Corrections and adjustments were made after fieldwork and during data processing. Final response rates are presented in detail in chapter 6.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Preliminary Field Data File," 2003–04.

Table 17. Approximate percentage of interviews completed at key milestone dates, by questionnaire: 2003–04

Questionnaire	End of November (Teacher Listing Forms)	End of December (principal, school, school library media center questionnaires)	End of January (teacher questionnaires)	End of February (extension for all questionnaires)
Principal	†	77	†	99
Private School Principal	†	74	†	99
School	†	75	†	99
Private School	†	74	†	99
Unified School (all)	†	65	†	97
Unified School (BIA-funded schools only[1])	†	47		72
School Library Media Center	†	73	†	98
Public Teacher Listing	85	†	†	99
Private Teacher Listing	83	†	†	99
Teacher	†	†	90	99
Private School Teacher	†	†	91	99

† Not applicable.
[1] BIA refers to the Bureau of Indian Affairs.
NOTE: These response rates were computed by dividing the field response rate at the milestone date by the field response rate at the conclusion of data collection.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Preliminary Field Data File," 2003–04.

Approximately three-quarters of the principal, school, and school library media center questionnaires for public and private schools were completed by the original target date. Approximately half of the BIA-funded schools were completed at that date. Approximately 85 percent of the Teacher Listing Forms and 90 percent of the teacher questionnaires were completed by the target dates.

At the end of January, it was decided to extend data collection by 1 month. Regional Offices were instructed to work all productive cases (those thought likely to refuse), but were given the option to conduct telephone interviews consisting of a subset of questionnaire items if respondents were unlikely to respond otherwise. Table 18 summarizes the telephone interview attempts and interviews. By the end of February, data collection was closed out in almost all cases. Exceptions were made for BIA-funded schools, which had unusually low response rates; for public schools that encountered delayed data collection efforts as a result of the school district's late approval for participation, and selected school districts to increase state-level response rates. (See earlier section discussing follow-up for school districts.) Field staff continued to attempt to interview BIA respondents through early May.

Table 18. Number of telephone interview attempts and interviews, by questionnaire: February 2004

Questionnaire	Number attempted	Completed interviews	Partial interviews
Principal	106	14	25
Private School Principal	26	1	11
School	123	12	36
Private School	36	2	16
Unified School	20	0	14
School Library Media Center	109	17	37
Teacher	358	105	86
Private School Teacher	67	0	8

NOTE: The teacher listing operations were completed prior to this operation.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Preliminary Field Data File," 2003–04.

Evaluation of Field-Based Methodology

As noted, the 2003–04 survey utilized a field-based data collection strategy, with field representatives in charge of distributing forms and conducting all follow-up. In some cases they made arrangements to pick up completed forms; otherwise they gave respondents return envelopes addressed to their Regional Office. The results of this approach compared to prior rounds of SASS were as follows:

- Most fieldwork was completed by the end of February, rather than the end of May, but poor response caused some school district and BIA work to extend to April/May.
- Response rates for school, principal, and school library media center questionnaires were lower. Procedures called for field representatives to establish questionnaire pick-up or mailback dates, and to follow up if questionnaires were not received. Under the new methodology, it was expected that response rates on December 31, 2003, would have exceeded the corresponding response rates on December 31, 1999—when the mail phase, and only for some questionnaires, the computer-assisted telephone interviewing (CATI) follow-up phase, took place. In fact, only the school questionnaires had higher interview rates in 2003. Table 19 shows the comparisons by questionnaire. Response rates are covered in more detail in chapter 6.

Table 19. Percentage interviewed, by date and questionnaire: 1999, 2003

Questionnaire	12/31/1999	12/31/2003
School District	67	61
Principal[1]	83	64
Private School Principal[1]	76	52
School[2]	51	61
Private School[2]	45	53
School Library Media Center[3]	62	52

[1] In 1999, included mail and computer-assisted telephone interviewing (CATI) data collection by December 31.
[2] In 1999, included only mail data collection by December 31.
[3] In 1999, included mail and CATI to encourage mail or internet response by December 31.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Preliminary Field Data File," 1999–2000 and 2003–04.

- Response rates for Teacher Listing Form and teacher questionnaires were about the same.
- Response rates varied by Regional Office.
- Use of the SASS Teacher Listing instrument up-front enabled out-of-scope schools to be identified at the beginning of the survey, rather than during processing. However, tracking cases and resolving whether a case was an interview, noninterview, or out-of-scope remained problematic and time consuming.

Chapter 6. Response Rates

This chapter presents the survey response rates for the 2003–04 Schools and Staffing Survey (SASS). First, the unit response rates are presented in detail. Next, the item response rates for each survey type are summarized. Following these sections, the nonresponse bias analyses that were conducted on both the unit and the items for this SASS are described, and major findings are presented.

Survey Response Rates

Unit response rates are the rate at which the sampled units respond by substantially completing the questionnaire. Unit response rates can be calculated as unweighted or weighted. The unweighted response rates are the number of interviewed sampled units divided by the number of eligible (i.e., in-scope) sampled units, which include respondents plus nonrespondents but not ineligible (i.e., out-of-scope) units. The weighted response rates are the base-weighted (i.e., initial basic weight multiplied by the sampling adjustment factor) number of interviewed cases divided by the base-weighted number of eligible cases. The base weight for each sampled unit is the inverse of the probability of selection. See chapter 9 for further discussion of the weighting.

The unweighted, weighted, and weighted overall (across all stages of selection, in the case of teachers) response rates for each data file and the Teacher Listing Forms are listed in table 20. Table 21 provides public school response rates by state for districts, schools, principals, teachers, and school library media centers. Exhibit 2 shows which states comprise each of the Census Bureau Regional Offices and which are the 12 offices that were responsible for data collection. Table 22 provides private school response rates by private school typology for schools, principals, and teachers. The response rate tables are useful as an indication of possible nonresponse bias. The unweighted response rates provide a general indication of the success of the data collection effort, while the weighted response rates provide a measure of the quality of the data and the potential for nonresponse bias.

Table 20. Weighted and unweighted response rates and weighted overall response rates in percent, by survey population: 2003–04

Survey population	Unweighted response rate	Weighted response rate	Weighted overall response rate[1]
Public school Teacher Listing Form	89.4	89.2	†
Private school Teacher Listing Form	84.1	85.4	†
BIA-funded school Teacher Listing Form[2]	93.8	93.8	†
Public school district	81.9	82.9	†
Public school	80.5	80.8	†
Private school	74.4	75.9	†
BIA-funded school[2]	89.5	89.5	†
Public school principal	82.4	82.2	†
Private school principal	73.8	74.9	†
BIA-funded school principal[2]	90.7	90.7	†
Public school teacher	84.0	84.8	75.7
Private school teacher	81.6	82.4	70.4
BIA-funded school teacher[2]	91.4	92.0	86.3
Public school library media center	78.2	76.9	†
BIA-funded school library media center[2]	82.1	82.1	†

† Not applicable.
[1] Weighted questionnaire response rate times the weighted response rate for the Teacher Listing Form.
[2] BIA refers to the Bureau of Indian Affairs.
NOTE: Response rates were weighted using the inverse of the probability of selection.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, BIA School, Private School, Public School Principal, BIA School Principal, Private School Principal, Public School Teacher, BIA School Teacher, Private School Teacher, Public School Library Media Center, and BIA School Library Media Center Documentation Data Files," 2003–04.

Table 21. Final weighted response rates in percent for public school districts, schools, principals, teachers, and school library media centers, by state: 2003–04

State	Public school districts	Schools	Principals	Teachers			School library media centers
				Teacher Listing Form	Teacher Questionnaire	Overall teacher response rate[1]	
Total	82.9	80.8	82.2	89.2	84.8	75.7	76.9
Alabama	97.0	89.5	90.2	99.1	89.4	88.6	87.6
Alaska	89.9	79.9	81.1	95.9	84.0	80.6	74.0
Arizona	88.5	86.0	84.8	89.8	92.1	82.7	81.2
Arkansas	74.2	82.6	83.4	94.2	82.8	78.0	84.7
California	82.5	71.2	72.8	83.4	79.9	66.7	71.4
Colorado	86.0	81.6	78.3	86.1	85.2	73.4	74.4
Connecticut	70.6	81.7	82.8	86.8	87.6	76.1	72.8
Delaware	71.6	73.4	75.6	87.7	83.7	73.5	71.7
District of Columbia	100.0	73.2	77.6	94.7	73.9	70.0	48.8
Florida	87.9	83.1	84.5	90.8	86.0	78.1	78.8
Georgia	86.5	82.9	87.9	93.0	89.3	83.0	87.6
Hawaii	100.0	80.1	82.5	85.4	83.5	71.3	77.8
Idaho	89.2	97.1	97.2	99.4	93.6	93.1	93.3
Illinois	84.9	78.0	79.1	82.3	84.4	69.5	65.1
Indiana	82.4	84.2	86.0	94.8	84.1	79.7	79.3
Iowa	83.9	87.2	91.4	94.3	86.2	81.4	87.2
Kansas	88.0	82.6	88.5	95.0	83.7	79.5	89.6
Kentucky	78.4	78.8	81.1	89.8	81.1	72.8	69.9
Louisiana	97.4	87.0	89.9	94.8	91.1	86.4	83.7
Maine	77.8	85.6	87.7	93.8	85.3	80.1	85.1
Maryland	79.2	75.4	66.8	90.5	70.7	63.9	65.2
Massachusetts	80.4	85.2	84.3	89.1	82.1	73.2	73.6
Michigan	69.2	84.2	86.0	92.1	80.8	74.4	69.1
Minnesota	81.2	76.9	77.4	88.7	80.2	71.1	73.1
Mississippi	96.2	95.3	94.9	97.5	96.3	93.9	91.5
Missouri	84.0	80.8	86.4	92.1	84.3	77.6	84.1
Montana	87.8	86.5	90.5	96.9	83.5	80.9	87.6
Nebraska	87.2	86.9	84.6	91.8	88.7	81.4	85.4
Nevada	76.5	78.9	80.1	83.9	88.7	74.4	68.9
New Hampshire	86.2	87.0	85.8	87.5	91.9	80.4	80.6
New Jersey	83.3	67.5	72.0	83.4	80.9	67.4	65.4
New Mexico	95.5	74.8	80.0	87.4	79.8	69.7	73.8
New York	77.4	68.5	70.9	81.0	79.2	64.2	67.3
North Carolina	70.9	80.1	82.9	90.4	84.0	75.9	78.2
North Dakota	90.8	89.4	93.9	97.9	84.3	82.6	87.0

See notes at end of table.

Table 21. Final weighted response rates in percent for public school districts, schools, principals, teachers, and school library media centers, by state: 2003–04—Continued

State	Public school districts	Schools	Principals	Teachers			School library media centers
				Teacher Listing Form	Teacher Questionnaire	Overall teacher response rate[1]	
Ohio	78.0	86.2	86.5	90.5	89.6	81.1	77.3
Oklahoma	85.8	86.0	89.4	96.3	84.9	81.7	84.3
Oregon	77.4	74.0	79.2	77.6	88.7	68.8	72.4
Pennsylvania	90.9	81.7	81.3	91.8	85.7	78.7	76.9
Rhode Island	68.3	74.1	76.3	76.7	84.1	64.5	69.6
South Carolina	87.1	86.4	89.3	90.8	91.2	82.8	82.6
South Dakota	82.6	83.1	91.2	97.1	82.2	79.8	79.8
Tennessee	86.0	92.4	92.0	95.5	90.8	86.7	84.6
Texas	92.9	87.9	86.8	90.3	90.8	82.0	83.6
Utah	93.8	82.0	82.1	87.6	92.1	80.6	80.1
Vermont	37.3	71.9	72.8	77.9	85.6	66.7	69.2
Virginia	72.2	67.9	69.7	78.9	80.0	63.1	68.4
Washington	69.5	79.0	82.7	91.4	84.1	76.9	82.2
West Virginia	75.4	94.2	94.5	99.2	88.1	87.4	76.6
Wisconsin	78.3	81.2	84.4	89.6	80.2	71.8	78.2
Wyoming	90.8	83.0	84.4	90.4	82.6	74.7	77.3

[1] Weighted questionnaire response rate times the weighted response rate for the Teacher Listing Form.

NOTE: Response rates were weighted using the inverse of the probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, Public School Principal, Public School Teacher, and Public School Library Media Center Documentation Data Files," 2003–04.

The geographic variation in response rates also can be examined by looking at the state response rates (from table 21) within each Census Bureau Regional Office. The 2003–04 SASS data collection was administered by 12 different Census Bureau Regional Offices. The states comprising each Regional Office are shown below in exhibit 2.

Exhibit 2. United States map, by Census Bureau Regional Office

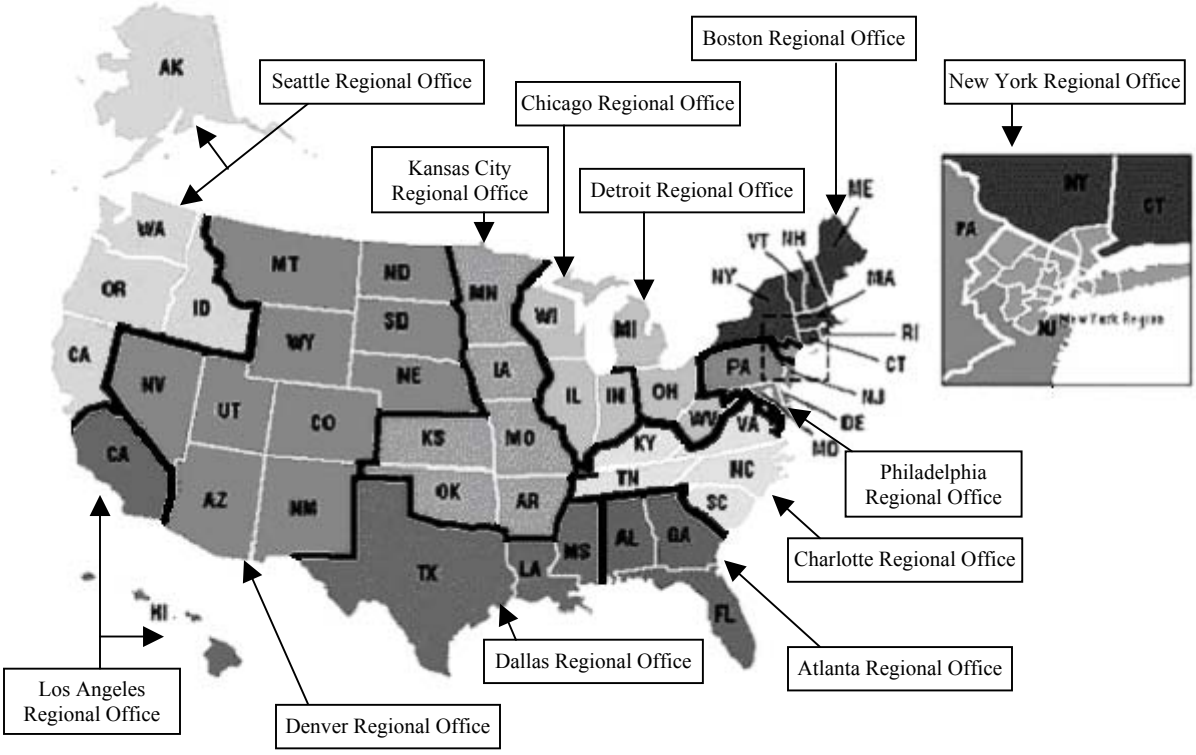

Table 22. Final weighted response rates in percent for private schools, principals, and teachers, by NCES typology: 2003–04

NCES typology	Schools	Principals	Teachers		
			Teacher Listing Form	Private School Teacher Questionnaire	Overall teacher response rate[1]
All private schools	75.9	74.9	85.4	82.4	70.4
Catholic	81.6	82.9	88.3	85.9	75.8
Parochial	84.3	84.4	90.0	85.1	76.6
Diocesan	80.0	82.5	87.6	87.6	76.7
Private	74.5	77.0	82.8	84.1	69.7
Other religious	74.0	71.1	84.5	80.6	68.1
Conservative Christian	75.8	73.9	84.2	81.5	68.6
Affiliated with a religious school association	78.5	77.8	85.3	82.3	70.1
Unaffiliated with a religious school association	68.8	62.7	84.3	77.0	64.9
Nonsectarian	72.6	72.7	83.6	79.2	66.2
Regular program	60.4	61.4	76.2	77.3	58.9
Special emphasis	77.3	77.9	85.9	79.2	68.0
Special education	85.8	83.8	92.3	85.9	79.2

[1] Weighted questionnaire response rate times the weighted response rate for the Teacher Listing Form.
NOTE: Response rates were weighted using the inverse of the probability of selection.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School, Private School Principal, and Private School Teacher Documentation Data Files," 2003–04.

Item Response Rates

The weighted item response rates are the number of sampled cases responding to an item divided by the number of sampled cases eligible to answer the item (i.e., not a valid skip) and adjusted by the final weight. For all items except the student race items on the district and school questionnaires, a counted response is any item that is not missing and the value of the associated imputation flag is 0. For the student race items on the district (d0052–d0057) and school (s0417–s0422) questionnaires, a counted response is any item that is not missing and the value of the associated imputation flag is 0 or 1. See chapter 8 for detailed information on imputations.

For SASS, the weighted item response rates ranged from 0 percent to 100 percent. Table 23 provides a brief summary of the item response rates. The item response rates in these tables are weighted and do not reflect additional response loss due to cases that refused to participate in the survey. Exhibit 3 lists the questionnaire items with weighted response rates of less than 70 percent.

Table 23. Summary of weighted item response rates, by survey population: 2003–04

Survey population	Range of item response rates	Percentage of items with a response rate of 85 percent or more	Percentage of items with a response rate of 70–84 percent	Percentage of items with a response rate of less than 70 percent
Public school district	52–100	90	8	2
Public school	71–100	91	9	0
Private school	49–100	90	9	1
BIA-funded school[1]	65–100	70	26	4
Public school principal	76–100	95	5	0
Private school principal	86–100	100	0	0
BIA-funded school principal[1]	61–100	93	2	5
Public school teacher	44–100	90	7	3
Private school teacher	64–100	92	7	1
BIA-funded school teacher[1]	0–100	81	16	3
Public school library media center	84–100	97	3	0
BIA-funded school library media center[1]	71–100	90	10	0

[1] BIA refers to the Bureau of Indian Affairs.
[2] The zero response rate resulted from one item where the only eligible respondent did not answer the item; the next lowest response rate was 63 percent.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, BIA School, Private School, Public School Principal, BIA School Principal, Private School Principal, Public School Teacher, BIA School Teacher, Private School Teacher, Public School Library Media Center, and BIA School Library Media Center Documentation Data Files," 2003–04.

Exhibit 3. Items with weighted response rates of less than 70 percent, by survey population: 2003–04

Survey population	Items
Public school district	58C, 58F, 65A, 66D
Private school	5F, 23E, 29C, 62 (high)
BIA-funded school[1]	4, 78A, 78B, 78C, 78D, 78E, 78F, 78G, 78H, 78I, 78J, 78K, 78L
BIA-funded school principal[1]	29A, 29B, 29C, 30A, 30B, 30C, 30D, 30E, 30F, 30G, 30H
Public school teacher	19(8, subject), 19(8, grade), 19(8, enrollment), 19(9, subject), 19(9, grade), 19(9, enrollment), 19(10, subject), 19(10, grade), 19(10, enrollment), 23D(7, year)
Private school teacher	19(10, grade), 19(10, enrollment), 31G(1, code), 31G(2, code)
BIA-funded school teacher[1]	4, 6E, 19(10, subj), 19(10, enrollment), 23B(7, code), 23D(5, year), 23D(7, year), 31F(2, code), 31G(1, code)

[1] BIA refers to the Bureau of Indian Affairs.
NOTE: Numbers in this table refer to questionnaire item numbers, while letters or parenthetical descriptions refer to subitems. The first item number presented in this table, 58C, is subitem C on the School District Questionnaire.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, BIA School, Private School, BIA School Principal, Public School Teacher, BIA School Teacher, and Private School Teacher Documentation Data Files," 2003–04.

Nonresponse Bias Analysis

A comprehensive nonresponse bias analysis was conducted for each of the components of the 2003–04 SASS. The analysis evaluated the extent of potential bias introduced by nonresponse from school districts, schools, school principals, teachers, and school library media centers at both the unit and item levels.

Unit-Level Nonresponse

Overview of Methodology

The first step in conducting the bias analysis was to examine the overall response rate for each file by state or affiliation stratum and the reporting characteristics (i.e., urbanicity, school level, and enrollment). If the response rate fell below 50 percent, that population would not be reported separately in a published table. Instead, the data would be replaced with a double dagger, but the estimates would be included in the total. The footnote would read, "Reporting standards not met. The base-weighted unit response rate was below 50 percent." For any state or affiliation stratum where the response rate was less than 85 percent, a more detailed analysis was done on the other reporting characteristics. The results were highlighted if that particular cell had a significantly higher or lower response rate than the file as a whole and bolded if the difference was noteworthy. A noteworthy difference had to meet the following conditions:

- The difference relative to the overall response rate, or frame proportion, was greater than 10 percent.
- The absolute difference was greater than one percentage point.
- The coefficient of variation was less than 15 percent.
- The cell had at least 30 interviews.

In addition, the base-weighted distribution of the respondents was compared to the distribution on the frame, which was adjusted for sampled units identified as out-of-scope. As discussed above, significant differences were highlighted and noteworthy cells were bolded. Finally, these same comparisons were analyzed using the final-weighted distributions.

Comparing the overall response rate of each file to the tabulation cells helped to identify areas of potential concern. Comparing the base-weighted distribution of the respondents to the adjusted frame helped to identify areas of potential bias for data items that were not particularly well correlated with the weighting cells. Comparisons with the final-weighted distributions identified areas of potential bias for data items correlated with the weighting cells.

***Summary of Conclusions*.** Evidence of substantial bias was not found on any of the 12 data files or the 3 Teacher Listing Form files. Nevertheless, response rates that fell below the acceptable level of 50 percent for particular states in public sector files and strata in private sector files were found and will not be reported separately in publications. These include public school districts in Vermont, public school library media centers in the District of Columbia, and principals in Amish private schools.

Summary for Public School Districts (LEA)[17]

The overall response rate for public school districts was 82.9 percent, requiring a closer examination of nonresponse. The more detailed analysis was performed by state and the two primary reporting characteristics (i.e., urbanicity and enrollment).

The overall response rate for 27 states was below 85 percent and 1 state, Vermont, had a response rate of 36.3 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. *The results of this analysis identified 3 out of 225 comparisons that were significant and noteworthy based upon the previously identified criteria. These differences were found in the enrollment categories for Maine and New Jersey* (table 24).

Table 24. Base-weighted public school district frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2003–04

State and reporting characteristic	Frame distribution (adjusted for out-of-scope districts) and standard error		Interviewed sample distribution (adjusted for out-of-scope districts) and standard error		*t* statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Maine					
Urbanicity					
Central city	0.028	0.0000	0.046	0.0245	-0.7313
Urban fringe or large town	0.152	0.0000	0.159	0.0175	-0.4351
Small town or rural	0.820	0.0000	0.795	0.0938	0.2724
Enrollment					
Less than 250	0.197	0.0000	0.123	0.0407	1.8035
250–999	0.393	0.0000	0.422	0.0803	-0.3584
1,000–1,999	0.197	0.0000	0.204	0.0207	-0.3615
2,000 or more	**0.208**	**0.0000**	**0.251**	**0.0092**	**-4.6538**
New Jersey					
Urbanicity					
Central city	0.061	0.0000	0.072	0.0181	-0.6199
Urban fringe or large town	0.902	0.0000	0.877	0.2093	0.1180
Small town or rural	0.037	0.0000	0.051	0.0147	-0.9127
Enrollment					
Less than 250	0.164	0.0000	0.141	0.1677	0.1371
250–999	0.336	0.0000	0.187	0.1500	0.9997
1,000–1,999	0.198	0.0000	0.269	0.1063	-0.6724
2,000–4,999	**0.199**	**0.0000**	**0.265**	**0.0310**	**-2.1273**
5,000–9,999	**0.078**	**0.0000**	**0.117**	**0.0095**	**-4.1020**
1,000 or more	0.025	0.0000	0.022	0.0014	2.3194

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District Documentation Data File," 2003–04.

The frame and base-weighted respondent distributions were also compared for the district's urbanicity and student enrollment, but no significant and noteworthy differences were found.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found. Nevertheless, the overall response rate for districts in Vermont was below the 50 percent threshold and, as

[17] LEA refers to Local Education Agency.

a result, the district data for that state will not be reported. Data for Vermont will be included in the total and footnoted.

Footnote: ‡ Reporting standards not met. The base-weighted unit response rate was below 50 percent.

Summary for Public Schools

The overall response rate for public schools was 80.9 percent, requiring a closer examination of nonresponse on this file. The more detailed analysis was performed by state and the three primary reporting characteristics (i.e., school level, urbanicity, and enrollment).

The overall response rate for 33 states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. *The results of this analysis identified 10 out of 396 comparisons that were significant and noteworthy based upon the previously identified criteria.*

While the proportion of respondents from California public schools differed significantly from the proportion on the frame, there were no significant differences in the distribution of the reporting characteristics. This suggests that there is no substantial evidence of a nonresponse bias for California public schools. Nine states did have noteworthy differences in the distribution of respondents within urbanicity or enrollment. A selection of these is presented in table 25.

Among the reporting characteristics, there were significant and noteworthy differences for two of the enrollment categories: public schools with 100–199 students and 750–999 students. Neither of these enrollment categories was identified as noteworthy and significant within the states.

Table 25. Base-weighted public school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2003–04

State and reporting characteristic	Frame distribution (adjusted for ineligible units) and standard error		Interviewed sample distribution and standard error		*t* statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Alaska					
School level					
Elementary	0.369	0.0000	0.429	0.0353	1.7022
Secondary	0.172	0.0126	0.169	0.0254	-0.1015
Combined	0.459	0.0366	0.402	0.0460	-0.9742
Urbanicity					
Central city	**0.196**	**0.0000**	**0.263**	**0.0325**	**2.0582**
Urban fringe or large town	0.060	0.0123	0.029	0.0103	-1.9438
Small town or rural	0.745	0.0386	0.709	0.0555	-0.5293
Enrollment					
Less than 100	0.397	0.0338	0.281	0.0548	-1.8009
100–199	0.154	0.0204	0.169	0.0324	0.3859
200–499	**0.315**	**0.0127**	**0.409**	**0.0387**	**2.2874**
500–749	0.084	0.0000	0.092	0.0121	0.6314
750–999	0.020	0.0000	0.028	0.0076	1.0050
1,000 or more	0.030	0.0000	0.023	0.0043	-1.6727
California					
School level					
Elementary	0.701	0.0079	0.677	0.0307	-0.7679
Secondary	0.259	0.0047	0.284	0.0376	0.6718
Combined	0.040	0.0014	0.039	0.0030	-0.3297
Enrollment					
Less than 100	0.111	0.0009	0.134	0.0394	0.5621
100–199	0.054	0.0065	0.058	0.0159	0.2251
200–499	0.235	0.0041	0.226	0.0283	-0.2897
500–749	0.254	0.0027	0.227	0.0280	-0.9475
750–999	0.175	0.0043	0.193	0.0218	0.8202
1,000 or more	0.172	0.0005	0.162	0.0188	-0.4961
Georgia					
School level					
Elementary	0.808	0.0229	0.809	0.0274	0.0263
Secondary	0.172	0.0064	0.170	0.0133	-0.0908
Combined	0.020	0.0004	0.021	0.0016	0.2410
Urbanicity					
Central city	0.158	0.0117	0.132	0.0194	-1.1661
Urban fringe or large town	**0.500**	**0.0057**	**0.571**	**0.0231**	**2.9881**
Small town or rural	0.343	0.0199	0.298	0.0219	-1.5090
Enrollment					
Less than 100	0.008	0.0000	0.016	0.0109	0.7468
100–199	0.013	0.0206	0.009	0.0045	-0.2223
200–499	0.249	0.0114	0.288	0.0431	0.8869
500–749	0.349	0.0000	0.307	0.0540	-0.7791
750–999	0.180	0.0024	0.186	0.0386	0.1300
1,000 or more	0.201	0.0000	0.196	0.0305	-0.1920

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Documentation Data File," 2003–04.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for BIA-Funded Schools

The overall response rate for BIA-funded schools was 89.3 percent. BIA-funded schools were stratified by state groupings: Arizona, New Mexico, South Dakota, and all other states. Only one category, "All Other States," had a response rate of less than 85 percent. Comparisons of the frame distribution to the base-weighted respondent distribution for the state groupings and reporting characteristics revealed that none were both significant and noteworthy.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for Private Schools

The overall response rate for private schools was 75.8 percent, requiring a closer examination of nonresponse on this file. A more detailed analysis was performed by strata and the three primary reporting characteristics (i.e., school level, urbanicity, and enrollment).

The overall response rate for 15 strata (including the "missing" category) was below 85 percent. For these strata, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 5 out of 165 comparisons that were significant and noteworthy based upon the previously identified criteria. These differences were found in the Catholic—diocesan and other religious strata (table 26).

Among the reporting characteristics, there was one significant and noteworthy difference between the frame and base-weighted distribution of respondents—for small town or rural private schools.

Table 26. Base-weighted private school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2003–04

Stratum and reporting characteristic	Frame distribution (adjusted for ineligible units) and standard error		Interviewed sample distribution and standard error		*t* statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
All strata					
Urbanicity					
Central city	0.345	0.0039	0.320	0.0100	2.3375
Urban fringe or large town	0.473	0.0047	0.467	0.0104	0.5071
Small town or rural	**0.183**	**0.0036**	**0.214**	**0.0102**	**-2.8556**
Catholic—diocesan					
School level					
Elementary	0.776	0.0054	0.756	0.0144	1.2970
Secondary	0.171	0.0056	0.180	0.0115	-0.7130
Combined	0.054	0.0014	0.064	0.0090	-1.1830
Urbanicity					
Central city	**0.415**	**0.0046**	**0.351**	**0.0228**	**2.7651**
Urban fringe or large town	0.455	0.0047	0.469	0.0277	-0.4954
Small town or rural	**0.130**	**0.0048**	**0.181**	**0.0224**	**-2.1965**
Enrollment					
Less than 100	0.096	0.0047	0.149	0.0219	-2.3340
100–199	0.254	0.0048	0.284	0.0277	-1.0500
200–499	**0.485**	**0.0048**	**0.415**	**0.0253**	**2.7180**
500–749	0.104	0.0022	0.082	0.0134	1.6610
750 or more	0.061	0.0014	0.072	0.0098	-1.0770
Other religious					
School level					
Elementary	0.468	0.0124	0.484	0.0183	-0.7350
Secondary	0.035	0.0074	0.039	0.0065	-0.3735
Combined	0.497	0.0117	0.477	0.0183	0.9200
Urbanicity					
Central city	**0.314**	**0.0096**	**0.250**	**0.0208**	**2.7912**
Urban fringe or large town	0.473	0.0115	0.483	0.0247	-0.3718
Small town or rural	**0.214**	**0.0109**	**0.268**	**0.0249**	**-1.9825**
Enrollment					
Less than 100	0.519	0.0127	0.567	0.0237	-1.7810
100–199	0.245	0.0086	0.219	0.0199	1.1745
200–499	0.173	0.0042	0.167	0.0162	0.4028
500–749	0.038	0.0014	0.032	0.0067	0.9046
750 or more	0.025	0.0012	0.015	0.0041	2.2552

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Documentation Data File," 2003–04.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for Public School Principals

The overall response rate for public school principals was 82.3 percent, requiring a closer examination of nonresponse on this file. The more detailed analysis was performed by state and the three primary reporting characteristics (i.e., school level, urbanicity, and enrollment).

The overall response rate for 29 states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 7 out of 348 comparisons that were significant and noteworthy based upon the previously identified criteria.

While the proportion of respondents from California public schools differed significantly from the proportion on the frame, only central city public school principals differed significantly from the proportion on the frame. Noteworthy differences were found in five other states. A selection of these is presented in table 27. Among the reporting characteristics, there were significant and noteworthy differences between the frame and base-weighted respondents for principals from combined schools and schools in central cities.

Table 27. Base-weighted public school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2003–04

State and reporting characteristic	Frame distribution (adjusted for ineligible units) and standard error		Interviewed sample distribution and standard error		*t* statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
California					
School level					
Elementary	0.702	0.0080	0.689	0.0277	-0.4313
Secondary	0.258	0.0060	0.275	0.0376	0.4358
Combined	0.040	0.0014	0.036	0.0030	-1.2472
Urbanicity					
Central city	**0.319**	**0.0052**	**0.280**	**0.0190**	**-1.9820**
Urban fringe or large town	0.598	0.0083	0.608	0.0410	0.2372
Small town or rural	0.083	0.0029	0.112	0.0166	1.7250
Enrollment					
Less than 100	0.111	0.0009	0.111	0.0350	-0.0011
100–199	0.054	0.0065	0.065	0.0176	0.5860
200–499	0.235	0.0041	0.247	0.0284	0.4256
500–749	0.254	0.0027	0.220	0.0277	-1.2248
750–999	0.175	0.0059	0.194	0.0214	0.8724
1,000 or more	0.172	0.0018	0.163	0.0187	-0.4515
Virginia					
School level					
Elementary	0.718	0.0059	0.751	0.0289	1.1245
Secondary	0.214	0.0032	0.219	0.0236	0.1949
Combined	0.068	0.0067	0.030	0.0082	-3.5546
Urbanicity					
Central city	**0.238**	**0.0059**	**0.191**	**0.0224**	**-2.0141**
Urban fringe or large town	0.480	0.0059	0.428	0.0295	-1.7325
Small town or rural	**0.282**	**0.0046**	**0.381**	**0.0203**	**4.7547**
Enrollment					
Less than 100	0.029	0.0000			
100–199	0.050	0.0000	0.088	0.0297	1.2663
200–499	0.406	0.0067	0.399	0.0442	-0.1456
500–749	0.280	0.0059	0.294	0.0376	0.3511
750–999	0.109	0.0000	0.099	0.0227	-0.4701
1,000 or more	0.126	0.0032	0.121	0.0202	-0.2517

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Principal Documentation Data File," 2003–04.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for Private School Principals

The overall response rate for private school principals was 74.9 percent, requiring a closer examination of nonresponse on this file. The more detailed analysis was performed by strata and the three primary reporting characteristics (i.e., school level, urbanicity, and enrollment).

The overall response rate for 16 strata (including the "missing" category) was below 85 percent and the response rate for the Amish strata was 40.7 percent. For these strata, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. Overall, there were no comparisons that were both significant and noteworthy for each strata and reporting characteristic. *Examining the strata by school level, urbanicity, and enrollment, identified five comparisons out of a total of 154 that were significant and noteworthy based upon the previously identified criteria.* The noteworthy differences occurred in three strata: Catholic—diocesan, Jewish, and other religious (table 28).

Among the reporting characteristics, there were no significant and noteworthy differences between the frame and base-weighted respondents for private school principals.

Table 28. Base-weighted private school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2003–04

Stratum and reporting characteristic	Frame distribution (adjusted for ineligible units) and standard error		Interviewed sample distribution and standard error		*t* statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Catholic—diocesan					
School level					
Elementary	0.776	0.0054	0.755	0.0131	1.4333
Secondary	0.171	0.0056	0.178	0.0101	-0.5815
Combined	0.054	0.0014	0.067	0.0075	-1.7759
Urbanicity					
Central city	**0.415**	**0.0046**	**0.345**	**0.0224**	**3.0801**
Urban fringe or large town	0.455	0.0047	0.474	0.0268	-0.7251
Small town or rural	**0.130**	**0.0048**	**0.181**	**0.0222**	**-2.2236**
Enrollment					
Less than 100	0.096	0.0047	0.138	0.0210	-1.9255
100–199	0.254	0.0048	0.294	0.0269	-1.4761
200–499	**0.485**	**0.0048**	**0.416**	**0.0254**	**2.6490**
500–749	0.104	0.0022	0.084	0.0142	1.3917
750 or more	0.061	0.0014	0.067	0.0092	-0.7024
Jewish					
School level					
Elementary	**0.485**	**0.0200**	**0.635**	**0.0387**	**-3.4593**
Secondary	0.277	0.0131	0.159	0.0389	2.8696
Combined	0.239	0.0243	0.206	0.0310	0.8358
Urbanicity					
Central city	0.554	0.0198	0.551	0.0580	0.0429
Urban fringe or large town	0.441	0.0199	0.449	0.0580	-0.1283
Small town or rural	0.005	0.0002	0.000	0.0000	23.9285
Enrollment					
Less than 100	0.331	0.0190	0.285	0.0582	0.7632
100–199	0.239	0.0100	0.195	0.0502	0.8663
200–499	0.288	0.0275	0.360	0.0575	-1.1305
500–749	0.085	0.0036	0.117	0.0285	-1.1025
750 or more	0.056	0.0023	0.044	0.0182	0.6869
Other religious					
School level					
Elementary	0.469	0.0135	0.481	0.0174	-0.5726
Secondary	0.036	0.0075	0.036	0.0058	-0.0489
Combined	0.496	0.0125	0.482	0.0171	0.6185
Urbanicity					
Central city	**0.315**	**0.0108**	**0.252**	**0.0216**	**2.6179**
Urban fringe or large town	0.474	0.0116	0.498	0.0258	-0.8209
Small town or rural	0.211	0.0118	0.251	0.0247	-1.4646
Enrollment					
Less than 100	0.513	0.0133	0.560	0.0244	-1.7038
100–199	0.248	0.0089	0.222	0.0206	1.1735
200–499	0.176	0.0044	0.170	0.0162	0.3755
500–749	0.038	0.0014	0.031	0.0069	1.1035
750 or more	0.025	0.0012	0.018	0.0049	1.3789

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Principal Documentation Data File," 2003–04.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found. Nevertheless, the overall response rate for principals in the Amish strata was below the 50 percent threshold and, as a result, the data for that stratum will not be reported separately. Data for Amish school principals will be included in the total and footnoted.

Footnote: ‡ Reporting standards not met. The base-weighted unit response rate was below 50 percent.

Summary for BIA-Funded School Principals

The overall response rate for BIA-funded school principals was 90.4 percent. Comparisons of the frame distribution to the base-weighted respondent distribution for state groupings, school level, enrollment, and urbanicity showed that none of the comparisons were both significant and noteworthy, because all significant cells had fewer than 30 interviews.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for Public School Library Media Centers

The overall response rate for public school library media centers was 76.9 percent, requiring a closer examination of nonresponse on this file. The more detailed analysis was performed by state and the three primary reporting characteristics (i.e., school level, urbanicity, and enrollment).

The overall response rate for 40 states was below 85 percent and the response rate for the District of Columbia was 48.8 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 26 out of 480 comparisons that were significant and noteworthy based upon the previously identified criteria. The noteworthy differences occurred in 15 states. Selected states are highlighted below in table 29.

Among the reporting characteristics, there were significant and noteworthy differences between the frame and base-weighted respondents for library media centers in combined schools, central city and small town/rural schools, and schools in the lowest and highest enrollment categories (less than 100 and 1,000 or more).

Table 29. Base-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2003–04

State and reporting characteristic	Frame distribution (adjusted for ineligible units) and standard error		Interviewed sample distribution and standard error		*t* statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Alaska					
School level					
Elementary	**0.374**	**0.0124**	**0.461**	**0.0410**	**2.0334**
Secondary	0.162	0.0177	0.145	0.0160	-0.6969
Combined	0.464	0.0391	0.394	0.0460	-1.1686
Urbanicity					
Central city	**0.194**	**0.0078**	**0.285**	**0.0387**	**2.2973**
Urban fringe or large town	0.061	0.0126	0.049	0.0099	-0.7645
Small town or rural	0.744	0.0431	0.666	0.0533	-1.1440

See notes at end of table.

Table 29. Base-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2003–04—Continued

State and reporting characteristic	Frame distribution (adjusted for ineligible units) and standard error		Interviewed sample distribution and standard error		*t* statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Alaska					
Enrollment					
Less than 100	0.393	0.0419	0.188	0.0454	-3.3102
100–199	0.155	0.0203	0.176	0.0371	0.4844
200–499	**0.317**	**0.0154**	**0.454**	**0.0466**	**2.7826**
500–749	0.084	0.0066	0.118	0.0146	2.1475
750–999	0.020	0.0000	0.033	0.0091	1.4050
1,000 or more	0.031	0.0000	0.031	0.0054	0.0151
Arizona					
School level					
Elementary	**0.649**	**0.0269**	**0.761**	**0.0327**	**2.6642**
Secondary	**0.251**	**0.0147**	**0.198**	**0.0124**	**-2.7474**
Combined	0.101	0.0183	0.041	0.0144	-2.5691
Urbanicity					
Central city	0.481	0.0284	0.460	0.0340	-0.4907
Urban fringe or large town	0.329	0.0111	0.317	0.0264	-0.4324
Small town or rural	0.190	0.0220	0.224	0.0180	1.1990
Enrollment					
Less than 100	0.179	0.0342	0.027	0.0141	-4.0891
100–199	0.119	0.0136	0.057	0.0284	-1.9733
200–499	0.230	0.0084	0.308	0.0434	1.7673
500–749	0.228	0.0053	0.302	0.0420	1.7535
750–999	0.130	0.0013	0.131	0.0340	0.0312
1,000 or more	**0.115**	**0.0014**	**0.175**	**0.0226**	**2.6455**
Colorado					
School level					
Elementary	0.702	0.0150	0.737	0.0474	0.7127
Secondary	0.211	0.0152	0.196	0.0110	-0.7968
Combined	0.088	0.0129	0.067	0.0086	-1.3240
Urbanicity					
Central city	0.289	0.0085	0.319	0.0302	0.9702
Urban fringe or large town	0.440	0.0133	0.378	0.0361	-1.6056
Small town or rural	0.272	0.0221	0.303	0.0337	0.7786
Enrollment					
Less than 100	0.081	0.0244	0.037	0.0233	-1.3110
100–199	0.102	0.0077	0.069	0.0238	-1.3338
200–499	0.441	0.0093	0.487	0.0490	0.9105
500–749	0.246	0.0019	0.255	0.0333	0.2747
750–999	0.050	0.0000	0.045	0.0170	-0.2616
1,000 or more	**0.079**	**0.0000**	**0.107**	**0.0138**	**1.9939**

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Library Media Center Documentation Data File," 2003–04.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found. Nevertheless, the overall response rate for public school library media centers in the District of Columbia

was below the 50 percent threshold and, as a result, the library data for that state will not be reported. Data for the District of Columbia will be included in the total and footnoted.

Footnote: ‡ Reporting standards not met. The base-weighted unit response rate was below 50 percent.

Summary for BIA-Funded School Library Media Centers

The overall response rate for BIA-funded school library media centers was 81.9 percent. Though this falls below the desired 85 percent response rate, a more detailed analysis of selected states, school level, enrollment, and urbanicity showed that none of the base-weight frame to respondent distribution comparisons was both significant and noteworthy. All of the significant comparisons can be explained by having fewer than 30 interviews.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for Public School Teachers

The overall response rate for public school teachers was 86.0 percent. The more detailed analysis was performed by state and the three primary reporting characteristics (i.e., school level, urbanicity, and enrollment).

The overall response rate for 19 states was below 85 percent and the response rate for the District of Columbia was 76.5 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. *The results of this analysis identified 15 out of 871 comparisons that were significant and noteworthy based upon the previously identified criteria*.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for Private School Teachers

The overall response rate for private school teachers was 85.4 percent.

The overall response rate for nine strata (not including the "missing" category) was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. *None of the comparisons were significant and noteworthy based upon the previously identified criteria*.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for BIA-Funded School Teachers

The overall response rate for BIA-funded school teachers was 92.3 percent. Comparisons of the frame distribution to the base-weighted respondent distribution by state groupings, school level, enrollment, and urbanicity showed that one of the comparisons was significant and noteworthy. The proportion of teachers from BIA-funded schools located in states other than Arizona, New Mexico, and South Dakota who responded to the survey was significantly less than the proportion on the frame.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for the Public School Teacher Listing Form

The overall response rate for the public school Teacher Listing Form was 89.2 percent. The overall response rate for nine states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. *The results of this analysis identified 5 out of 104 comparisons that were significant and noteworthy based upon the previously identified criteria*.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for the Private School Teacher Listing Form

The overall response rate for the private school Teacher Listing Form was 85.2 percent. The overall response rate for seven strata (not including the "missing" category) was below 85 percent. The stratum with the lowest response rate, at 62.8 percent, was Jewish. However, none of the analysis variables within Jewish schools had response rates significantly different than the overall unit response rate.

For these strata, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. *Four out of 74 comparisons were significant and noteworthy based upon the previously identified criteria*.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Summary for the BIA-Funded School Teacher Listing Form

The overall response rate for the BIA-funded school Teacher Listing Form was 94.0 percent. Comparisons of the frame distribution to the base-weighted respondent distribution by state grouping, school level, enrollment, and urbanicity showed that none of the comparisons were both significant and noteworthy.

***Conclusion/Course of Action*.** Based on this analysis, evidence of substantial bias was not found.

Item Nonresponse Bias Analysis

Overview of Methodology

The item bias analysis examined the overall response rate for each item on each file.[18] The analysis included examining the item response rates by state for public sector files, affiliation stratum for private sector files, state groupings for BIA sector files, and by the reporting characteristics (i.e., urbanicity, school level, and enrollment) for all files using the final weight for all in-scope sampled units. If the overall response rate for the item fell below 70 percent, the item will be footnoted in National Center for Education Statistics (NCES) publications with "Item response rate is below 70 percent" as a method of cautioning the user that the low item response rate introduces some potential for bias in the imputation procedure. For any state, affiliation stratum, or state grouping where the item response rate was less than 85 percent, a more detailed analysis was done by the reporting characteristics. The results were

[18] For public school districts, screening items used to determine a district's eligibility for the survey (A1–A4) or whether the district's physical location or street address were different than what was presented on the survey cover (C1) were excluded from the analysis. The screening items excluded were used to verify that the respondent was a district and whether the district was still in operation, had the correct grade range, or had merged with another district.

highlighted if that particular cell had a significantly higher or lower response rate than the file as a whole and bolded if the difference was noteworthy. A noteworthy difference met the following conditions:

- The difference relative to the overall response rate for the particular item was greater than 10 percent.
- The absolute difference was greater than one percentage point.
- The coefficient of variation was less than 15 percent.
- The cell had at least 30 interviews.

Table 30 presents the number of items by response rate for each data file. Of particular concern are the items with an overall response rate below 70 percent. These items are listed in exhibit 4.

Table 30. Number of questionnaire items, by response rate category and data file: 2003–04

Data file	Total items	Items 95 percent and above	Items between 85 and 94 percent	Items between 70 and 84 percent	Items below 70 percent
Public School District	216	84	112	16	4
Public School	219	95	105	19	0
BIA School[1]	351	93	153	92	13
Private School	335	120	180	31	4
Public School Principal	202	184	7	11	0
BIA School Principal[1]	202	80	107	4	11
Private School Principal	167	161	6	0	0
Public School Library Media Center	98	73	22	3	0
BIA School Library Media Center[1]	97	37	50	10	0
Public School Teacher	294	190	74	20	10
BIA School Teacher[1]	296	97	141	49	9
Private School Teacher	307	183	99	21	4

[1] BIA refers to the Bureau of Indian Affairs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, BIA School, Private School, Public School Principal, BIA School Principal, Private School Principal, Public School Teacher, BIA School Teacher, Private School Teacher, Public School Library Media Center, and BIA School Library Media Center Documentation Data Files," 2003–04.

Exhibit 4. Items with a response rate below 70 percent, by data file: 2003–04

Data file	Item
Public School District	Item 58c: Years of computer science instruction required for graduation
	Item 58f: Years of foreign language instruction required for graduation
	Item 65a: General district operating funds used for teacher professional development
	Item 66d: Pay incentives used to recruit or retain teachers in less desirable locations
BIA School[1]	Item 4: Number of male students enrolled in the school
	Item 78a: General elementary training available to teachers at no cost to cover anticipated shortages
	Item 78b: Special education training available to teachers at no cost to cover anticipated shortages
	Item 78c: English training available to teachers at no cost to cover anticipated shortages
	Item 78d: Social studies training available to teachers at no cost to cover anticipated shortages
	Item 78e: Computer science training available to teachers at no cost to cover anticipated shortages
	Item 78f: Mathematics training available to teachers at no cost to cover anticipated shortages
	Item 78g: Physical science training available to teachers at no cost to cover anticipated shortages
	Item 78h: Biology training available to teachers at no cost to cover anticipated shortages
	Item 78i: English as a second language training available to teachers at no cost to cover anticipated shortages
	Item 78j: Foreign language training available to teachers at no cost to cover anticipated shortages
	Item 78k: Music or art training available to teachers at no cost to cover anticipated shortages
	Item 78l: Vocational education training available to teachers at no cost to cover anticipated shortages
Private School	Item 5f: Total enrollment
	Item 23e: Has this school been accredited by another organization
	Item 29c: Years of computer science instruction required for graduation
	Item 62-high: Highest annual teacher's base salary
BIA School Principal[1]	Item 29a: Received additional resources that support school-wide activities
	Item 29b: Received additional resources to distribute to teachers
	Item 29c: Received nonmonetary recognition
	Item 30a: Required to write a program improvement plan
	Item 30b: Put on an evaluation cycle with required improvement
	Item 30c: Provided with additional resources to support instructional improvement
	Item 30d: Penalized by reduction in resources
	Item 30e: Principal replaced
	Item 30f: Reconstituted or taken over
	Item 30g: Required to provide supplemental educational services
	Item 30h: Required to provide a school choice program
Public School Teacher	Item 19_8subj: Subject matter taught in 8th class
	Item 19_8grade: Grade level of 8th class taught
	Item 19_8enrl: Enrollment of 8th class taught
	Item 19_9subj: Subject matter taught in 9th class
	Item 19_9grade: Grade level of 9th class taught
	Item 19_9enrl: Enrollment of 9th class taught

See notes at end of exhibit.

Exhibit 4. Items with a response rate below 70 percent, by data file: 2003–04—Continued

Data file	Item
Private School Teacher	Item 19_10subj: Subject matter taught in 10th class
	Item 19_10grade: Grade level of 10th class taught
	Item 19_10enrl: Enrollment of 10th class taught
	Item 23_d7_year: Year doctorate earned
BIA School Teacher[1]	Item 4: How much time worked as a teacher at this school
	Item 6e: Status of teaching position
	Item 19_10subj: Subject matter taught in 10th class
	Item 19_10enrl: Enrollment of 10th class
	Item 23_d5_year: Year educational specialist degree earned
	Item 23_b7_code: Field of study for doctorate
	Item 23_d7_year: Year doctorate earned
	Item 31_f2_grade: Grade level for additional content area certified
	Item 31_g1_code: Subject matter of additional content area certified
Private School Teacher	Item 19_10grade: Subject matter taught in 10th class
	Item: 19_10enrl: Enrollment of 10th class taught
	Item 32_g1_code: Subject matter of additional content area certified
	Item 32_g2_grade: Grade level of additional content area certified

[1] BIA refers to the Bureau of Indian Affairs.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, BIA School, Private School, BIA School Principal, Public School Teacher, BIA School Teacher, and Private School Teacher Documentation Data Files," 2003–04.

Summary of Conclusions

Public School Districts. Twenty items had a response rate below 85 percent, requiring a closer examination. Of those items, four had a response rate below 70 percent, necessitating a footnote. The closer examination of response rates revealed no substantial evidence of a bias.

Public Schools. Nineteen items had a response rate below 85 percent, requiring a closer examination. Of those items, all were above 70 percent, so no footnoting was necessary. The closer examination of response rates revealed no substantial evidence of a bias.

BIA-Funded Schools. One hundred five items had a response rate below 85 percent, requiring a closer examination. Of those items, thirteen were below 70 percent, necessitating a footnote. The closer examination of response rates revealed no substantial evidence of a bias, primarily because most of the detailed analysis cells had fewer than 30 interviews.

Private Schools. Thirty-five items had a response rate below 85 percent, requiring a closer examination. Of those items, four were below 70 percent, necessitating a footnote. The closer examination of response rates revealed no substantial evidence of a bias.

Public School Principals. Eleven items had a response rate below 85 percent, requiring a closer examination. All of those items had a response rate above 70 percent, so no footnoting was necessary. The closer examination of response rates revealed no substantial evidence of a bias.

BIA-Funded School Principals. Fifteen items had a response rate below 85 percent, requiring a closer examination. Eleven of these items had a response rate below 70 percent, necessitating a footnote. The

closer examination of response rates revealed no substantial evidence of a bias, primarily because most of the analysis cells had fewer than 30 interviews.

***Private School Principals*.** No items had a response rate below 85 percent, so no closer examination was needed.

***Public School Library Media Centers*.** Three items had a response rate below 85 percent, requiring a closer examination. All of the items had a response rate above 70 percent, so no footnoting was necessary. A closer examination of response rates revealed no substantial evidence of a bias.

***BIA-Funded School Library Media Centers*.** Ten items had a response rate below 85 percent, requiring a closer examination. All of the items had a response rate above 70 percent, so no footnoting was necessary. A closer examination of the response rates revealed no substantial evidence of a bias.

***Public School Teachers*.** Thirty items had a response rate below 85 percent, necessitating a closer examination. Ten items had a response rate below 70 percent requiring a footnote. A closer examination of the response rates revealed no substantial evidence of a bias.

***BIA-Funded School Teachers*.** Fifty-eight items had a response rate below 85 percent, requiring a closer examination. Nine items had a response rate below 70 percent requiring a footnote. A closer examination of the response rates revealed no substantial evidence of a bias, primarily because most of the cells had fewer than 30 interviews.

***Private School Teachers*.** Twenty-five items had a response rate below 85 percent, requiring a closer examination. Four items had a response rate below 70 percent, necessitating a footnote. A closer examination of response rates revealed no substantial evidence of a bias.

Chapter 7. Data Processing

Once the 2003–04 Schools and Staffing Survey (SASS) data collection was completed, data processing began. Census Bureau field representatives, who were responsible for all of the data collection at the sampled schools, were also responsible for the first phase of data processing. This involved using the Regional Office Systems Control (ROSCO) system to track cases, as well as assign an outcome code to each one. Once this was completed, all cases were shipped to the Census Bureau clerical processing staff in Jeffersonville, Indiana. There, the cases were assigned a check-in code that indicated their status, and the data from completed questionnaires were captured and sent to Census Bureau analysts in reformatted datasets. Census Bureau analysts were responsible for resolving outcome codes, conducting preliminary data review, and assigning the preliminary interview status. They performed a series of computer edits on the data to identify inconsistencies, assigned a final interview status to each case, and imputed items that were still "not-answered." Up to this point, all data were processed and split into data files by questionnaire. The final step of data processing was to split the questionnaire datasets up into 12 final files by respondent type. All tables in this chapter contain data by final file, not questionnaire.

Questionnaire Check-in

School district questionnaires were returned to the Census Bureau Regional Offices. The school district questionnaires were checked in and tracked at the Regional Offices using a specially designed database. Field representatives had discretion over the way in which respondents returned their forms. The field representatives could arrange to pick up completed questionnaires at the school or could provide postage-paid envelopes for the schools to mail their completed questionnaires to the Regional Office. In both cases, the school-level forms were checked in and tracked using the ROSCO system, a system that interacted with a case management system on the field representatives' laptops. Field staff used ROSCO to assign an outcome code to each case. The three outcome codes were completed interview, out-of-scope, and noninterview.

Questionnaires were assigned outcome codes and edited for critical items. (See exhibit 5.) Critical items are those that must be answered in order for a questionnaire to be considered completed. If a critical item was missing, the Regional Office supervisor contacted the field representative or respondent directly to obtain the data. After editing the school district questionnaires, field staff grouped them into batches of 100 and shipped all complete and incomplete interviews to the clerical processing staff in Jeffersonville, Indiana, where data keying took place. The remaining SASS questionnaires that were complete interviews were grouped into batches of 100 by questionnaire type and shipped to the same clerical processing staff.

Upon receipt, clerical processing staff assigned a check-in code (separate from the outcome code previously assigned by field staff) to each questionnaire to indicate its status. All school district questionnaires were assigned a check-in code, but only complete interviews were assigned a check-in code for the remaining SASS forms. The code was entered into the Automated Tracking And Control (ATAC) system. The questionnaires were then grouped into batches by type and interview status (i.e., interviews, noninterviews, and out-of-scope for the survey) for data capture.

Exhibit 5. Critical item editing table, by questionnaire: 2003–04

Questionnaire	Page	Item	Source code[1]	Description
School District— 2 critical items	4	3	0051	Total number of K–12 students was reported (number should be greater than 0)
	6	8	0064	Total number of full-time equivalent teachers was reported (number should be greater than 0)
Principal— 9 critical items, 6 required	4	1 or 2	0025 or 0026	Years as principal of this school OR years as principal of any other school was reported
	And at least 5 of the following items should have data:			
	4	3	0027	Teaching experience before becoming a principal
	4	4	0028	Teaching experience since becoming principal
	5	6a–g	0030–0036	Prior positions held by the principal
	6	9	0039	Highest degree earned by the principal
	26	41	0254	Gender
	26	42	0255	Hispanic origin
	26	43	0256–0260	Race
	26	44	0262	Year of birth
Private School Principal— 9 critical items, 6 required	4	1 or 2	0025 or 0026	Years as principal of this school OR years as principal of any other school was answered
	And at least 5 of the following items should have data:			
	4	3	0027	Teaching experience before becoming a principal
	4	4	0028	Teaching experience since becoming principal
	5	6a–g	0030–0036	Prior positions held by the principal
	6	8	0039	Highest degree earned by the principal
	22	35	0254	Gender
	22	36	0255	Hispanic origin
	22	37a	0256–0260	Race
	22	38	0262	Year of birth
School— 2 critical items	4	2	0414	Number of K–12 students was reported (number should be greater than 0)
	15	34	0513 or 0514	Number of full- and/or part-time teachers was reported
Private School— 2 critical items	5	2	0734	Number of K–12 students was reported (number should be greater than 0)
	15	24	0513, 791–795	Number of full- and/or part-time teachers was reported
Unified School— 2 critical items	4	2	0414	Number of K–12 students was reported (number should be greater than 0)
	22	51	0513 or 0514	Number of full- and/or part-time teachers was reported
Teacher and Private School Teacher— 7 critical items, 4 required	6	7 or 8	0034 or 0035	Year began teaching at this school OR at any school was reported
	8	11	0051–0065	Listed teaching at least one grade
	One of these two items:			
	9	15	0069 or 5069	Main teaching assignment at the school was reported
	11	17	0075 or 5075	
	And at least one of the following questions answered:			
	13	20a	0116	Bachelor's degree
	14	22a	0123	Master's degree
	15	23	0127	Other degrees

See notes at end of exhibit.

Exhibit 5. Critical item editing table, by questionnaire: 2003–04—Continued

Questionnaire	Page	Item	Source code[1]	Description
School Library Media Center—2 critical items	4	2	0026	Total number of seats in the library was reported
	10	18a	0089	Total number of books in the library was reported

[1] Source codes are used to identify specific items on the SASS questionnaires. For each questionnaire item, the four-digit source code can be found to the left of the first answer choice.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, Bureau of Indian Affairs (BIA) School, Private School, Public School Principal, BIA School Principal, Private School Principal, Public School Teacher, BIA School Teacher, Private School Teacher, Public School Library Media Center, and BIA School Library Media Center Documentation Data Files," 2003–04.

Data Capture

The 2003–04 SASS data were captured (converted from paper to electronic format) using a combination of manual data keying and imaging technology. Manual data keying, used for most of the SASS questionnaires, was accomplished using a Key from Paper (KFP) data capture system. The KFP system was programmed to present screens of questionnaire items to data keying staff, who worked through each page of the questionnaire and keyed any entries into the appropriate fields on the screens. The KFP system performed various edits as the data were keyed. Imaging technology differs from KFP by first capturing an electronic image of each questionnaire page. Along with the image capture, data could be captured using Optical Mark Recognition (OMR). The OMR recognized the marked box (next to precoded items) or the written alphanumerical entry, and entered the appropriate data into the OMR database for that questionnaire. Alternatively, the images could be presented to data keying staff, who captured the data by keying any entries into the appropriate fields on the screens (similar to the KFP process).

All of the SASS questionnaires except for the public and private teacher questionnaires (including all SASS reinterview questionnaires) were captured utilizing the KFP system.[19] Prior to keying, KFP programs were developed for each questionnaire. Images of these forms were captured after data entry was completed. The image files were used during subsequent steps of data processing to view the actual questionnaires online. All KFP entries were 100 percent verified by the keying staff, meaning that each field was keyed twice and the results were compared automatically for discrepancies and, subsequently, verified. The verification during this operation allowed up to a 1 percent error on a field-to-field basis. Unacceptable batches of questionnaires (where there was more than a 1 percent error) were 100 percent verified a second time by keying staff. A more detailed discussion of data capture and results of the keying verification for all SASS questionnaires are provided in "Appendix O. Quality Assurance for Keying and Mailout Operations."

The data from SASS teacher questionnaires were captured using imaging technology and a combination of OMR and Key from Image (KFI). The precoded items (all items where the respondent answered by marking a box) on the SASS public and private school teacher questionnaires were captured utilizing OMR. All write-in fields (e.g., open-ended, numeric, and character fields) for these questionnaires were captured by the KFI process. OMR and KFI are both methods used by the Workflow and Image Processing System (WIPS), an automated data capture system.

When the SASS public and private school teacher questionnaires were received and checked in by the Census Bureau clerical processing staff, they were disassembled, and each duplex page was scanned. Images of each duplex page were created along with a data response file. The data response file was

[19] The Teacher Listing Form data were captured using the SASS Teacher Listing instrument.

processed through imaging recognition software at a 99 percent confidence level. If the recognition software was 99 percent certain that the box next to the precoded response field contained a valid mark, the entry was copied to an output file. If the response fell outside the confidence level, the imaged response was presented to a member of the keying staff. This member of the keying staff then had to interpret and key the data from the image of the questionnaire duplex page.

All of the open-ended items also were presented to members of the keying staff. All nonblank write-in KFI entries were 100 percent verified, meaning that each field was keyed twice, and the results were compared automatically for discrepancies and, subsequently, verified. The fields that were read as blank by the KFI system were verified at a 5 percent rate. That is, of the total number of write-in fields that were read as blanks for each item, 5 percent were verified a second time to verify that they were blank. The sample verification during this operation allowed a 1 percent error on a field-to-field basis. Unacceptable (sample verified) batches of questionnaires where there was more than a 1 percent error were 100 percent reverified by keying staff by referring back to the original survey. A more detailed discussion of data capture and results of the keying verification for all SASS teacher questionnaires are provided in "Appendix O. Quality Assurance for Keying and Mailout Operations."

The automated OMR and KFI data capture methods were chosen for the teacher forms because of the large quantity of questionnaires, as compared to the other SASS forms. Generally, it takes more time to program the automated OMR and KFI programs than it takes to program the KFP method. But the OMR captures data much faster than keying from paper, so the time savings from a large quantity of OMR data capture can offset the additional programming time for the operation.

Reformatting

After the SASS questionnaire data were captured, the output files were reformatted into SAS datasets in order to facilitate the remaining data processing and cleaning.

Outcome Code Resolution

Automation issues led to a number of problems with accurately recording outcome codes for the library media center, school, teacher, and principal questionnaires and the Teacher Listing Form. The problems fell into three distinct categories: teacher resampling, ROSCO to ATAC mismatches, and SASS Teacher Listing instrument to questionnaire mismatches.

Teacher Sampling Issues

Three types of errors occurred during the teacher sampling and data collection: teacher lists were resampled after they had been sampled once, teachers received questionnaires for invalid control numbers, and teacher questionnaires were swapped. A total of 5,045 teacher records, including 1,150 private school teacher records and 3,895 public school teacher records, required some form of reconciliation.

The teacher resampling occurred in about 40 schools because the Teacher Listing instrument, as originally released, allowed the field representative to reenter the listing of teachers after the sample of teachers was drawn. Additions or changes to the list of teachers forced the teacher sampling to be rerun and a new teacher sample to appear in place of the original one. Generally, the teacher questionnaires had already been distributed to the original sample, so the original sample was considered valid. To resolve this problem, names of teachers from the instrument were compared to names on the returned questionnaires. If most of the names within a school were nonmatches, then resampling was presumed to

have occurred. The questionnaire names were accepted as the valid sample provided they fit a valid sampling pattern and the listing information was corrected to be consistent with these sampled teachers. The resampling problem had minor implications for the sampling; primarily due to uncertainty in the identity of the nonresponding teachers and their specific listing information. The sampling problem also had implications for field follow-up, since field staff were unable to pursue the nonrespondents. Listing information for these teachers was imputed in order to complete the weighting procedure as described in chapter 9.

The second type of error occurred when the field representative had to conduct nonresponse follow-up on sampled teachers and, rather than using replacement labels and blank questionnaires to conduct this operation, the sampled teachers were provided with unused questionnaires from the sampling procedure. This resulted in the correct teachers being interviewed, but the wrong control number being included on the questionnaires. The control numbers were subsequently corrected for responding teachers. This problem had no implications for the integrity of the teacher sampling, because the identity of the correct sample was preserved in the automated case management system.

The third type of error occurred when questionnaires were distributed to the correct sample of teachers, but in the wrong order, resulting in a swapping of control numbers for the sampled teachers. Teacher names from the returned questionnaires were compared to the names from the Teacher Listing instrument. When swapping occurred, control numbers on the returned questionnaires were corrected to be consistent with the sampling. This problem had no implications for the integrity of the teacher sampling, since the identities of the correct sample of teachers were preserved in the automated case management system.

ROSCO to ATAC Mismatches

SASS utilized two distinct systems to track outcome codes for questionnaires. The ROSCO system was set up so that field representatives could update the status of each individual case using their laptop by recording when questionnaires were dropped off or picked up. When each questionnaire was received by the Regional Office, field staff would ensure that the form was a valid and completed interview and update the outcome code appropriately. In order to clear a case from the field representative's laptop to indicate that it was no longer active, the field representative needed to update the outcome code in ROSCO's case management and transmit the case to the Regional Office. The field representative would then transmit the case once again to remove the case from his or her laptop. Finally, the Regional Office would check the form out and send it to the centralized check-in facility in Jeffersonville, the Census Bureau's clerical processing staff. Problems within the ROSCO system caused some Regional Offices to intentionally miscode refusals as completed interviews, because it was the only way to remove the cases from the case management system in the field representatives' laptops. Only complete, in-scope interviews were supposed to be transmitted to the clerical processing staff (for all questionnaires other than the district).

The Census Bureau clerical processing staff used the ATAC check-in system for the questionnaires. Initially, each questionnaire, as identified by the respondent's control number, was assigned a check-in code of "99," which means that the form had not been received. As forms were received, the check-in code was changed to "01," meaning that the interview was received. The field staff mailed a number of forms that were not valid interviews to the clerical processing staff. In some cases, these were discovered before the form was checked in and each one was pulled from the batching process. The ATAC code for these cases remained a "99." In other cases, the invalid interviews were not discovered until keying; these interviews already had been assigned the ATAC code of "01." These cases were pulled from the keying process and their ATAC codes were changed to an invalid interview code, either a "97" (blank questionnaire, misc.) or "98" (received but not complete).

At the conclusion of data collection, Census Bureau analysts compared outcome codes from ROSCO to the check-in codes from ATAC and found many inconsistencies. For example, for some cases, the Regional Office indicated that a form had a ROSCO code of "201" (completed interview), but ATAC did not show that the clerical processing staff had received a completed form. Likewise, there were several cases where a completed form was received by the clerical processing staff, but the ROSCO outcome code indicated an out-of-scope, refusal, or other noninterview code. Census Bureau analysts worked to reconcile each of these cases and then updated the ROSCO and ATAC outcome codes accordingly. Approximately 800 cases went through this resolution process.

SASS Teacher Listing Instrument to Questionnaire Mismatches

After reconciliation was completed with regard to teacher sampling and the ROSCO/ATAC mismatches, Census Bureau analysts investigated inconsistencies that were discovered between outcome codes from the SASS Teacher Listing instrument and the outcome codes on the related forms (e.g., school, principal, or school library media center questionnaire). For example, some Teacher Listing Forms were coded as complete in ROSCO (code of "801"), but the corresponding teacher questionnaires had an outcome code of "233," meaning that the Teacher Listing Form had not been completed. This problem was most prevalent on the public and private teacher questionnaires. Over 2,000 individual cases went through this reconciliation.

The problem with inconsistencies between the Teacher Listing Form and questionnaire outcome codes was an artifact of the teacher resampling issue and of field representatives restarting cases. Investigation of the discrepancy showed that these cases were refusals that were converted into interviews at a later time. When a Teacher Listing Form was a refusal, all 20 of the teacher records were set to an outcome code of "233" (Teacher Listing Form not completed).[20] When a case was converted to an interview during follow-up, the teacher control numbers were assigned valid outcome codes. However, the unused teachers (20 records minus the teachers actually sampled) should have had their outcome codes changed to "247" (unused teacher), but many actually remained as "233."

Similar situations occurred with cases in which the district refused to participate in SASS (code of "923")[21] or the school had no principal (code of "252"). Census Bureau analysts reviewed each case by looking at the questionnaires (which were stored in image files), Teacher Listing instrument notes, and the output from the Teacher Listing instrument. A spreadsheet was created for each of the surveys. These spreadsheets included updated outcome codes for each inconsistent case. Upon completion of the file, analysts updated the outcome codes and reran the comparison. If a new set of mismatches was identified, then it was corrected in a new spreadsheet.

Primary Data Review and Preliminary Interview Status Recode (ISR) Classification

A data review process ran simultaneously with the outcome code resolution process. During data review, Census Bureau analysts examined frequencies of each data item in order to identify any suspicious values (e.g., if an item's response was outside the range of possible answer choices, or if an answer seemed unlikely given the respondent's other responses in the survey). For these, they looked at the image of the

[20] The case management system was initialized with 20 teacher records for each school. If the school was made out-of-scope in the Teacher Listing instrument, all cases associated with the school were made out-of-scope. If the school remained in scope, some of the 20 teacher records became sampled cases, and the remainders were coded as "unused teachers."

[21] In some cases, the school district refused to allow its schools to participate in SASS from the beginning. Later, some of these districts approved the survey.

questionnaire page to verify that the data were keyed correctly. Appropriate fixes were made to the data files. Analysts also reviewed questionnaires to ensure that key items were answered and that enough of the questionnaire items were completed. When analysts identified a potential problem, they verified that data were keyed correctly by reviewing an electronic image of the questionnaire. If data were missing, analysts attempted to recontact the school or use nonintrusive means of obtaining the data (e.g., school website, intraquestionnaire imputation).

The next step in data processing was the preliminary determination of each case's interview status recode (ISR); that is, whether each case was an interview, a noninterview, or was out-of-scope for SASS. In general, cases with an "out-of-scope" outcome code that had been assigned by the SASS Teacher Listing instrument were classified as out-of-scope (ISR = 3) for the preliminary ISR. Otherwise, cases with data entries were classified as completed interviews (ISR = 1). Cases with no data, cases lacking critical items, or cases where the district or school had refused for all respondents were classified as noninterviews (ISR = 2).

Computer Edits

After primary data review and the preliminary ISR classification, all files were submitted to a series of computer edits. These edits consisted of a range check, a consistency edit, and a blanking edit.

The first of the computer edits was the range check. The range check was used to delete entries that were outside the range of acceptable values that were set prior to the administration of SASS.

Actual changes to the data were made during the consistency edit. The consistency edits identified inconsistent entries within each case and, whenever possible, corrected them. If the inconsistencies could not be corrected, the entries were deleted. These inconsistencies occurred

- within items (e.g., if the response to the "Yes/No" part of School Questionnaire item 10—whether or not the school has one or more temporary buildings—was "No," but the capacity of temporary buildings was greater than zero for the second part of the item); or
- between items (e.g., if School Questionnaire item 56 indicated that the school does not participate in the National School Lunch Program, but one or more students were reported as approved for this program in item 57).

In addition, the consistency edit filled in some items where data were missing or incomplete by using other information on the same data record. For example, if some parts of School Questionnaire item 5—student counts by race—had entries, and the sum of those parts was greater than or equal to the school's total enrollment, then a zero entry was put in each part that was unanswered during the consistency edit.

The blanking edits deleted extraneous entries (e.g., in situations where skip patterns were not followed correctly) and assigned the "not answered" (.N) code to items that should have been answered but were not.

The only records that were put through the series of edits were those classified as interviews in the preliminary ISR. The tables in "Appendix P. Changes Made to Variables During the Computer Edit, by Data File," show the number of edit changes made to entries for each of the variables within each data file. For information about how the data files were created from the questionnaire data, see the final section, "Data Products," in this chapter. These changes are summarized in table 31 below.

Table 31. Summary of changes made to variables in the computer edit, by data file: 2003–04

Data file	Total number of cases	Total number of variables in questionnaire	Number of variables changed during edits by percent of records on which the variable was changed			
			None	1–15 percent	16–30 percent	More than 30 percent
Public School District	4,421	294	0	247	41	6
Public School Principal	8,143	202	0	189	13	0
Private School Principal	2,376	167	1	163	3	0
BIA School Principal[1]	146	202	20	165	6	11
Public School	7,991	239	0	197	20	22
Private School	2,456	402	0	338	57	7
BIA School[1]	145	238	15	118	63	42
Public School Teacher	43,244	326	15	307	4	0
Private School Teacher	7,979	349	15	331	3	0
BIA School Teacher[1]	624	326	18	289	19	0
Public School Library Media Center	7,229	99	1	88	7	3
BIA School Library Media Center[1]	124	99	5	74	17	3

[1] BIA refers to the Bureau of Indian Affairs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, BIA School, Private School, Public School Principal, BIA School Principal, Private School Principal, Public School Teacher, BIA School Teacher, Private School Teacher, Public School Library Media Center, and BIA School Library Media Center Documentation Data Files," 2003–04.

Final Interview Status Edit

After the range checks, consistency edits, and blanking edits were completed, the records were put through an edit to make a final determination of whether the case was eligible for the survey and, if so, whether sufficient data had been collected for the case to be classified as a completed interview. A final interview status recode (ISR) value was assigned to each case as a result of this edit.

1. **School District Questionnaire** (Form SASS-1A)
   - A case was classified as **out-of-scope** (ISR = 3) if
     - the district named on the questionnaire was no longer in operation; or
     - the district did not serve any students in grades 1–12 or comparable ungraded levels; or
     - the agency named on the questionnaire label was not a school district or other public education agency that employed elementary and/or secondary teachers.
   - A case was classified as an **interview** (ISR = 1) if
     - none of the conditions for out-of-scope cases was met; and
     - the number of students in K–12 and comparable ungraded levels in the district was reported (D0051); and
     - the total number of full-time equivalent (FTE) teachers was reported (D0064); and
     - There were data in at least 10 percent (28) of the remaining items.
   - A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

2. **Principal and Private School Principal Questionnaires** (Forms SASS-2A and -2B)
   - A case was classified as **out-of-scope** (ISR = 3) if
     - the school named on the questionnaire label was classified as out-of-scope; or
     - the school had no principal, headmaster, or administrator.
   - A case was classified as an **interview** (ISR = 1) if
     - neither of the conditions for out-of-scope cases was met; and
     - the respondent had reported the total number of years served as a principal of his/her current school as well as any other school (A0025) or the respondent had reported the total number of years served as principal at the school where she/he is currently principal (A0026); and
     - there were valid entries in at least five of these items:
       - Years of elementary or secondary teaching experience before becoming a principal (A0027)
       - Years of elementary or secondary teaching experience since becoming a principal (A0028)
       - School positions held prior to becoming a principal (A0030–A0036)
       - Highest degree earned (A0039)
       - Gender (A0254)
       - Hispanic origin (A0255)
       - Race (A0256–A0260)
       - Year of birth (A0262); and
     - there were data in at least 10 percent (19) of the remaining items.
   - A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

3. **School Questionnaire** (Form SASS-3A)
   - A case was classified as **out-of-scope** (ISR = 3) if
     - the school named on the questionnaire was not in operation during the 2003–04 school year; or
     - the school did not serve students in any of grades 1–12 or comparable ungraded levels; or
     - the institution named on the questionnaire was not a public school.
   - A case was classified as an **interview** (ISR = 1) if
     - none of the conditions for out-of-scope cases was met; and
     - the number of K–12 students was reported (S0414); and
     - the number of teachers working at the school was reported (S0513 and/or S0514) or the count of teachers from the Teacher Listing Form was greater than zero; and
     - there were data in at least 10 percent (23) of the remaining items.
   - A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

4. **Private School Questionnaire** (Form SASS-3B)
   - A case was classified as **out-of-scope** (ISR = 3) if
     - the school named on the questionnaire was not in operation during the 2003–04 school year; or
     - the school did not serve students in any of grades 1–12 or comparable ungraded levels; or
     - the institution named on the questionnaire was not a private school.
   - A case was classified as an **interview** (ISR = 1) if
     - none of the conditions for out-of-scope cases was met; and
     - the number of K–12 students was reported (S0734); and

  - the number of teachers working at the school was reported (S0795) or the count of teachers from the Teacher Listing Form was greater than zero; and
  - there were data in at least 10 percent (22) of the remaining items.
- A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

5. **Unified School Questionnaire** (Form SASS-3Y)
   - A case was classified as **out-of-scope** (ISR = 3) if
     - the school named on the questionnaire was not in operation during the 2003–04 school year; or
     - the school did not serve students in any of grades 1–12 or comparable ungraded levels; or
     - the institution named on the questionnaire was not a public or Bureau of Indian Affairs (BIA) funded school.
   - A case was classified as an **interview** (ISR = 1) if
     - none of the conditions for out-of-scope cases was met; and
     - the number of K–12 students was reported (S0414); and
     - the number of teachers working at the school was reported (S0513 and/or S0514) or the count of teachers from the Teacher Listing Form was greater than zero; and
     - there were data in at least 10 percent (22) of the remaining items.
   - A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

6. **Teacher and Private School Teacher Questionnaires** (Forms SASS-4A and -4B)
   - The school where the teacher was selected for sample was classified as out-of-scope by the Teacher Listing instrument. A case was classified as **out-of-scope** (ISR = 3) if
     - the teacher no longer worked at the school named on the questionnaire (e.g., he/she transferred to another school, left teaching, retired, or was deceased); or
     - the person named on the label was a short-term substitute teacher, student teacher, or teacher's aide; or
     - the person named on the label was not a teacher; or
     - the person named on the questionnaire label had never worked at the school;
     - the person named on the questionnaire worked at the school but did not teach any classes (e.g., he/she was an assistant principal, counselor, or librarian); or
     - the teacher moved out of the United States.
   - A case was classified as an **interview** (ISR = 1) if
     - none of the conditions for out-of-scope cases was met; and
     - the respondent reported either the year that he/she began teaching in the school where he/she was selected for the survey sample (T0034) or the year he/she began full- or part-time teaching at the elementary or secondary level (T0035); and
     - the respondent reported whether he/she had a college degree (T0116 or T0123 or T0127); and
     - the respondent reported his/her main teaching assignment field (T0069 or T0075); and
     - at least one grade level of students taught by the respondent was reported (T0051–T0065); and
     - there were data in at least 10 percent (34) of the remaining items (28 for the private school teachers).
   - A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

7. **School Library Media Center Questionnaire** (Form LS-1A)
   - A case was classified as **out-of-scope** (ISR = 3) if
     - the school named on the questionnaire was classified as out-of-scope; or
     - the school did not have a library.
   - A case was classified as an **interview** (ISR = 1) if
     - neither of the conditions for out-of-scope cases was met; and
     - the number of books in the library (M0089) was greater than zero; or
     - the number of books acquired during the 2002–03 school year (M0090) was greater than zero; and
     - there were data in at least 10 percent (12) of the remaining items.
   - Cases were classified as **noninterviews** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

The preliminary ISR and final ISR counts for each data file and the percent of change for each ISR classification are shown in table 32. For information about the file creation from the questionnaire data, see the final section of this chapter.

Table 32. Preliminary and final interview status recode (ISR) counts and percent change, by data file: 2003–04

Data file	Sample size	Preliminary ISR			Final ISR			Percent change in ISR status		
		Number of interviews	Number of non-interviews	Number of out-of-scope	Number of interviews	Number of non-interviews	Number of out-of-scope	Interviews	Non-interviews	Out-of-scope
Public School District	5,437	4,745	647	45	4,421	976	40	-6.83	50.85	-10.87
Public School Principal	10,202	8,251	1,634	317	8,143	1,742	317	-1.31	6.61	0
Private School Principal	3,622	2,448	773	401	2,376	845	401	-2.94	9.31	0
BIA School Principal[1]	166	147	14	5	146	15	5	-0.68	7.14	0
Public School	10,202	8,123	1,801	278	7,991	1,933	278	-1.63	7.32	0
Private School	3,622	2,515	788	319	2,456	847	319	-2.35	7.48	0
BIA School[1]	166	145	17	4	145	17	4	0	0	0
Public School Teacher Listing	10,202	8,875	1,049	278	8,875	1,049	278	†	†	†
Private School Teacher Listing	3,622	2,777	526	319	2,777	526	319	†	†	†
BIA School Teacher Listing[1]	166	152	10	4	152	10	4	†	†	†
Public School Teacher	52,478	44,037	7,442	999	43,244	8,235	999	-1.8	10.66	0
Private School Teacher	9,947	8,323	1,452	172	7,979	1,796	172	-4.13	23.69	0
BIA School Teacher[1]	710	631	52	27	624	59	27	-1.11	13.45	0
Public School Library Media Center	10,202	7,562	1,677	963	7,229	2,010	963	-4.4	19.86	0
BIA School Library Media Center[1]	166	137	14	15	124	27	15	-9.49	92.86	0

† Not applicable.

[1] BIA refers to the Bureau of Indian Affairs.

NOTE: The Teacher Listing did not have a separate final interview status recode (ISR) step.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, BIA School, Private School, Public School Principal, BIA School Principal, Private School Principal, Public School Teacher, BIA School Teacher, Private School Teacher, Public School Library Media Center, and BIA School Library Media Center Documentation Data Files," 2003–04.

Creating Imputation Flags

After the final ISR edits, there were still several cases with "not-answered" values on the files for some variables. Values were created for these items in the next step of the processing, imputation, which is described in "Chapter 8. Imputation Procedures." Exhibit 6 includes the naming convention for flags created to identify changes made to the data during the pre-edit, consistency edit, and imputation stages. Only the imputation flags remain on the restricted-use data files. All three types of flags can be found on the documentation data files. (See the next section for a description of the documentation files.)

As discussed earlier, the 2003–04 school year was a survey year for both SASS and Private School Universe Survey (PSS). The SASS Private School Questionnaire collected all of the PSS data, in addition to some SASS school data, so that private schools selected for the SASS data sample would not be asked to complete two separate questionnaires. Items 1–5e, 7–9, 14–21, 24, 32–34, and 96–100 were all "PSS items" and were processed with the PSS data files. For the purpose of imputation, PSS items are defined

as any item collected for the PSS that remains on the SASS private school record. The private school data file has a distinct set of imputation flag values and definitions. See exhibit 6. The imputation procedures for the Private School Questionnaire are described in greater detail in the "Imputation Procedures for the Private School Questionnaire (Form SASS-3B)" section of chapter 8.

Exhibit 6. Flags used in processing questionnaires, by processing step: 2003–04

Processing step	Flag variables	Flag values and definitions
Pre-edit	prf_[source code]+1 (e.g., prf_0014+1)	†
Consistency edit	ef_[source code]+1 (e.g., ef_s0014+1)	†
Imputation specs	f_[source code] = x (e.g., f_s0014 = 7)	For all questionnaires except the Private School Questionnaire: 0 Not imputed 1 Original value was ratio adjusted 2 Value was imputed by using data from other variables in same record 3 Value was imputed by using data from the principal record, district record, school record or Teacher Listing Form 4 Value was imputed by using data from the sample file (Common Core of Data for nonteachers or Teacher Listing Form for teachers) 7 Imputed from donor 8 Clerical imputation For the Private School Questionnaire: P0 Private School Universe Survey (PSS) item - Not imputed P1 PSS item - Original value was ratio adjusted P2 PSS item - Value was imputed by using data from other variables in same record or from the sample file (data from previous PSS) P3 PSS item - Imputed from donor P4 PSS item - Value was imputed by hand (clerical) S0 Not a PSS item - Not imputed S1 Not a PSS item - Original value was ratio adjusted S2 Not a PSS item - Value was imputed by using data from other variables in same record S3 Not a PSS item - Value was imputed by using data from principal questionnaire record S7 Not a PSS item - Imputed from donor S8 Not a PSS item - Value was imputed by hand (clerical)

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, Bureau of Indian Affairs (BIA) School, Private School, Public School Principal, BIA School Principal, Private School Principal, Public School Teacher, BIA School Teacher, Private School Teacher, Public School Library Media Center, and BIA School Library Media Center Documentation Data Files," 2003–04.

Data Products

After all stages of imputation were completed and the blanking and consistency edits were run once again, the data were still split into files by questionnaire type (i.e., district, principal, school, teacher, and school library media center). Twelve data files were created from the questionnaire data files so that the data could be categorized by school type, that is, public, private, and Bureau of Indian Affairs (BIA). The sixth digit of each respondent's unique control number was used to separate BIA-funded schools from the data files, because a sixth digit of a "3" indicates a BIA-funded school.

- *Public School District (doc_District)*. The public school district final file includes all items from the School District Questionnaire. It also includes the district items included on the Unified School Questionnaire for non-BIA cases.
- *Public School Principal (doc_PubPrinc)*. The public school principal final file includes all items from the Principal Questionnaire for all principals from non-BIA-funded schools.
- *Private School Principal (doc_PriPrinc)*. The private school principal final file includes all items from the Private School Principal Questionnaire.
- *BIA School Principal (doc_BIAPrinc)*. The BIA school principal final file includes all items from the Principal Questionnaire for all principals from BIA-funded schools.
- *Public School (doc_PubSch)*. The public school final file includes all items from the School Questionnaire. It also includes the school-level items from the Unified School Questionnaire for non-BIA-funded schools.
- *Private School (doc_PriSch)*. The private school final file includes all items from the Private School Questionnaire.
- *BIA School (doc_BIASch)*. The BIA school final file includes all items from the Unified School Questionnaire for all BIA-funded schools.
- *Public School Teacher (doc_PubTea)*. The public school teacher final file includes all items from the Teacher Questionnaire for all teachers from non-BIA-funded schools.
- *Private School Teacher (doc_PriTea)*. The private school teacher final file includes all items from the Private School Teacher Questionnaire.
- *BIA School Teacher (doc_BIATea)*. The BIA school teacher final file includes all items from the Teacher Questionnaire for all teachers from BIA-funded schools.
- *Public School Library Media Center (doc_PubLibr)*. The public school library media center final file includes all items from the School Library Media Center Questionnaire for all non-BIA-funded public schools.
- *BIA School Library Media Center (doc_BIALibr)*. The BIA school library media center final file includes all items from the School Library Media Center Questionnaire for all BIA-funded public schools.

Each of these files contained all variables, including frame variables, survey variables, created variables, weighting variables, and imputation flags. These files were used as the source files for the bias analysis files, the documentation files, and the restricted-use files. The bias analysis files were used to run the unit and item bias analyses. The documentation files were used to produce unit and item response rates and contain all sampled cases and the base weights in addition to the final weights. The restricted-use files contain only the respondents' records, and processing variables and most sampling variables were removed. In addition, the restricted-use files were altered to meet the requirements of data nondisclosure. (See chapter 11 for additional description of the restricted-use files.)

Chapter 8. Imputation Procedures

Following the computer edit stage of the 2003–04 Schools and Staffing Survey (SASS) data processing, "not answered" items still remained. These "not answered" items do not include items that respondents should not have answered because of skip patterns in the questionnaires. In order to fill these "not answered" items with data, questionnaires were put through three separate stages of imputation. With each stage, larger assumptions were made about how the participant might have responded. The first stage of imputation involved using items from either the same questionnaire or other questionnaires from the same school or district to impute missing items. The second stage of imputation included "hot deck" imputation (establishing donor records and using them to impute data), creating regression models to predict and impute data, ratio imputation (by subsamples of data), and random ratio imputation (by subsamples of data). After the first two stages of imputation, Census Bureau analysts imputed the remaining unanswered items clerically in the third stage of imputation.

Overview of Imputation Procedures

As questionnaires went through the different stages of imputation, a numerical flag corresponding to the stage of imputation and type of imputation was assigned to each imputed item. In this way it is possible for data users to identify which items were imputed and how the imputations were performed. Data users can use this imputation flag to decide whether or not to include imputed data in their analysis and which types of imputed data to employ.

First-Stage Imputation

In the first stage of imputation, missing (not answered) survey data were imputed with a valid response using data from other items in the same questionnaire or from other related sources. In addition, data were ratio adjusted in some circumstances so that items were consistent with one another. For example, if the counts of students by race on a school questionnaire did not sum to the reported total enrollment, the ratio of each race to the total enrollment was preserved, but the actual number was adjusted to be consistent with the total enrollment figure. Except for the Private School Questionnaire, there were four different sources for stage 1 imputations, and each was given a particular numerical flag. The definitions of these flags are as follows:

0 Data reported. No adjustment or imputation was made.
1 The item was ratio adjusted to be consistent with another item on the questionnaire.
2 The item was imputed based on data from another item within the same questionnaire.
3 The item was imputed based on data from another questionnaire associated with the same school.
4 The item was imputed from the 2001–02 Common Core of Data (CCD) or the Teacher Listing Form.

Both the Private School Universe Survey (PSS) and SASS were conducted during the 2003–04 school year. The SASS Private School Questionnaire collected the same items that were present on PSS, plus additional SASS school data, for the private schools included in the SASS sample. The PSS data that were collected on the SASS Private School Questionnaire were processed jointly as part of the PSS processing. These PSS items received PSS imputation flags. The remaining items that appeared only on the SASS Private School Questionnaire were processed during SASS processing. These SASS-only items received SASS imputation flags. The definitions of these two different types of flags are as follows:

P0 Data reported for the PSS item. No adjustment or imputation was made.
P1 The PSS item was ratio adjusted to be consistent with another item on the questionnaire.

P2 The PSS item was imputed based on data from other items in the same questionnaire or based on data from the 2001–02 PSS.
S0 Data reported for the SASS-only item. No adjustment or imputation was made.
S1 The SASS-only item was ratio adjusted to be consistent with another item on the questionnaire.
S2 The SASS-only item was imputed based on data from other items in the same questionnaire.

Second-Stage Imputation

Several different approaches were used in the second stage of imputation. Data were imputed from items found on questionnaires of the same type that had certain characteristics in common or from the aggregated answers of similar questionnaires. These records are called "donor records."

When a missing item was imputed from a donor record, and the donor answered using the "other" option, the write-in "please specify" portion was also imputed.[22] For instance, if the donor answered item 5 on the Teacher Questionnaire, which asks the respondent's main activity last school year, using the "other" option, the information he or she specified in the write-in portion would also be imputed to the missing item. However, not all write-in items (e.g., open-ended items) were imputed from donor records. Many of the write-in items ask about things that are very specific to each respondent. For instance, item 21 on the public school teacher questionnaire asks the name of the college or university in which the respondent earned his or her degree. Items such as these were not imputed and were left unanswered. All items that were imputed during the second stage of imputation were assigned an imputation flag of "7."

Hot Deck Imputation

In hot deck imputation, responses were determined by establishing a donor record and then basing imputation on data found within the donor record. Donors were selected based on their answers to specified items called "matching variables." If two respondents answered the selected matching variables in similar ways, then it was assumed that they were comparable and that imputation of one data item from the other was reasonable.

The matching variables used to establish donor relationships were selected based on the type of data the donor would supply to the record undergoing imputation. For example, since a respondent's answer to a given item may be influenced by the school's enrollment and the proximity of the school to a city, these variables were used to find another respondent in a school with similar characteristics.

The datasets were sorted by matching variables in the order of their importance. The sorting helped to ensure that appropriate donors were the most similar to the record with the unanswered data. For example, on the Principal Questionnaire, item 44 asks for the principal's birth year. If the respondent left this item blank, then important variables in predicting its value would be the number of years of educational experience (EXPER) and the highest degree that he or she had earned (DEGREE). Therefore, the records were sorted by LEVEL / DEGREE / EXPER. However, items 38 to 40 concern the level of parent or guardian involvement at the school, an area in which the number of years of educational experience and the highest degree that he or she has earned would not be useful predictors. Instead, the type of school at which the respondent served as principal (TYPE) and the county of the respondent's school (GFIPCT) would be more useful indicators. These variables followed the sort routine LEVEL / TYPE / GFIPCT. The various sort routines ensured that the most similar record to the unanswered one served as the donor.

[22] This was done for item 44 on the SASS School Questionnaire; items 23e and 77 on the SASS Private School Questionnaire; items 5, 6, 29, 44, and 48 on the SASS Teacher Questionnaire; and items 5, 6c, 6e, 29, 45, and 48 on the SASS Private School Teacher Questionnaire.

When there were not enough donor records within any given stratification cell, a collapsing routine was instituted. This was done to make sure that values that were not consistent with other data on the same record would not be imputed simply because a record was close to the boundary between the stratification cells (e.g., there were other records that were suitable donors or the record was not similar enough to be a donor).

For example, for the School Questionnaire, the collapsing routine for the matching variable MINEN[23] (percentage of students in school who are of a racial/ethnic minority) was as follows:

(1,2,3,4,0,
2,3,1,4,0,
3,2,1,4,0,
4,3,2,1,5,
5,4,0,0,0)

If the value for MINEN on the record with missing data was one and there was no available donor where MINEN = 1, the collapsing program looked for a donor where MINEN = 2. If there was still no available donor, the program looked for a donor where MINEN = 3, then MINEN = 4. It did not look for cases where MINEN = 5. Likewise, if the value for MINEN on the record with missing data was a three and there was no available donor where MINEN = 3, the collapsing program searched for a donor where MINEN = 2, then MINEN = 1, then MINEN = 4. When the collapsing routine hit zero, there was no donor available for this case. In these instances, the value was clerically imputed in the third stage of imputation.

In many cases, the donor and imputed records were required to have the same answers on key variables. For example, for public school sector records donors needed to be from the same state as the record with missing data, and for private school sector records donors needed to have the same religious affiliation, or matching strata, as the record with missing data. Finally, to prevent a single record from having an undue impact on the data, a record could only be used as a donor a maximum of five times. There were no exceptions to this procedure.

Once the donor relationship was established, the donor record provided data items either directly or indirectly to the imputed record. For example, the unanswered item requesting the "number of white non-Hispanic students" was filled by accepting the ratio of White students to total students from the donor record and by applying that ratio to the total number of students on the imputed record.

Regression Imputation

When unanswered items remained after the hot deck imputation process was completed, simple linear regression was used to impute data for items requiring numerical answers. Linear models for such items were based on data from other items on the questionnaire and data from the school survey.

Items used in the regression model were selected based on how much explanatory power each had in the model and on the manner in which each influenced the overall explanatory power of the model. This was measured by examining the coefficient of the variable in the regression as well as the adjusted *R*-squared statistic associated with the model. In addition, the certainty of the relationship established through

[23] MINEN = 1 if the percentage of students in school who were of a racial/ethnic minority was less than 5.5 percent. MINEN = 2 if the percentage was between 5.5 percent and 20.5 percent. MINEN = 3 if minority enrollment was between 20.5 percent and 50.5 percent. MINEN = 5 if the percentage was greater than or equal to 50.5 percent. MINEN = 4 if the percentage was unclassified.

regression was a factor in determining which variables to use in the regression. This was measured by the *t* statistic associated with the coefficient of each variable in the regression as well as the overall *F* statistic associated with the model. In general, Census Bureau analysts attempted to produce models in which each *t* statistic was less than 0.20, the *F* statistic was less than 0.20, and the *R*-squared was at least 0.40; however, it was not always possible to fulfill all of these requirements. When a sufficient model could not be built for a variable, it was imputed clerically during third-stage imputation.

Subsample Ratio Imputation

For unanswered items that remained after the hot deck imputation and that were categorical variables, subsample ratio imputation was employed. First, data were broken into five subsamples (or groupings) based on the grade levels offered at the school (LEVEL). The groups were broken down as follows:

LEVEL = 1	Grades kindergarten through 6 (elementary)
LEVEL = 2	Grades kindergarten through 8
LEVEL = 3	All grades (combined)
LEVEL = 4	Grades 5 through 12
LEVEL = 5	Grades 7 through 12 (secondary)

The ratio of each type of response was found for each grouping. Finally, the items were assigned answers according to the subsample to which they belonged in order to preserve the response ratios within that subsample.

For example, an item composed of four categories as answered by a subsample of schools, where LEVEL = 1, had the following distribution of answers: 40 percent chose the first category, 20 percent chose the second, 30 percent chose the third, and 10 percent chose the fourth category. These distributions would then be used to impute the records with missing data for this item where LEVEL = 1. Similarly, the percentage distribution of responses for records where LEVEL = 2 was calculated and the records with missing data that had the same LEVEL value were imputed accordingly. This operation was performed for all LEVEL values, or subsamples.

Random Subsample Ratio Imputation

Random subsample ratio imputation is a method similar to subsample ratio imputation but is more effective at handling items that require continuous answers. For a random subsample ratio, cases were imputed using a program that randomly assigned values to categorical variables while preserving the observed distribution of the data. The program also sorted the data into groupings based on the value of those variables that might have impacted the respondent's answer. Continuous variables were assigned a random probable value (i.e., a value between the 5th and 95th percentile) to cases with missing responses based on the range of values provided by respondents with similar characteristics.

Type of school (i.e., school sector), school program type, level of classes taught, and teaching experience were variables used to define a subsample within the dataset. If a record within this subsample had an unanswered item, an answer was randomly assigned so that the distribution of responses to that item remained the same. For example, if teachers who worked in private schools that were alternative schools, taught elementary level students, and had 20 years of teaching experience had a base annual teaching salary that ranged from $20,000 in the 5th percentile to $50,000 in the 95th percentile, then the imputation procedure randomly assigned salary figures to teachers with missing data that were consistent with this distribution.

Third-Stage Imputation

In some cases, items still remained "not answered" after the first two stages of imputation. This happened when there was no available donor, the value imputed by the computer was out-of-range or inconsistent with values in other items, or there was no method of imputation suitable for the item other than clerical imputation. Therefore, all remaining unanswered items after the first two stages of imputation were imputed clerically during the third stage of imputation. All third-stage imputations were given an imputation flag of "8." In order to determine an appropriate value for each unanswered item, Census Bureau analysts reviewed

- the original image of the questionnaire to see if the respondent had made any notes in the margin that might provide insight;
- other items within the same record with related information;
- similar cases to get an understanding of what the respondent might have answered; and/or
- averages of similar subsamples.

Post-Imputation Processing

Following both the second and third stages of imputation, the computer edits were re-run and any remaining data issues were resolved. (See chapter 7 for details.) At this point, any items that were imputed at a rate greater than 15 percent were analyzed as part of the item bias analysis. (See chapter 6 for details about the nonresponse bias analysis.) The computer edits were used to ensure that the values imputed in each stage of imputation were within acceptable ranges and were consistent with other items on the questionnaire.

Imputation Procedures for the School District Questionnaire (Form SASS-1A)

Items on the School District Questionnaire that still were "not answered" went through a first stage of imputation in which unanswered items were imputed from other items on the same record or items on the district's sample file (including CCD). The questionnaires then went through the second stage of imputation, or hot deck imputation, in which some of the remaining "not answered" items were filled using the data record from a similar record. The third stage of imputation filled in the remaining "not answered" items that were not resolved during the first two stages of imputation.

Public and public charter one-school districts had their district data collected on the Unified School Questionnaire and were imputed separately from the public and public charter school districts that completed the School District Questionnaire. Following the stage 3 imputation of both the School District Questionnaire and Unified School Questionnaire, the school district items that appeared on the Unified School Questionnaire were split out from the Unified School Questionnaire data file and included in the School District Questionnaire data file. For further details, see the "Imputation Procedures for the Unified School Questionnaire" section.

First-Stage Imputation for School District Data

In the first stage, unanswered items from the School District Questionnaire were filled in whenever possible using information about the district from the following sources:

- *Other questionnaire items on the district's school district questionnaire record*. Based on entries from related questionnaire items, assumptions were made about how the respondent might have answered items. For example, if item 59, which asks whether or not the district requires community service for seniors to graduate, was blank, and item 60a, which asks if there is a certain number of hours of community service required, was marked no, then item 59 had the answer "no" imputed, and items 60a and 60b (actual number of hours required) were marked as valid skips since those items did not apply.
- *District's sample file record, including data from the 2001–02 CCD*. In some cases, CCD data from the sample file were used to impute entries to items. For example, if item 1a did not indicate that the district offers kindergarten or 1st grade through 12th grade, and item 1b, which asks which grades are offered, was unanswered, the grades offered were imputed from the sample file data, which was derived from the 2001–02 CCD.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For records where the sum of the entries in item 4 (number of students by race) did not equal the districts' K–12 enrollment in item 3, the item 4 entries were adjusted to be consistent with item 3. For example, if the sum of the students reported by the racial categories in item 4 differed from the district's K–12 enrollment reported in item 3, the assumption was made that the total enrollment was correct. Consequently, the difference between the racial counts in item 4 and the total value reported in item 3 was resolved by adding or subtracting the misreported students from each racial category without changing the proportion of each racial group to the total enrollment.

Table 33 includes a summary of imputation performed in stage 1 processing.

Second-Stage Imputation for School District Data

Hot Deck Imputation

In general, the hot deck stage of imputation filled in unanswered items by using data from the record of a similar district. For example, districts were similar if they were the same level, of similar size, had a similar percentage of minority students, etc. Imputation variables that describe certain characteristics of the districts (e.g., enrollment size, school level, and percent minority students) were created and used to sort the records and to match incomplete records to those with complete entries (donors).

For some items, such as item 7, which asks for the number of days in the school year, data were copied directly from the donor record to the record with the missing value. For others, such as item 12 (number of teachers newly hired), the entries on the donor record were used along with other questionnaire data to fill the incomplete items. For example, suppose district A had not answered item 12, number of teachers newly hired, and district B had been established as an appropriate donor for district A. In this case, the ratio of newly hired teachers to the total number of teachers in district B was multiplied by the total number of teachers reported in district A to yield the number that was filled in for the total number of newly hired teachers in district A. Consequently, while district A had the same ratio of newly hired teachers to total teachers as district B, the actual number of newly hired teachers was likely to be different.

The School District Questionnaire records were grouped into 23 state groups (typically according to their geographic location) so that records for similar districts were together. District records were sorted by the following variables to ensure similarity between the records receiving information and their donors:

GROUP	Groups of states with similar districts
STATE	State in which the school district is located
LEVEL	Grade levels offered
URB	Proximity to a metropolitan center
D0051	Total K–12 and ungraded enrollment

For items 5 through 7, 12 through 14, and 24 through 70, records were sorted by GROUP / STATE / LEVEL / URB / D0051. For items 2 through 4, 8 through 11, 15 through 23, and 71 through 77, the records were sorted by GROUP / STATE / URB / D0051.

Table 33 includes a summary of the amount of imputation performed in stage 2 processing.

Third-Stage Imputation for School District Data

Clerical Imputation

Values were imputed clerically for cases where there was no available donor, the value imputed by computer was out-of-range or inconsistent with values in other items, or there was no method of imputation appropriate for the item other than clerical imputation. In order to determine an appropriate value for each unanswered item, Census Bureau analysts reviewed

- the original image of the questionnaire to see if the respondent had made any notes in the margin that might provide insight;
- other items within the same record with related information;
- similar cases to get an understanding of what the respondent might have answered; and/or
- averages of similar subsamples.

Table 33 includes a summary of the amount of imputation performed in stage 3 processing.

Final File Imputation Table for School District Data

District-level data were collected on the School District Questionnaire or the Unified School Questionnaire. Please see the "Imputation Procedures for the Unified School Questionnaire" section below for details on the processing of the Unified School Questionnaire data. Public and public charter one-school districts had their district data collected on the Unified School Questionnaire and were imputed separately from public and public charter school districts that completed the School District Questionnaire. Following stage 3 imputation, the school district items that were included on the Unified School Questionnaire were included in the final school district data file, while the school items on the Unified School Questionnaire were included in the public school data file for public and public charter schools. The School District Questionnaire items that were not asked on the Unified School Questionnaire (e.g., items concerning district-wide library media centers, principal hiring policies, homeschooling) were assigned a value of -8, which indicates they were "Not asked of one-school districts" for the Unified School Questionnaire records. Data from the Unified School Questionnaire for BIA-funded schools were placed on the BIA School data file. The number of source codes (specific items) that were imputed, including district items from the Unified School Questionnaire, for a given percentage of records during

each stage of processing appears in table 33 below. For example, during stage 1 imputation 124 survey items were imputed for between 1 and 15 percent of the public school district records.

Table 33. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public school districts, including district items from the Unified School Questionnaire: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	162	124	7	1
Stage 2	28	266	0	0
Stage 3	70	224	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District Restricted Use Data File," 2003–04.

"Appendix Q. Imputation Changes to Variables, by Data File," contains the total number of imputations applied at each stage to each source code.

Imputation Procedures for the Principal and Private School Principal Questionnaires (Forms SASS-2A and -2B)

Principal data for public, public charter, private, and BIA-funded schools were on the same data file when entering the imputation step of data processing. Items on the principal questionnaires that still had items that were "not answered" went through the first stage of imputation in which unanswered items were imputed from other items on the same principal record or items on the corresponding school record. Before the principal questionnaires went through the second stage of imputation, both public charter school principals and private school principals were split into their own data files in order to establish appropriate donors and sort patterns. Data for principals from BIA-funded schools were kept in the same dataset as data for principals from public schools. The second and third stages of imputation proceeded with the data split into these types of datasets. After all stages of imputation were completed and no more "not answered" items remained, the BIA-funded school and private school principal data remained in their own separate datasets. Public and public charter school principal data were moved back into the same data file.

First-Stage Imputation for Principal Data

In the first stage, items that were unanswered on the principal questionnaires were filled in whenever possible by using information about the principal from these sources:

- *Other questionnaire items on the principal questionnaire record*. Based on entries from related items on the principal record, assumptions were made about how the respondent might have answered the item. For example, if there was no response to item 1 (total number of years spent as a principal at any school), and item 2 (total number of years spent as principal of the current school) indicated that the respondent had been a principal at the school since he or she was 22 years of age, it was assumed that the respondent had only been principal of the current school. The answer to item 2 was filled in for item 1.

- *School questionnaire record*. Information from the record of the principal's school was used to impute values in the first stage as well. For example, if item 15, on the level of influence that particular groups have on the school, had any section asking about curriculum specialists unanswered, and the school record indicated there were no curriculum specialists at the school, then "No Influence" was imputed for these items.

Tables 34 through 36 include summaries of the amount of imputation performed in stage 1 processing.

Second-Stage Imputation for Principal Data

Hot Deck Imputation

In general, the hot deck imputation filled unanswered items using data from the record for a similar principal (e.g., a principal of similar age, experience, education, etc.) who worked at a similar school (e.g., a school that was the same level, the same type, of similar size, etc.). Imputation variables that describe certain characteristics of the principals and their schools were created and used to sort the records and to match incomplete records to those with complete entries (donors).

For some items, such as item 5 (whether or not the principal also serves as a teacher in the school), data were copied directly from the donor to the record with the missing value. For other items, such as item 10 (number of hours spent per week on school-related activities), the entries on the donor record were factored with other questionnaire data to fill in the incomplete items. For example, if item 10 was unanswered, the donor's ratio of hours spent on school activities per week to hours spent interacting with students was multiplied by the principal's reported hours spent interacting with students to calculate the answer that was imputed into item 10.

Public School and BIA-Funded School[24] Principals. BIA-funded school principal data were kept in the same data file as the public school principal data and received the same processing as a result. Non-BIA-funded school principals could be in a donor relationship with BIA-funded school principals.

The hot deck imputation was done within state; that is, the donor principal record had to be from the same state as the principal record with missing data. Within each state, the principal records were sorted by the following variables:

DEGREE	Highest degree attained
LEVEL	Grade levels offered
EXPER	Years of educational experience
YEARPRIN	Years served as a principal
HOWOLD	Principal's age
GFIPCT	FIPS county code for the county of the respondent's school
TYPE	School type

For item 44, the records were sorted by LEVEL / DEGREE / EXPER. For items 1 through 6 and 14, the records were sorted by LEVEL / DEGREE / YEARPRIN / HOWOLD. For items 7 through 13, 15 through 37, 41 through 43, and 45, the records were sorted by LEVEL / DEGREE / YEARPRIN / GFIPCT. For items 38 through 40, the records were sorted by LEVEL / TYPE / GFIPCT.

[24] "BIA-funded school" refers to schools funded by the Bureau of Indian Affairs (BIA) that were not operated by a local school district. These schools may be operated by BIA, a tribe, or a private contractor.

Private School Principals. The hot deck imputation was done within general religious affiliation (AFFILG, where 1 = Catholic, 2 = Other religious, 3 = Nonsecular); that is, the donor principal record had to be for a principal at a school with the same general affiliation as the principal record with missing data. Within each general affiliation category, private school principals were sorted by the following variables:

DEGREE	Highest degree attained
LEVEL	Grade levels offered
EXPER	Years of educational experience
YEARPRIN	Years served as a principal
HOWOLD	Principal's age
AFFILR	School's religious affiliation[25]

For item 38, the records were sorted by LEVEL / DEGREE / EXPER. For items 1 through 6 and 13, the records were sorted by LEVEL / DEGREE / YEARPRIN / HOWOLD. For items 7 through 12, 14 through 37, and 39, the records were sorted by LEVEL / DEGREE / YEARPRIN / AFFILR.

Public Charter School Principals. Public charter school principal data were kept in the same dataset as the public school principal data through the first stage of imputation. However, the datasets were split prior to hot deck imputation. This was to ensure that no non-public charter school data would be used in the charter school imputation process. Because there were only 220 public charter school principals that were accepted as completed interviews in the data file, it was not possible to use donor imputation for these records. Public charter school data went directly into the next steps of processing, which included regression subsample ratio imputation.

Regression Imputation

Following hot deck imputation, some unanswered items remained. For questions that ask for continuous value answers, such as Principal Questionnaire item 45 (current annual salary), simple linear regression was used to impute the data. Linear models for such items were based on data from other items on the questionnaire and data from the school survey. For example, to impute item 45, a model of public school principal salary was created through linear regression using the answers to item 1 (total number of years served as a principal in all schools), item 2 (years spent as a teacher prior to becoming a principal), item 9 (highest degree earned), item 10 (total hours spent per week on all school related activities), item 11 (total hours spent per week interacting with students), item 2 from the public school survey (total K–12 and ungraded school enrollment), and URB (a numerical variable based on the school's proximity to a metropolitan center) as coefficients in the linear regression model.

Items used in the regression model were selected based on how much explanatory power each had in the model and the manner in which each influenced the overall explanatory power of the model. This was measured by examining the coefficient of the variable in the regression, as well as the adjusted R-squared statistic associated with the model. In addition, the certainty of the relationship established through regression was a factor in determining which variables to use in the regression. This was measured by the t statistic associated with the coefficient of each variable in the regression, as well as the overall F statistic associated with the model.

[25] AFFILR indicates the religion with which the private school was associated. A code of 26 was assigned when there was no religious affiliation associated with the school.

Subsample Ratio Imputation

For items that lacked data following hot deck imputation and required categorical answers, subsample ratio imputation was employed. First, data were broken into five subsamples based on the value of LEVEL (grade levels offered at the school). Then, the ratio of each type of response was found for each subsample. Finally, the items were assigned answers according to the subsample they belonged to in such a way as to preserve the response ratios within that subsample.

For example, on Principal Questionnaire item 15b(1) (level of influence of state department of education or other state-level bodies on school's curriculum), there were five available answer categories ranging from 1 (no influence) to 4 (major influence) with 5 indicating "not applicable." If it was found that 10 percent of respondents with LEVEL equal to 1 answered "1" for this item, and 90 percent answered "2" and that when LEVEL was equal to 3, some 80 percent answered "3" and 20 percent answered "4," then items were imputed to maintain this ratio.

Tables 34 through 36 include summaries of the amount of imputation performed in stage 2 processing.

Third-Stage Imputation for Principal Data

Clerical Imputation

Some values on the public, public charter, private, and BIA-funded school principal records were imputed clerically. This method was used when there was no available donor that matched the record with the missing values, when the imputed values were outside the range of valid entries or inconsistent with other entries on the record, or if there was no method of imputation appropriate for the item other than clerical imputation. In order to determine an appropriate value for each unanswered item, Census Bureau analysts reviewed

- the original image of the questionnaire, to see if the respondent had made any notes in the margin that might provide insight;
- other items within the same record with related information;
- similar cases, to get an understanding of what the respondent might have answered; and/or
- averages of similar subsamples.

Tables 34 through 36 include summaries of the amount of imputation performed in stage 3 processing.

Final File Imputation Tables for Principal Data

Following stage 3 processing, public charter school principal records were added back into the public school principal data file, while BIA-funded school principal records were removed and placed in a separate BIA school principal data file for the final data files. The number of source codes (specific items) that were imputed on a given percentage of records during a given stage of processing appears below in tables 34 through 36. For example, during stage 1 imputation 115 survey items were imputed for between 1 and 15 percent of the public school (including public charter school) principal records.

Table 34. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public school principals, including public charter school principals: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	91	115	0	0
Stage 2	6	200	0	0
Stage 3	178	28	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Principal Restricted Use Data File," 2003–04.

Table 35. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for private school principals: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	111	95	0	0
Stage 2	43	163	0	0
Stage 3	191	15	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Principal Restricted Use Data File," 2003–04.

Table 36. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIA-funded school principals: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	176	30	0	0
Stage 2	36	169	1	0
Stage 3	203	3	0	0

NOTE: BIA refers to the Bureau of Indian Affairs. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "BIA School Principal Restricted Use Data File," 2003–04.

"Appendix Q. Imputation Changes to Variables, by Data File," contains the total number of imputations applied at each stage to each source code.

Imputation Procedures for the School Questionnaire (Form SASS-3A)

School data for public and public charter schools were on the same data file when entering the imputation step of data processing. Items on the School Questionnaire that were "not answered" went through a first

stage of imputation in which unanswered items were imputed from other items on the same school record, items on the corresponding school district record, or items from the Teacher Listing Form. Before the public school questionnaires went through the second stage of imputation, public charter schools were split into their own data file in order to establish appropriate donors and sort patterns. The second and third stages of imputation proceeded with the data split into these types of datasets. After all stages of imputation were completed and no more "not answered" items remained, the public and public charter school data were moved back into the same data file.

Public and public charter one-school districts had their school data collected on the Unified School Questionnaire and were imputed separately from the public and public charter schools that completed the School Questionnaire. Following the stage 3 imputation of both the School Questionnaire and Unified School Questionnaire items, the school items that appeared on the Unified School Questionnaire were split out from the Unified School Questionnaire data file and were included in the School Questionnaire public school data file. More details are available in the "Imputation Procedures for the Unified School Questionnaire" section below.

First-Stage Imputation for Public and Public Charter School Data

In the first stage, unanswered items for the School Questionnaire were filled whenever possible by using information about the school from these sources:

- *Other questionnaire items on the school's public school questionnaire record*. Based on entries from related items on the school record, assumptions were made about how the respondent might have answered items. For example, if the type of school was not reported in item 14, and item 17a indicated the school had a magnet program, code 3, "Special program emphasis," was imputed to item 14.
- *School District Questionnaire record for the district that operated the school*. If the school's district participated in SASS, information from the district's questionnaire was used to complete some unanswered items on the school record. For example, if the number of migrant students was not reported in item 3 and the School District Questionnaire record indicated that there were no migrant students in the district, then zero was imputed to item 3.
- *Teacher Listing Form for the school*. If the counts of full-time and part-time teachers were not reported in item 34 of the School Questionnaire and the school had completed a Teacher Listing Form, the counts of full-time and part-time teachers from the Teacher Listing Form were used to impute missing values in item 34.
- *School's sample file record, including data from the 2001–02 CCD*. In some cases CCD data from the school's sample file record were used to complete items. For example, if there was no response to item 55a, whether or not the school has prekindergarten students, and the sample file indicated that there were prekindergarten students in the school, "yes" was imputed to the item.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For example, if the sum of the students reported by the racial categories in item 5 was greater than the school's total enrollment reported in item 2, the assumption was made that the proportions assigned to the categories were correct, and the counts in item 5 were adjusted to fit the total reported in item 2; that is, each entry in item 5 was multiplied by the ratio of the enrollment reported in item 2 to the sum of the entries in item 5.

Table 37 includes a summary of the amount of imputation performed in stage 1 processing.

Second-Stage Imputation for Public and Public Charter School Data

Hot Deck Imputation

In the second stage of imputation, School Questionnaire items that remained unanswered were filled by using data from the record for a similar school (e.g., a school that was the same level, type, etc.). Imputation variables that describe certain characteristics of the school (e.g., type of community where school is located, type of school, and school level) were created and used to sort the records and to match incomplete records to those with complete data (donors).

For some items, such as item 53 (whether students with limited-English proficiency are tested to determine their level of English proficiency), data were copied directly from the donor to the record with the missing value. For others, such as item 62 (number of Title I teachers), the entries on the donor record were used as factors along with other questionnaire data to fill the incomplete items. For example, if item 62 was unanswered for school A, the number of teachers who were Title I on the donor record were used with the total teacher count for school A to calculate and impute the number of Title I teachers for school A (school A item 34 = school A total teacher count * (donor school item 34 / donor school total teacher count)).

Public Schools. The second stage imputation was done within state; that is, the donor record had to be for a school located in the same state as the school with the incomplete record. Within each state, the public school records were sorted by the following variables:

STCNTY	Sample file code identifying the state and county location of the school
S0414	Total enrollment
TYPE	School type
LEVEL	Grade levels offered
MINEN	Minority enrollment
URB	Proximity to a metropolitan center

For items 34, 1, 7, 27 through 33, 40 through 44, 4, 18, 20 through 21, 22, 24, 38, 39, 9, 10, 36, the records were sorted by LEVEL / TYPE / STCNTY / S0414. For items 5, 3, 37, 35, 47 through 54, 6, 56 through 62, 45 through 46, and 17, the records were sorted by LEVEL / MINEN / URB /STCNTY / S0414.

Public Charter Schools. Public charter school data were kept in the same data file as the public school data through the first stage of imputation. However the datasets were split prior to hot deck imputation. This ensured that no non-public charter school data would be used in the public charter school imputation process. Because there were only 190 public charter schools in the dataset, it was not possible to use donor imputation on the dataset and public charter school data went directly into clerical imputation.

Table 37 includes a summary of the amount of imputation performed in stage 2 processing.

Third-Stage Imputation for Public and Public Charter School Data

Clerical Imputation

Some values on the public school records were imputed clerically. This method was used when there was no available donor that matched the record with the missing values, and when the computer-imputed value was outside the range of valid entries or inconsistent with other entries on the record, or if there was

no method of imputation appropriate for the item other than clerical imputation. In order to determine an appropriate value for each unanswered item, Census Bureau analysts reviewed

- the original image of the questionnaire, to see if the respondent had made any notes in the margin that might provide insight;
- other items within the same record with related information;
- similar cases, to get an understanding of what the respondent might have answered; and/or
- averages of similar subsamples.

Table 37 includes a summary of the amount of imputation performed in stage 3 processing.

Final File Imputation Table for Public School Data

One of the 2003–04 SASS questionnaires was the Unified School Questionnaire. This questionnaire was distributed to school district institutions with only one school and included items from the School Questionnaire and the School District Questionnaire in order to simultaneously collect information on the school district and the single school administered by that school district. All BIA-funded schools received the Unified School Questionnaire. Following stage 3 imputation, items on the questionnaire that dealt with the school district were included in the final school district data file, while the items that dealt with the school were included either on the public school data file, if the school was not a BIA-funded school, or on the BIA-funded school data file otherwise. Below is a summary of the amount of imputation performed on both the School Questionnaire and the school items included on the Unified School Questionnaire. Please see the "Imputation Procedures for the Unified School Questionnaire" section below for details on the processing of Unified School Questionnaire data and for the table indicating the amount of imputation performed on the Unified School Questionnaire given to BIA-funded schools. The number of source codes (specific items), including unified school items, that were imputed on a given percentage of records during a given stage of processing appears below in table 37. For example, during stage 1 imputation 135 survey items were imputed for between 1 and 15 percent of the public school records.

Table 37. Number of source codes imputed, by percentage of records receiving imputation during each stage for public schools, including public school items from the Unified School Questionnaire: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	94	135	4	5
Stage 2	36	200	2	0
Stage 3	14	224	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Restricted Use Data File," 2003–04.

"Appendix Q. Imputation Changes to Variables, by Data File," contains the total number of imputations applied at each stage to each source code.

Imputation Procedures for the Private School Questionnaire (Form SASS-3B)

The 2003–04 school year was a survey year for both SASS and PSS. The SASS Private School Questionnaire collected the same items that are present on PSS, plus additional SASS school data, for the private schools included in the SASS sample. Items 1 through 5a–e, 7 through 9, 14 through 21, 24, 32 through 34, and 96 through 100 (the PSS items within the Private School Questionnaire records) were processed with the PSS data files. Therefore, imputation for the Private School Questionnaire data was done in six stages: PSS stage 1, SASS Private School Questionnaire stage 1, PSS stage 2, SASS Private School Questionnaire stage 2, PSS clerical imputation, and SASS Private School Questionnaire clerical imputation. Following each PSS processing step the relevant PSS data were copied onto the corresponding SASS Private School Questionnaire records.

First-Stage Imputation for Private School Data

In the first stage of imputation, values for unanswered items were imputed whenever possible by using information about the school from these sources:

- *2003–04 PSS*. If PSS items (items 1–5, 7–9, 14–21, 24, 32–34, and 96–100) on the SASS Private School Questionnaire record were unanswered, data from the 2001–02 PSS were used to fill the unanswered items whenever possible. For example, if the school's religious affiliation was not reported in item 14c and it had been reported on the 2001–02 PSS questionnaire, the PSS entry was copied to item 14c of the Private School Questionnaire record.
- *Other questionnaire items on the school's Private School Questionnaire record*. Based on entries from related items on the school record, assumptions were made about how the respondent might have answered items with missing values. For example, if item 40b(4) (whether the school is specifically for special needs students) was unanswered and item 15 indicated the school was a special education school, the assumption was made that the school was specifically for special needs students and the code for "Yes" was imputed to item 40b(4).

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For those where the number of teachers reported in item 25 (teachers by race) did not equal the number reported in item 24, the entries in item 25 were adjusted. For example, if the sum of the teachers reported by the racial categories in item 25 were greater than the total number of teachers reported in item 24, the assumption was made that the proportions assigned to the categories in item 25 were correct and the counts in item 25 were adjusted to fit the total reported in item 24; that is, each entry in item 25 was multiplied by the ratio of the teacher count reported in item 24 to the sum of the entries in item 25.

Table 38 includes a summary of the amount of imputation performed in stage 1 processing.

Second-Stage Imputation for Private School Data

Hot Deck Imputation

In the second stage of imputation, unanswered items for the Private School Questionnaire were filled by using data from the records for similar schools (e.g., schools that were the same level, type, size, etc.). As noted previously, items 1 through 5, 7 through 9, 14 through 21, 24, 32 through 34, and 96 through 100 were imputed during the PSS processing. Therefore, for these items, the imputed entries could have come

from private schools not selected for SASS, as well as those that participated in SASS. For non-PSS items, entries were imputed by using data from other SASS private schools.

For some items, such as item 75 (whether or not most students have access to the internet at the school), data were copied directly from the donor to the record with the missing value. For others, such as item 10 (school capacity), the entries on the donor record were used as factors along with other questionnaire data to fill the incomplete items. For example, if item 10 was unanswered, the donor survey's ratio of school capacity to total enrollment was multiplied by the reported total enrollment to yield the value of school capacity that was imputed into item 10.

Imputation variables that describe certain characteristics of the schools (e.g., religious affiliation, size, and school level) were created and used to sort the records and to match incomplete records to those with complete data (donors). During the stage 2 imputations, the school records were sorted so that records for similar schools were near each other on the file. The variables used for sorting were as follows:

S0734	Total enrollment
TYPE	School type
LEVEL	Grade levels offered
PERMINOR	Percent of enrollment that is minority
URB	Proximity to a metropolitan center
AFFILR[26]	School's religious affiliation
AFFILG[27]	School's general affiliation
AFFILS[28]	School's religious and or association affiliation

During the PSS second-stage imputation, the PSS school records (those selected for SASS and those that were not) were sorted AFFLG / LEVEL / AFFILS / TYPE / P305 (PSS total enrollment variable).

The items that were not part of PSS, the records for SASS private schools for items 5f, 10 through 13, 22 through 23, 30 through 31, 35 through 63, 26, 73, 74, 76, 75, and 77 through 80 were sorted by AFFLG / LEVEL / AFFILS / TYPE / AFFILR / URB / S0734. For items 6, 25, 27, 64 through 72, 89 through 95, and 81 through 88, the records were sorted by AFFLG / LEVEL / AFFILS / URB / PERMINOR / S0734.

Table 38 includes a summary of the amount of imputation performed in stage 2 processing.

Third-Stage Imputation for Private School Data

Clerical Imputation

Some values on the private school records were imputed clerically. This method was used when there was no available donor that matched the record with the missing values, and when the computer-imputed value was outside the range of valid entries or inconsistent with other entries on the record. This method was also used for schools where the religious affiliation was not reported and there was no previous PSS information available, or if there was no method of imputation appropriate for the item other than clerical

[26] AFFILR indicates the specific religion with which the private school was associated. There were 26 different religious affiliation indicators.
[27] AFFILG indicates the school's general affiliation. This indicates if the school was Catholic, Other religious affiliation, or No religious affiliation.
[28] AFFILS indicates the school's religious and/or associated affiliation. It provides more detailed categories for type of Catholic or nonsecular school and identifies whether the school was affiliated with the Conservative Christian school association.

imputation. In order to determine an appropriate value for each unanswered item, Census Bureau analysts examined

- the original image of the questionnaire, to see if the respondent had made any notes in the margin that might provide insight;
- other items within the same record with related information;
- similar cases, to get an understanding of what the respondent might have answered; and/or
- averages of similar subsamples.

Table 38 includes a summary of the amount of imputation performed in stage 3 processing.

Final File Imputation Table for Private School Data

The number of source codes (specific items), including PSS items, that were imputed on a given percentage of records during a given stage of processing appears below in table 38. For example, during stage 1 imputation 253 survey items were imputed for between 1 and 15 percent of the private school records.

Table 38. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for the Private School Questionnaire, including PSS items: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	142	253	4	3
Stage 2	136	259	7	0
Stage 3	309	93	0	0

NOTE: PSS refers to the Private School Universe Survey. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Restricted Use Data File," 2003–04.

"Appendix Q. Imputation Changes to Variables, by Data File," contains the total number of imputations applied at each stage to each source code.

Imputation Procedures for the Unified School Questionnaire (Form SASS-3Y)

The Unified School Questionnaire was sent to public and public charter school districts with only one school and all BIA-funded schools. In order to simultaneously collect data on the school and the school district that administers the school, items from the School District Questionnaire and the School Questionnaire were included. After all stages of imputation were completed and no more "not answered" items remained, the BIA-funded schools that received the Unified School Questionnaire were separated into a single dataset. The remaining public and public charter school records had their data split between the school district data file and the public school data file. Thus, items dealing with school district information for public and public charter schools were included on the school district data file and items providing school level information for public and public charter schools were added to the public school data file.

First-Stage Imputation for Unified School Data

In the first stage, Unified School Questionnaire unanswered items were filled whenever possible by using information about the school from these sources:

- *Other questionnaire items on the school's Unified School Questionnaire record*. Based on entries from related items on the school record, assumptions were made about how the respondent might have answered items. For example, if the type of school was not reported in item 15, and item 18a indicated the school had a magnet program, code 3, "Special program emphasis," was imputed to item 15.
- *Teacher Listing Form for the school*. If the counts of full-time and part-time teachers were not reported in item 51 of the Unified School Questionnaire and the school had completed a Teacher Listing Form, the counts of full-time and part-time teachers from the Teacher Listing Form were used to impute missing values in item 51.
- *School's sample file record, including data from the 2001–02 CCD*. In some cases, CCD data from the school's sample file record were used to complete items. For example, if item 15, type of school, was unanswered and the sample file indicated the type of school, then the sample file type was imputed to the item.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For example, if the sum of the students reported by the racial categories in item 5 was greater than the school's total enrollment reported in item 2, the assumption was made that the proportions assigned to the categories were correct, and the counts in item 5 were adjusted to fit the total reported in item 2; that is, each entry in item 5 was multiplied by the ratio of the enrollment reported in item 2 to the sum of the entries in item 5.

Table 39 contains the amount of stage 1 imputation performed on BIA-funded school records. Imputation count information is included in table 33 for the items that deal with the district data, while imputation count information for items dealing with public school data are included in table 37.

Second-Stage Imputation for Unified School Data

Hot Deck Imputation

Since there were relatively few Unified School Questionnaire records, it was not possible to perform hot deck imputation on them. As a result, the records only underwent regression imputation, subsample ratio imputation, and clerical imputation.

Regression Imputation

For questions that asked for continuous value answers, such as item 68a on the Unified School Questionnaire (annual salary for a teacher with a bachelor's degree and no teaching experience), simple linear regression was used to impute data. Linear models for such items were based on data both from other items on the questionnaire and data from the school survey. For example, to impute item 68a a model of the salary of teachers with no experience and a bachelor's degree was created through linear regression using the answers to item 63 (contract length), item 51 (number of full-time and part-time teachers employed at the school), and URB (a numerical variable based on the school's proximity to a metropolitan center) as coefficients in the linear regression model.

Items used in the regression model were selected based on how much explanatory power each had in the model and the manner in which each influenced the overall explanatory power of the model. This was

measured by examining the coefficient of the variable in the regression, as well as the adjusted *R*-squared statistic associated with the model. In addition, the certainty of the relationship established through regression was a factor in determining which variables to use in the regression. This was measured by the *t* statistic associated with the coefficient of each variable in the regression as well as the overall *F* statistic associated with the model.

Subsample Ratio Imputation

For items that lacked data following first-stage imputation and required categorical answers, subsample ratio imputation was employed. First, data were broken into five subsamples based on the value of LEVEL (grade levels offered at the school). Then the ratio of each type of response was found for each subsample. Finally, the items were assigned answers according to the distribution within the subsample to which they belonged in order to preserve the response ratios within that subsample.

For example, on Unified School Questionnaire item 67 (whether or not there is a salary scale at the school), there were two available answer categories; 1 = "yes" and 2 = "no." If 10 percent of the respondents with LEVEL equal to 1 answered "1" for this item and 90 percent answered "2," then blank responses were imputed to maintain this ratio within the subsample.

Table 39 contains the amount of stage 2 imputation performed on BIA-funded school records. Imputation count information is included in table 33 for the items that deal with the district data, while imputation count information for items dealing with public school data are included in table 37.

Third-Stage Imputation for Unified School Data

Clerical Imputation

Some values for records from the Unified School Questionnaire were imputed clerically. This method was used when there was no available donor that matched the record with the missing values, and when the computer-imputed value was outside the range of valid entries or inconsistent with other entries on the record, or if there was no method of imputation appropriate for the item other than clerical imputation. In order to determine an appropriate value for each unanswered item, Census Bureau analysts examined

- the original image of the questionnaire, to see if the respondent had made any notes in the margins that might provide insight;
- other items within the same record with related information;
- similar cases, to get an understanding of what the respondent might have answered; and/or
- averages of similar subsamples.

Table 39 contains the amount of stage 3 imputation performed on BIA-funded school unified school records. Imputation count information is included in table 33 for the items that deal with the district data, while imputation count information for items dealing with public school data are included in table 37.

Final File Imputation Table for BIA-Funded School Data

The number of source codes (specific items) that were imputed on a given percentage of records during a given stage of processing appears below in table 39. For example, during stage 1 imputation 85 survey items were imputed for between 1 and 15 percent of the BIA-funded school records.

Table 39. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIA-funded schools: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	346	85	2	0
Stage 2	398	18	17	0
Stage 3	87	277	68	1

NOTE: BIA refers to the Bureau of Indian Affairs. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "BIA School Restricted Use Data File," 2003–04.

"Appendix Q. Imputation Changes to Variables, by Data File," contains the total number of imputations applied at each stage to each source code.

Imputation Procedures for the Teacher and Private School Teacher Questionnaires (Forms SASS-4A and -4B)

When entering the imputation step of data processing, teacher data for public, public charter, and BIA-funded school teachers were kept together on one data file, and teacher data for private school teachers were on a separate data file. Items on the teacher questionnaires that still had items that were "not answered" went through a first stage of imputation in which unanswered items were imputed from other items on the same teacher record or items on the corresponding school record. The teacher questionnaires then went through the second stage of imputation in which some of the remaining "not answered" items were filled using either the data record from a similar record or random ratio imputation. The third stage of imputation filled in the remaining "not answered" items that were not resolved during the first two stages of imputation.

After all stages of imputation were completed and no more "not answered" items remained, the private school teacher data stayed in a separate dataset. The teacher data from BIA-funded school teachers were separated into a single dataset. Public and public charter school teacher data remained in the same data file.

First-Stage Imputation for Teacher Data

In the first stage, unanswered items for the teacher questionnaires were filled whenever possible by using information about the teacher from these sources:

- *Other questionnaire items on the teacher questionnaire record*. Based on entries from related items on the teacher record, assumptions were made about how the respondent might have answered items. For example, if item 4, which asks how much time spent at the school, was unanswered, and item 1 indicated that the teacher was a long-term substitute, and item 57 indicated that the teacher worked more than 35 hours per week, then "full-time" was imputed to item 4.
- *School questionnaire record for the school in which the teacher taught*. If the teacher's school participated in SASS, information from the record for the school was used to impute values in the first stage. For example, if Teacher Questionnaire item 49, which asks for the number of students

taught with individual education plans (IEP), and item 45 on the school form indicated there were no students with IEPs, then zero was imputed to item 49 on the teacher form.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For example, if the number of hours spent teaching different subjects reported in item 16 was greater than 40, then the ratio of hours per subject to total hours reported was maintained but was adjusted to be consistent with the total hours spent delivering instruction as reported in Teacher Questionnaire item 59.

Tables 40 through 42 include summaries of the amount of imputation performed in stage 1 processing.

Second-Stage Imputation for Teacher Data

Hot Deck Imputation

In general, hot deck imputation filled unanswered items by using data from the record for a similar teacher (e.g., a teacher of similar teaching level, etc.) who worked at a similar school (e.g., a school that was the same level, the same type, of similar size, etc.). Imputation variables that describe certain characteristics of the teachers and their schools were created and used to sort the records and to match incomplete records to those with complete entries (donors).

For some items, such as item 4 (how much time worked as a teacher in the school), data were copied directly to the record with the missing value. For other items, such as item 8 (year started teaching), the entries on the donor record were used as factors along with other questionnaire data to fill in the incomplete items. For example, if item 8 was unanswered, then the teacher's year of birth and the donor's age at the time they started teaching were used to impute an answer for item 8.

Public School Teachers. For stage 2, the states were combined into 23 groups according to their geographic location in order to increase the size of the data pool. All imputation was done within the state group; that is, the donor record had to be from a teacher within the same state group as the incomplete record. Within each state group, the records were sorted by the following variables:

STATE	State school location
S0414	School's total enrollment
SCHKND[29]	Kind of school
TEALEVEL	Grade levels taught

The records were sorted by STATE / SCHKND / TEALEVEL / S0414.

Private School Teachers. The records were sorted by the following variables:

AFFILG	School's general affiliation
AFFILS	School's religious and/or association affiliation
TEALEVEL	Grade levels taught
URB	Proximity to a metropolitan center
S0734	School's total enrollment

The records were sorted by AFFILG / AFFILS / TEALEVEL / URB / S0734.

[29] SCHKND indicates whether the school is a regular public school (including Department of Defense and some one-school districts), BIA-funded school, or public charter school.

BIA-funded School[30] Teachers. BIA-funded school teacher data were in the same dataset as the rest of public school teacher data and received the same treatment. However, because SCHKND was one of the sorting variables, non-BIA-funded school teachers could not be in a donor relationship with BIA-funded school teachers.

Public Charter School Teachers. Public charter school teacher data were in the same dataset as the rest of public school teacher data and received the same treatment. However, because SCHKND was one of the sorting variables, non-public charter school teachers could not be in a donor relationship with public charter school teachers.

Random Subsample Ratio Imputation

After hot deck imputations were completed, remaining unanswered items were filled in using a program that randomly assigned values to categorical variables while preserving the observed distribution of the data. The program also sorted the data in order to take into account those variables that might explain why respondents answered one way or another. Continuous variables were assigned a random "plausible value" (a value between the 5th and 95th percentile) to cases with missing responses based on the range of values provided by respondents with similar characteristics.

For example, type of school, level of classes taught, school program type, and teaching experience were used to define a subsample within the data. Then, if a record had an item missing and that record belonged to the subset within the data, a random answer was assigned to the record in such a way so as to maintain the distribution of answers to that item within that subsample. So, if it was found that for private, elementary, and Montessori school teachers with 20 years of teaching experience Teacher Questionnaire item 71, base academic pay, had a 5th percentile answer of $20,000 and a 95th percentile answer of $50,000, then the program randomly assigned answers consistent with that distribution to teachers that fit the description.

Tables 40 through 42 include summaries of the amount of imputation performed in stage 2 processing.

Third-Stage Imputation for Teacher Data

Clerical Imputation

For cases where the respondent did not report gender in Teacher Questionnaire item 76, a value was imputed clerically by referring to the respondent's name whenever possible. For names that were not clearly gendered, Census Bureau analysts clerically imputed the item by looking at other records with similar characteristics (e.g., teaching assignment field, teaching level) and making an appropriate decision on a case-by-case basis. In addition, some values on the teacher records were imputed clerically when there was no available donor that matched the record with the missing values, when the computer-imputed value was outside the range of valid entries or inconsistent with other entries on the record, or when there was no method of imputation appropriate for the item other than clerical imputation. In order to determine an appropriate value for each unanswered item, Census Bureau analysts reviewed

- the original image of the questionnaire, to see if the respondent had made any notes in the margins that might provide insight;
- other items within the same record with related information;
- similar cases, to get an understanding of what the respondent might have answered; and/or

[30] BIA-funded school refers to schools funded by the Bureau of Indian Affairs (BIA) that were not operated by a local school district. These schools may be operated by BIA, a tribe, or a private contractor.

- averages of similar subsamples.

Tables 40 through 42 include summaries of the amount of imputation performed in stage 2 processing.

Final File Imputation Tables for Teacher Data

Following stage 3 processing, BIA-funded school teacher records were removed to create the final data files. The number of source codes (specific items) that were imputed on a given percentage of records during a given stage of processing appears for each file below in tables 40 through 42. For example, during stage 1 imputation 141 survey items were imputed for between 1 and 15 percent of the public school (including public charter school) teachers.

Table 40. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public school teachers, including public charter school teachers: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	195	141	0	0
Stage 2	37	297	2	0
Stage 3	284	52	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Restricted Use Data File," 2003–04.

Table 41. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for private school teachers: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	216	120	0	0
Stage 2	69	266	1	0
Stage 3	268	68	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Teacher Restricted Use Data File," 2003–04.

Table 42. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIA-funded school teachers: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	228	108	0	0
Stage 2	82	247	7	0
Stage 3	324	12	0	0

NOTE: BIA refers to the Bureau of Indian Affairs. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "BIA School Teacher Restricted Use Data File," 2003–04.

"Appendix Q. Imputation Changes to Variables, by Data File," contains the total number of imputations applied at each stage to each source code.

Imputation Procedures for the School Library Media Center Questionnaire (Form LS-1A)

Library media center data for public and BIA-funded schools were on the same data file when entering the imputation step of data processing. Items from the School Library Media Center questionnaire that still had items that were "not answered" went through a first stage of imputation in which unanswered items were imputed from other items on the same library media center record or items on the corresponding school record. The library media center data then went through the second stage of imputation in which some of the remaining "not answered" items were filled using either the data record from a similar record, regression imputation, or random ratio imputation. The third stage of imputation filled in the remaining "not answered" items that were not resolved during the first two stages of imputation. After all stages of imputation were completed and no more "not answered" items remained, the library media center data from BIA-funded schools were separated into a single dataset.

First-Stage Imputation for School Library Media Center Data

In the first stage, unanswered items were completed whenever possible by using information about the school library from the following sources:

- *Other questionnaire items on the library record*. Based on entries from related items on the library record, some assumptions were made about how the respondent might have answered items. For example, if item 4 on the School Library Media Center Questionnaire (whether the library has a paid state-certified librarian) was unanswered and item 12 indicated that no school staff member has primary responsibility for the library, the code for "Yes" was imputed to item 4.
- *Matching SASS school questionnaire*. For a few unanswered items, data from the matching school record were used to impute the entries. For example, if item 6 on the School Library Media Center Questionnaire was unanswered and entries on the school record indicated that the school did not have any library aides, the code for "No" was imputed to item 6 of the library record.

Tables 43 and 44 include summaries of the amount of imputation performed in stage 1 processing.

Second-Stage Imputation for School Library Media Center Data

Hot Deck Imputation

In general, the second stage of imputation filled unanswered items by using data from the record for a library of a similar school (e.g., a school that was the same level, of similar size, located in same type of community). Imputation variables that described certain characteristics of the schools (e.g., enrollment size and school level) were copied from the matching school record. In addition, a variable that categorized the size of the library was created by using the number of books held at the end of the 2002–03 school year. These school variables and the library variable were used to sort the library records and to match incomplete records to those with complete entries (donors).

For some items, such as item 1 on the School Library Media Center Questionnaire (whether library is centralized or decentralized), data were directly copied to the record with the missing value. For others, however, such as item 18a(2) (number of books acquired during the 2002–03 school year), entries on the donor record were used as factors along with other information on the incomplete record to fill the unanswered items. For example, if the number of books held was reported for Library A, but the number acquired was not, the donor's ratio of books acquired to books held was used with the number of books held by Library A to impute the number acquired by Library A (Library A books acquired = Library A books held * (donor library books acquired / donor library books held)).

Public School Library Media Centers. The School Library Media Center Questionnaire records were sorted so that records for libraries of similar schools were near each other on the file. The data were sorted by the following variables:

STATE	State location of school
ENR	School's total enrollment
LEVEL	Grade levels offered
URB	Proximity to a metropolitan center
M0089	Total number of books in library

The records were sorted by STATE / ENR / LEVEL / URB / M0089.

BIA-funded School[31] Library Media Centers. BIA-funded school library media centers were not treated separately from public school library media centers.

Public Charter School Library Media Centers. Public charter school library data were kept in the same dataset as the public school library data through the first stage of imputation. However, the datasets were split prior to hot deck imputation to ensure that no non-public charter school library data would be used in the public charter school library imputation process. Because there were a relatively small number of school libraries in the dataset, it was not possible to use hot deck imputation on the dataset containing only public charter school library data. As a result, public charter school library data went directly into the next steps of processing, which included regression imputation and subsample ratio imputation.

Regression Imputation

Following hot deck imputation, there were still some unanswered items. For questions that ask for continuous value answers, such as item 21b on the School Library Media Center Questionnaire (total

[31] BIA-funded school refers to schools funded by the Bureau of Indian Affairs (BIA) that were not operated by a local school district. These schools may be operated by BIA, a tribe, or a private contractor.

amount spent on electronic databases in the 2002–03 school year), simple linear regression was used to impute data. Linear models for such items were based on other items on the questionnaire. For example, to impute item 21b, a model of expenditures on electronic databases was created through linear regression using the answers to item 18b(3) (amount spent on video materials), item 18c(3) (amount spent on CD-ROM titles), and item 19c (amount spent on subscriptions).

Items used in the regression model were selected based on how much explanatory power each had in the model and the manner in which each influenced the overall explanatory power of the model. This was measured by examining the coefficient of the variable in the regression, as well as the adjusted R-squared statistic associated with the model. In addition, the certainty of the relationship established through regression was a factor in determining which variables to use in the regression. This was measured by the t statistic associated with the coefficient of each variable in the regression, as well as the overall F statistic associated with the model.

Subsample Ratio Imputation

For items that lacked data following hot deck imputation and required categorical answers, subsample ratio imputation was employed. First, data were broken into five subsamples based on the value of LEVEL (grade levels offered at the school). Then the ratio of each type of response was found for each subsample. Finally, the items were assigned answers according to the subsample to which they belonged in such a way so as to preserve the response ratios within that subsample.

For example, on School Library Media Center Questionnaire item 20 (whether or not the library had access to electronic databases of periodicals provided for free), there were two answer categories available, "yes" or "no." If it was found that 10 percent of respondents with LEVEL equal to 1 answered "no" for this item and 90 percent answered "yes," then items were imputed to maintain this ratio.

Tables 43 and 44 include summaries of the amount of imputation performed in stage 2 processing.

Third-Stage Imputation for School Library Media Center Data

Clerical Imputation

Some values on the library records were imputed clerically. This method was used when there was no available donor that matched the record with the missing values, when the imputed values were outside the range of valid entries or inconsistent with other entries on the record, or when there was no method of imputation appropriate for the item other than clerical imputation. In order to determine an appropriate value for each unanswered item, Census Bureau analysts examined

- the original image of the questionnaire, to see if the respondent had made any notes in the margins that might provide insight;
- other items within the same record with related information;
- similar cases, to get an understanding of what the respondent might have answered; and/or
- averages of similar subsamples.

Tables 43 and 44 include summaries of the amount of imputation performed in stage 3 processing.

Final File Imputation Tables for School Library Media Center Data

Following stage 3 processing, BIA-funded school library records were removed to create a separate dataset, while the public charter school library records where added back into the public school library dataset. The number of source codes (specific items) that were imputed on a given percentage of records during a given stage of processing appears for each file below in tables 43 and 44. For example, during stage 1 imputation 63 survey items were imputed for between 1 and 15 percent of the public school (including public charter school) library media centers.

Table 43. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public school library media centers, including public charter school library media centers: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	37	63	0	0
Stage 2	3	97	0	0
Stage 3	58	42	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Library Media Center Restricted Use Data File," 2003–04.

Table 44. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIA-funded school library media centers: 2003–04

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	62	38	0	0
Stage 2	21	78	1	0
Stage 3	78	22	0	0

NOTE: BIA refers to the Bureau of Indian Affairs. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "BIA School Library Media Center Restricted Use Data File," 2003–04.

"Appendix Q. Imputation Changes to Variables, by Data File," contains the total number of imputations applied at each stage to each source code.

Chapter 9. Weighting and Variance Estimation

This chapter describes the weighting procedure used for the 2003–04 Schools and Staffing Survey (SASS). The final weights are needed to have the sample estimates reflect the target survey population when analyzing the data. In addition, the variance estimation procedures are discussed, which include the methods of estimating sampling errors for weighted estimates in SASS using the replicate weights. Weighting is presented first, followed by variance estimation.

Weighting

This section describes the weighting processes for each SASS respondent. The general purpose of weighting is to inflate the sample estimates to represent the target survey population. The steps for weighting various types of respondents are largely the same. The initial basic weight (the inverse of the sampled unit's probability of selection at the time of initial selection) is used as the starting point, then a sampling adjustment factor is applied to account for any additional circumstances impacting the probability of selection (e.g., subsampling in the field). This product is the base weight. Next, a nonresponse adjustment factor is calculated and applied using whatever information is known about the respondents from the sampling frame data. Finally, various ratio adjustment factors are calculated and applied to the sample. The type and number of ratio adjustment factors varies with each SASS data file, but in general, they each adjust the sample totals to frame totals in order to reduce sampling variability.

Most components of the weighting employed weighting classes in the calculation of the weighting adjustments. Weighting classes allow for differential adjustment factors to be computed for the same weighting component. This technique is especially useful when the computed factors are presumed to differ substantially, such as when patterns of nonresponse vary across subpopulations. For each component of SASS described in subsequent sections, the formula for computing the particular weighting component is presented, along with a brief description of each component of the weight. When computations were done within weighting classes, or cells, such as nonresponse adjustments, the cells are described. Sometimes a cell did not have enough data to produce a reliable estimate; in such cases, cells were collapsed. The most important variables were always collapsed last. The collapsing criteria are also described below for each component of SASS.

The school weight is described first since it is the primary sampling unit. The public, Bureau of Indian Affairs (BIA) funded, and private school weights have similar structures and are presented together. They differ only by the definition of the cells that were used to compute the nonresponse adjustment factor and the ratio adjustment factor(s). The specific weighting adjustment factors and cells are described in the second section. Since the public, BIA-funded, and private school administrator weights are similar to the school weights, they are described third. In the fourth section, the public school district weights are described. The fifth section describes how district base weights were computed. Teacher weights are described in the sixth section. Since the public, BIA-funded, and private school teacher weights have the same structure, they are presented together. They differ only in the definition of the cells that were used to compute the various weighting factors. These cells are described separately within the teacher weight section. The final two sections describes the school library weights. The library media center survey was only offered to public and BIA-funded schools in this administration of SASS.

The distribution of the final weights from each file is provided in table 45 below.

Table 45. Distribution of final weights for interviewed cases, by data file: 2003–04

Data file	Mini-mum	Weight at given percentile									Maxi-mum	Mean
		1st	5th	10th	25th	50th	75th	90th	95th	99th		
Public School District	0.81	1.00	1.00	1.10	1.39	2.10	3.99	7.28	10.05	20.04	137.06	3.51
Public School	0.82	1.17	1.63	2.11	3.48	6.70	13.65	24.87	35.81	62.23	219.43	11.03
BIA School[1]	1.04	1.04	1.04	1.04	1.05	1.05	1.09	1.40	1.40	2.57	2.80	1.16
Private School	0.84	1.87	3.49	4.52	7.04	9.98	14.03	19.62	24.69	37.80	76.81	11.56
Public School Principal	0.90	1.14	1.57	2.04	3.43	6.47	13.23	24.37	35.05	61.17	236.48	10.76
BIA School Principal[1]	1.03	1.03	1.03	1.03	1.03	1.07	1.11	1.30	1.30	2.59	2.68	1.14
Private School Principal	0.82	1.94	3.47	4.55	7.24	10.20	14.40	19.29	24.33	37.37	85.12	11.65
Public School Teacher	0.81	5.76	8.76	11.29	19.63	37.24	83.37	181.46	267.60	565.69	1,535.22	75.17
BIA School Teacher[1]	0.87	1.11	3.06	3.69	4.37	6.15	8.02	9.46	10.69	15.50	23.18	6.43
Private School Teacher	0.89	5.18	8.34	15.10	34.66	50.21	70.28	111.10	136.87	216.12	390.51	58.58
Public School Library Media Center	0.97	1.14	1.56	2.06	3.39	6.45	13.33	25.43	34.65	64.86	156.77	10.83
BIA School Library Media Center[1]	1.09	1.09	1.09	1.09	1.09	1.21	1.25	1.41	1.41	2.57	2.83	1.24

[1] BIA refers to the Bureau of Indian Affairs.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, Private School, BIA School, Public School Principal, Private School Principal, BIA School Principal, Public School Teacher, Private School Teacher, BIA School Teacher, Public School Library Media Center, and BIA School Library Media Center Restricted Use Data Files," 2003–04.

School Weight (School, Private School, and Unified School Questionnaires)

The final weight for the public and private school data is the product of:

(Initial Basic Weight) and (Sampling Adjustment Factor) and (Nonresponse Adjustment Factor) and (First-Stage Ratio Adjustment Factor) and (Second-Stage Ratio Adjustment Factor[32])

where:

Initial Basic Weight is the inverse of the probability of selection of the school at the time of selection.

Sampling Adjustment Factor is an adjustment that accounts for circumstances that affect the school's probability of selection that are identified after the data collection has begun, such as a merger, duplication, or incorrect building-level collapsing (i.e., a junior high school and a senior

[32] The second-stage ratio adjustment factor applies to private schools only.

high school merge to become a junior/senior high school). Any changes in the school collapsing, as described in chapter 4 (i.e., uncollapsing or additional collapsing of schools), are adjusted for in this step. The collapsing described in chapter 4 is reflected in the initial basic weight.

Nonresponse Adjustment Factor is an adjustment that accounts for total school nonresponse. It is the weighted (product of initial basic weight and sampling adjustment factor) ratio of the total eligible in-scope schools (interviewed schools plus noninterviewed schools) to the total responding in-scope schools (interviewed schools) within cells. Variables used to define cells are presented in exhibit 7. At this stage of the weighting process, noninterviewed and out-of-scope schools are assigned a weight of zero.

First-Stage Ratio Adjustment Factor is a factor that adjusts the sample estimates to known final frame totals after all frame construction. Construction of the frame is described in chapter 4. For public schools, the first-stage ratio adjustment factor is equal to the ratio of the total number of SASS frame noncertainty schools (i.e., schools not selected with certainty as described in chapter 4) to the weighted sample estimate of the total number of noncertainty schools within each weighting class, or cell, defined for this step in the weighting procedure. Certainty schools were excluded from both the numerator and denominators and were assigned a factor equal to one. Since all BIA-funded schools were selected with certainty, this step in the weighting was not applied to them. All BIA-funded schools received a factor of one. For private schools, the adjustment was the same, except for the area frame. For the area frame, all private schools in noncertainty primary sampling units were in sample and there were no universe counts for all noncertainty primary sampling units. These schools were assigned a factor equal to one. Certainty private schools were also excluded from this calculation and received a factor set equal to one.

Second-Stage Ratio Adjustment Factor applies only to private schools. It is a factor that adjusts sample estimates based on an older sampling frame to current independent control counts. For the 2003–04 SASS, the list frame for private schools was the current 2003–04 Private School Universe Survey (PSS) list frame, whereas the area frame was based on an older 2001–02 PSS area frame sample. The second-stage ratio adjustment factor is the ratio of the weighted 2003–04 PSS estimates of schools to the weighted 2003–04 SASS sample estimate of schools within each cell.

School Weighting Adjustment Cells

School noninterview and first- and second-stage ratio adjustments were computed within cells. The schools were classified into cells based on sampling frame data for the noninterview and first-stage ratio adjustments. For the second-stage ratio adjustment, private schools were classified into cells using questionnaire data.

For both public and private schools, schools selected with certainty were adjusted using a separate set of cells for the nonresponse adjustment within each sector. This was done due to changes in the variance methodology, which was changed to reflect a variance associated with nonresponding certainty schools. See the "Variance Estimation" section later in this chapter for further details on the variance methodology.

Public, Public Charter, BIA-Funded, and Private School Adjustment Cells

The following exhibit presents a summary of the collapsing criteria applied for each adjustment factor to the different types of schools in the weighting process. The exact cells are shown in "Appendix R. Weighting Adjustment Cells."

Exhibit 7. Adjustment factors and collapsing criteria as applied to school weights: 2003–04

Type of school	Nonresponse adjustment factor			First-stage ratio adjustment factor			Second-stage ratio adjustment factor (list and area frames)		
	Collapsing criteria		Collapsing order	Collapsing criteria		Collapsing order	Collapsing criteria		Collapsing order
Public schools									
Certainty	Factor	≤ 2.0	Enrollment, school level, state/region	†			†		
	Interviews	≥ 5							
	Noninterviews	≥ 1							
BIA-funded[1]	Factor	≤ 2.0	Enrollment, school level, state	†					
	Interviews	≥ 10							
	Noninterviews	≥ 1							
High American Indian enrollment	Factor	≤ 2.0	Enrollment, school level, state/region	Factor	≥ 0.667 and ≤ 1.5	Enrollment, school level, state/region			
	Interviews	≥ 10		Interviews	≥ 10				
Public charter	Factor	≤ 1.5	School level, state/region	Factor	≥ 0.667 and ≤ 1.5	School level, state/region			
	Interviews	≥ 15		Interviews	≥ 10				
Other public	Factor	≤ 1.5	Enrollment, urbanicity, school level	Factor	≥ 0.667 and ≤ 1.5	Enrollment, urbanicity, school level			
	Interviews	≥ 15		Interviews	≥ 15				
Private schools									
Certainty		†		†			†		
List frame	Factor	≤ 2.0	Enrollment, school level	Factor	≥ 0.667 and ≤ 1.5	School level, affiliation	Factor	≥ 0.667 and ≤ 1.5	Enrollment, urbanicity, school level
	Interviews	≥ 15		Interviews	≥ 15				
Area frame	Factor	≤ 2.0	Enrollment, school level, affiliation	†			Interviews	≥ 15	
	Interviews	≥ 15							

† Not applicable.
[1] BIA refers to the Bureau of Indian Affairs.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

Exhibit 7 is used to identify the differences in the criteria used in each adjustment factor calculation. The collapsing criteria are used within a cell, while the collapsing order is used to determine a similar cell with which to collapse. The categories used in the collapsing order differed by sector, type of public school, state, or affiliation stratum and are detailed in "Appendix R. Weighting Adjustment Cells." Note that collapsing for public schools was restricted to within type (i.e., certainty, BIA-funded, public charter, high American Indian or Alaska Native enrollment, other). For example, if a particular cell in the certainty public school table met the collapsing criteria (i.e., had at least five interviewed schools, at least one noninterviewed school, and an initial factor of less than two), then it was not collapsed into another cell. However, if that cell did not meet any one of the above criteria, it was collapsed with a similar cell. In this case, the cell would have been collapsed into a cell with a similar enrollment. The number of noninterviewed schools was only used in certainty school cells to determine if the cell needed to be collapsed. In the certainty public school example above, the number of interviewed schools was insufficient to prevent collapsing of the nonresponse adjustment factor cells even though the number of

noninterviewed schools was sufficient. The number of interviews needed to keep the cell from collapsing was always used as a criterion for collapsing and can differ for different types of schools.

Principal Weight (Principal and Private School Principal Questionnaires)

The public, public charter, BIA-funded, and private school principal weighting was done the same way as the school questionnaire weighting described above. Since the response status for each of the principal surveys and the corresponding school surveys could be different, the weighting process was done separately for each questionnaire. The sum of the principal weights may be less than the sum of the school weights because some schools do not have principals. See chapter 7 for a discussion of the interview status of schools and principals.

Public School District Weight (School District Questionnaire)

The final weight for the public school district data is the product of:

(Initial Basic Weight) and (Sampling Adjustment Factor) and (Nonresponse Adjustment Factor) and (First-Stage Ratio Adjustment Factor)

where:

Initial Basic Weight is the inverse of the probability of selection of the district at the time of selection. Note that districts were not selected directly, making the computation of this probability more complex. See the next section, "District Initial Basic Weights," for a detailed description of the computation.

Sampling Adjustment Factor is an adjustment that accounts for circumstances that affect the district's probability of selection that are identified after the data collection has begun, such as a merger or split. For example, if two districts consolidated into one, the consolidated district's base weight would reflect the two chances of selection.

Nonresponse Adjustment Factor is an adjustment that accounts for total district nonresponse. It is the weighted (product of the initial basic weight and sampling adjustment factor) ratio of total eligible in-scope districts to the total responding in-scope districts, computed within weighting classes, or cells (as shown in exhibit 8), within each state. At this stage of the weighting, out-of-scope and noninterviewed districts were assigned a weight of zero. A separate nonresponse adjustment factor was computed for Hawaii. Since there is only one district in Hawaii, no amount of collapsing would satisfy the collapsing criteria.

First-Stage Ratio Adjustment Factor is a factor that adjusts the sample estimates to the 2001–02 Common Core of Data (CCD) frame totals. It is the ratio of the total number of noncertainty districts in the frame to the weighted sample estimate of the total number of noncertainty districts in the frame, computed within weighting classes, or cells (as shown in exhibit 8), within each state. Certainty districts were assigned a factor of one.

Exhibit 8. Adjustment factors and collapsing criteria as applied to public school district weights: 2003–04

Type of public school district	Nonresponse adjustment factor			First-stage ratio adjustment factor		
	Collapsing criteria		Collapsing order	Collapsing criteria		Collapsing order
Certainty districts	Factor	≤ 1.5	Urbanicity, enrollment	†		
	Interviews	≥ 10				
Remaining districts	Factor	≤ 1.5		Factor	≥ 0.667 and ≤ 1.5	Urbanicity, enrollment
	Interviews	≥ 10		Interviews	≥ 10	

† Not applicable.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

Exhibit 8 is used to identify the differences in the criteria used in each adjustment factor calculation. Some of the criteria (collapsing criteria) apply within a cell, while the other criteria (collapsing order) are used to determine a similar cell with which to collapse. Criteria vary by whether or not the district was selected with certainty.

District Initial Basic Weights

Given the complexity of the sampling scheme, the calculation of the district initial basic weights is not straightforward. Districts were divided into two groups: 1) districts outside Delaware, Florida, Maryland, Nevada, and West Virginia; and 2) districts in Delaware, Florida, Maryland, Nevada, and West Virginia, which are all certainty districts.

District Base Weights for Districts Outside Delaware, Florida, Maryland, Nevada, and West Virginia

The district sample was not selected directly through a district frame. Instead, the districts were selected through the school sampling. In other words, the districts associated with the sampled schools comprised the district sample. As a result, district weighting requires more factors than other respondents.

Since schools were stratified by school level (i.e., elementary, secondary, and combined) and by type (i.e., high proportion of American Indian enrollment, public charter, other public) the probability of selection for district k, (Pk(sel)) can be written as follows:

$$Pk(sel) = 1 - [(1 - Pk(HAI,ELM))(1 - Pk(HAI,SEC))(1 - Pk(HAI,COM))(1 - Pk(PUB,ELM))(1 - Pk(PUB,SEC))(1 - Pk(PUB,COM))(1 - Pk(CHA,ELM))(1 - Pk(CHA,SEC))(1 - Pk(CHA,COM))]$$

where: Pk(HAI,ELM) is the probability of selecting district k that includes schools that are classified as elementary (ELM) and have a high American Indian enrollment (HAI). This equals the sum of the school selection probabilities for the schools that are American Indian, elementary, and in district k. If the sum is greater than one, then Pk(HAI,ELM) is set equal to one.

Pk(HAI,SEC) is the probability of selecting district k that includes schools that are classified as secondary (SEC) and have a high American Indian enrollment (HAI). This equals the sum of the school selection probabilities for the schools that are American Indian, secondary, and in district k. If the sum is greater than one, then Pk(HAI,SEC) is set equal to one.

Pk(HAI,COM) is the probability of selecting district k which contains schools that are classified as combined (COM) and have a high American Indian enrollment (HAI). This equals the sum of the school selection probabilities for the schools that are American Indian, combined, and in district k. If the sum is greater than one, Pk(HAI,COM) is set equal to one.

Pk(PUB,ELM) is the probability of selecting district k which contains schools that are elementary (ELM) and are not public charter schools or do not have high American Indian enrollment (PUB). This equals the sum of the school selection probabilities for the schools that are not American Indian or public charter, but are elementary and in district k. If the sum is greater than one, then Pk(PUB,ELM) is set equal to one.

Pk(PUB,SEC) is the probability of selecting district k which contains schools that are secondary (SEC) and do not have a high American Indian enrollment or are not public charter schools (PUB). This equals the sum of the school selection probabilities for the schools that are not American Indian, not public charter, and are secondary and in district k. If the sum is greater than one, then Pk(PUB,SEC) is set equal to one.

Pk(PUB,COM) is the probability of selecting district k which contains schools that are combined (COM) and not American Indian or public charter (PUB). This equals the sum of the school selection probabilities for the schools that are not American Indian or public charter, are combined and in district k. If the sum is greater than one, then Pk(PUB,COM) is set equal to one.

Pk(CHA,ELM) is the probability of selecting district k which contains schools that are elementary (ELM) and public charter (CHA). This equals the sum of the school selection probabilities for the schools that are public charter, elementary, and in district k. If the sum is greater than one, then Pk(CHA,ELM) is set equal to one.

Pk(CHA,SEC) is the probability of selecting district k in which contains schools that are classified as secondary (SEC) and public charter (CHA). This equals the sum of the school selection probabilities for the schools that are public charter, secondary, and in district k. If the sum is greater than one, then Pk(CHA,SEC) is set equal to one.

Pk(CHA,COM) is the probability of selecting district k which contains schools that are classified as combined (COM) and public charter (CHA). This equals the sum of the school selection probabilities for the schools that are public charter, combined, and in district k. If the sum is greater than one, Pk(CHA,COM) is set equal to one.

Note that 1/Pk(sel) equals the initial basic weight.

District Base Weights for Delaware, Florida, Maryland, Nevada, and West Virginia

The initial basic weight was one for all districts in Delaware, Florida, Maryland, Nevada, and West Virginia since all districts in these five states were guaranteed to be selected for sample. Their final weights, however, may not equal one due to adjustment for nonresponse.

Teacher Weights (Teacher and Private School Teacher Questionnaires)

The final weight for public and private school teachers is the product of:

(Initial Basic Weight) and (School Sampling Adjustment Factor) and (Teacher List Nonresponse Adjustment Factor) and (Teacher-Within-School Nonresponse Adjustment Factor) and (First-Stage Ratio Adjustment Factor) and (Teacher Adjustment Factor)

where:

Initial Basic Weight is the inverse of the probability of selection of the teacher at the time of selection.

Sampling Adjustment Factor is an adjustment that accounts for circumstances that affect the school's probability of selection that are identified after the data collection has begun, such as a merger, duplication, or incorrect building-level collapsing (i.e., a junior high school and a senior high school merge to become a junior/senior high school). Any changes in the school collapsing described in chapter 4 (i.e., uncollapsing or additional collapsing) are adjusted for in this step. The collapsing described in chapter 4 is reflected in the initial basic weight.

Teacher List Nonresponse Adjustment Factor is an adjustment that accounts for teachers in schools that did not provide a list of its teachers. It is the weighted (the product of the school initial basic weight and the school sampling adjustment factor) ratio of total eligible in-scope schools to the total in-scope schools providing teacher lists, computed within cells. (See exhibit 9.)

Teacher-within-school Nonresponse Adjustment factor is an adjustment that accounts for sampled teachers who did not respond to the survey. It is the weighted (product of all previously defined components) ratio of the total eligible teachers to the total eligible responding teachers computed within cells. (See exhibit 9.) At this stage of the weighting procedure, noninterviewed and out-of-scope teachers are assigned a weight of zero.

First-Stage Ratio Adjustment Factor is a factor computed at the school level that adjusts the sampled schools' frame estimates of full-time equivalent (FTE) teachers to the total full-time equivalent teachers in the whole school sampling frame (either the 2001–02 CCD or the updated 2001–02 PSS). For the set of noncertainty schools, the factor is the ratio of the frame estimate of the total number of FTE teachers to the weighted (product of all previously defined components) sample estimate of the total number of FTE teachers. These factors are computed within cells. (See exhibit 9.) The sample estimate uses the frame count of the number of FTE teachers in the school.

For teachers from certainty schools, the factor is one.

Teacher Adjustment Factor is a factor that adjusts the inconsistency between the estimated number of teachers from the SASS school data files and the SASS teacher data files. It is the ratio of the weighted number of teachers from the school data file for a cell to the weighted number of teachers on the teacher data file for a cell. The weight is the product of all previously defined components. This factor ensures that teacher estimates from the teacher file will agree with the corresponding teacher aggregates from the school file (after imputation), since the teacher file counts are being adjusted to agree with the school counts.

The teacher list nonresponse adjustments, the teacher-within-school nonresponse adjustments, the first-stage ratio adjustments, and the teacher adjustments are computed within cells. The cells for the teacher list nonresponse adjustments and the first-stage ratio adjustments are the same as those used in the school nonresponse and first-stage adjustments. The cells are described in the school weight section.

Exhibit 9. Adjustment factors and collapsing criteria as applied to teacher weights: 2003–04

Type of teacher	Teacher within-school nonresponse adjustment factor			Teacher adjustment factor[1]		
	Collapsing criteria		Collapsing order	Collapsing criteria		Collapsing order
Public school teachers						
BIA-funded[2]	Factor	≤ 1.5	Ethnicity, race, enrollment, region, teacher subject	Factor	≥ 0.667 and ≤ 1.5	Ethnicity, enrollment, school level
	Interviews	≥ 15		Interviews	≥ 15	
High American Indian	Factor	≤ 1.5		Factor	≥ 0.667 and ≤ 1.5	
	Interviews	≥ 15		Interviews	≥ 15	
Public charter	Factor	≤ 1.5		Factor	≥ 0.667 and ≤ 1.5	
	Interviews	≥ 15		Interviews	≥ 15	
Other public	Factor	≤ 1.5		Factor	≥ 0.667 and ≤ 1.5	
	Interviews	≥ 15		Interviews	≥ 15	
Private school teachers						
List frame	Factor	≤ 1.5	School level, affiliation	Factor	≥ 0.667 and ≤ 1.5	Ethnicity enrollment, school level, affiliation
	Interviews	≥ 15		Interviews	≥ 15	
Area frame	Factor	≤ 1.5	Enrollment, teaching field, affiliation	Factor	≥ 0.667 and ≤ 1.5	
	Interviews	≥ 15		Interviews	≥ 15	

[1] The list and area frames were combined for private school teachers.
[2] BIA refers to the Bureau of Indian Affairs.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

This exhibit is used to identify the differences in the criteria used in each adjustment factor calculation. The collapsing criteria apply within a cell, while the collapsing order is used to determine a similar cell with which to collapse. Criteria vary by school sector and type of school.

School Library Weights (School Library Media Center Questionnaire)

SASS school library media center data were used to estimate the characteristics of schools with library media centers as well as schools without library media centers. Whenever possible, sampled schools with library media centers and sampled schools without library media centers were adjusted separately. Thus, interviewed library media centers were weighted up to the weighted estimate of sampled schools known to have library media centers, as determined at the time school library media center questionnaires were distributed. Likewise, the number of interviewed schools without library media centers was weighted up to the weighted number of all schools without library media centers as determined from the questionnaire distribution. This was done to study the characteristics of each type of school. When it was not possible to adjust the library weights by the type of school, all sampled school library media centers and schools without library media centers were adjusted as a whole. This was necessary to handle instances where the existence of the library media center could not be established during data collection. Due to reporting inconsistencies between the school library media center questionnaire and the school questionnaire, school library media center survey data were not adjusted directly to schools reporting to have library media centers on the school questionnaire.

The final weight for the public school library media center data is the product of the following:

(Initial School Basic Weight) and (Sampling Adjustment Factor) and (Library Type A, or Unknown status, Nonresponse Adjustment Factor) and (Library Type B, or Known Status, Nonresponse Adjustment Factor) and (First-Stage Ratio Adjustment Factor)
where:

Initial School Basic Weight is the inverse of the probability of selection from the school sample file as reflected at the time of the school sampling.

Sampling Adjustment Factor is an adjustment that accounts for circumstances that affect the school's probability of selection that were identified after the data collection has begun, such as a merger, duplication, or incorrect building-level collapsing (i.e., a junior high school and a senior high school merge to become a junior/senior high school). Any changes in the school collapsing described in chapter 4 (i.e., uncollapsing or additional collapsing) are adjusted for in this step. The collapsing described in chapter 4 is reflected in the initial basic weight.

Library Type A (Unknown Status) Nonresponse Adjustment Factor is an adjustment that accounts for schools that were general refusals or were never contacted and the library media center status was not known. Because it was not clear if the school had a library media center or not, this factor adjusts all schools (with and without library media centers) together. It is the weighted (product of the initial basic weight and the sampling adjustment factor) ratio of the total school library media center records to the total in-scope interviewed school library media centers plus out-of-scope school library media centers.

Library Type B (Known Status) Nonresponse Adjustment Factor is an adjustment that accounts for library media center nonrespondents where the status of the library media center is known based on the status of the library media center questionnaire. Given that schools with library media centers were able to be distinguished from schools without library media centers, this adjustment was made separately for SASS sampled schools with and without library media centers.

Schools with libraries. This adjustment is the weighted (product of the initial basic weight and the sampling adjustment factor and the type A nonresponse adjustment factor) ratio of the interviewed schools with library media centers plus the noninterviewed schools with library media centers to the interviewed library media centers.

Schools without libraries. This adjustment is the weighted (product of the initial basic weight and the sampling adjustment factor and the type A nonresponse adjustment factor) ratio of the interviewed schools without library media centers plus the noninterviewed schools without library media centers to the interviewed schools without library media centers.

At the conclusion of the nonresponse adjustment procedures, noninterviewed school library media centers were assigned a weight of zero.

First-Stage Ratio Adjustment Factor is a factor that adjusts the sample estimates to known frame totals. Construction of the frame is described in chapter 4. For public schools, it is equal to the ratio of the total number of SASS frame noncertainty schools (i.e., those schools not selected with certainty as mentioned in chapter 4) to the weighted sample estimate of the total number of noncertainty schools within each weighting class, or cell, defined for this step in the weighting procedure. Certainty schools were excluded from both the numerator and denominators and were

assigned a factor equal to one. Since all BIA-funded schools were selected with certainty, this step in the weighting did not apply, so all BIA-funded school received a factor of one.

This is the same factor that was applied to the SASS school sample.

Public, Public Charter, and BIA-Funded School Library Adjustment Cells

Library noninterview and ratio adjustments were computed within cells.

For all school library media centers, the types A and B nonresponse adjustment cells were defined the same as those used for the school nonresponse adjustment in the school weighting. The general collapsing criteria were also the same as those used in the school nonresponse adjustment in the school weighting.

For all school library media centers, the first-stage ratio adjustment cells were the same as those used in the first-stage ratio adjustment in the school weighting. The collapsing criteria were also the same as those used in the first-stage ratio adjustment in the school weighting.

Private school library media centers were not surveyed in the 2003–04 SASS.

Variance Estimation

This section describes the variance estimation used for the 2003–04 SASS, how the replicates were assigned, and how to use the replicate weights to compute variances.

Producing Replicate Weights

In surveys with complex sample designs, such as SASS, direct estimates of sampling errors that assume a simple random sample will typically underestimate the variability in the estimates. The SASS sample design and estimation included procedures that deviate from the assumption of simple random sampling, such as stratifying the school sample, oversampling new teachers, and sampling with differential probabilities.

The preferred method of calculating sampling errors to reflect these aspects of the complex sample design of SASS is using replication. Replication methods involve constructing a number of subsamples, or replicates, from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic. The replicate weights are used to compute the variance of a statistic, Y, as given below:

$$\text{Variance } (Y) = \left(\frac{1}{n}\right)\sum_{r}(Y_r - Y)^2$$

Where: Y_r = the estimate of Y using the r^{th} set of replicate weights
n = the number of replicates

The SASS surveys completed before 1993 used a procedure known as balanced repeated replication (BRR) for the calculation of sampling variance. BRR assumes sampling is done with replacement, and hence, BRR does not reflect the increase in precision due to sampling a large proportion of a finite population. For most surveys, where the sampling rates are small, the increase in precision will be small and can be disregarded safely. However, with SASS, the public sector surveys (i.e., school, principal, school district, teacher, and library media center) are designed to produce reliable state estimates. This

necessarily implies large sampling rates, which can lead to very large overestimates of variance with BRR. Likewise, the private sector surveys (i.e., school, principal, and teacher) are designed to produce detailed private school affiliation stratum estimates, which also imply large sampling rates, and subsequent overestimation of variance with BRR.

It is possible to adjust the BRR to include a finite population correction (FPC). The FPC corrects the standard error in instances where a large proportion of the frame is in sample. However, since SASS uses a probability proportionate to size systematic selection procedure, it is not clear what the appropriate FPC would be. It is even possible for an appropriate FPC to be greater than one. (See Kaufman 2001.)

To overcome this limitation, a bootstrap variance estimator was implemented for the 1993–94 SASS, and its role was expanded in the 1999–2000 and even more so in the 2003–04 SASS. The bootstrap variance estimator was used for public schools, private list frame noncertainty schools, and public school districts in the 1993–94 SASS. In the 1999–2000 SASS, an additional bootstrap estimator was also included for public schools and private list frame certainty schools. The bootstrap estimator used in the 2003–04 SASS was modified from the 1999–2000 estimator to make it more stable. In the 2003–04 SASS, a new bootstrap estimator for both public and private school teachers was included. The bootstrap variance reflects the increase in precision due to large sampling rates because the bootstrap sampling is done systematically without replacement, as was the original sampling.

The idea behind the public school district bootstrap variance estimation is to use the distribution of the sampling weights to generate a bootstrap frame. A series of bootstrap samples of a prespecified bootstrap sample size can be selected from the bootstrap frame, respective replicate weights computed, and variances estimated with standard BRR software. This process is repeated for a number of independent samples following the SASS sample design, using variables from the frame. With estimates from a number of samples, a true estimate of the variance is computed. Given the true variance estimate, the bootstrap stratum sample sizes are chosen to get as close as possible to the true stratum variance estimates. Once the bootstrap stratum sample sizes are determined, bootstrap samples and replicate weights are generated for the actual fielded sample using these bootstrap stratum sample sizes. This process indirectly generates an appropriate FPC. For further details, see Kaufman (1998). The district bootstrap replicate base weights (inverse of the probability of selection) generated for the fielded sample were subsequently reweighted by processing each set of replicate base weights through the weighting procedure.

The other bootstrap weights (public schools and teachers and private list frame schools and teacher) were calculated using the updated bootstrap system. This system is based on a series of assumptions about the sampling design: 1) the traditional systematic probability proportionate to size first-stage sample can be approximated using a randomized systematic sample; and 2) the stratified equal probability systematic sample can be approximated by a stratified without replacement simple random sample. Using these assumptions, the bootstrap replicate weights are computed from a single sample. Again, the appropriate bootstrap replicate base weights (inverse of the probability of selection) generated for the sample were subsequently reweighted by processing each set of replicate base weights through the weighting procedure.

Since the number of certainty schools is substantial, it was decided to treat nonresponse as a stage of sample selection. For certainty schools, this allowed for the reflection of a variance component that otherwise would be regarded as a bias. The nonresponse sampling model is as follows:

- For noncertainty schools, nonresponse is considered a nested random process within selected primary sampling units. Within appropriately defined cells (as described in the earlier section on

"School Weighting Adjustment Cells" in this chapter), it is assumed nonresponse follows a "missing at random process."

- For certainty schools, nonresponse is considered the first stage of selection. It is assumed that this process follows a simple random sample without replacement model within appropriately defined cells. (See the earlier section on "School Weighting Adjustment Cells" in this chapter.) The frame size for this selection is assumed to be the number of selected certainty schools in the cell and the sample size is the number of responding certainty schools in the cell.

This procedure also allows for correctly estimating variances for school-based estimates that use school teacher averages generated from the SASS teacher data files.

To be consistent with the bootstrap procedures described above, the nonresponse modeling of certainty schools was reflected through an appropriately defined bootstrap procedure. For more details on the bootstrap methodology and how it applies to SASS, see Efron (1982), Kaufman (1992, 1993, 1994, 1998, and 2001), and Sitter (1990).

The newest version of the bootstrap procedure made it possible to compute teacher bootstrap replicate weights at the same time as the school weights, considerably reducing the processing time to form the replicates.

Applying Replicate Weights

Each SASS data file includes a set of 88 replicate weights designed to produce variance estimates. Replicate weights were created for each of the 88 samples using the same estimation procedures used for the full sample and are included in the data files. Most of the replicate weights were produced using a bootstrap procedure.

As described above, the replicate weights are used to compute the variance of a statistic, Y, as given below.

$$\text{Variance } (Y) = \left(\frac{1}{88}\right)\sum_{r=1}^{88}(Y_r - Y)^2$$

Where: Y_r = the estimate of Y using the r^{th} set of replicate weights, and the number of replicate weights is 88 for SASS.

Analysis of the bootstrap replicate weights revealed that approximately 3 percent of the school (public and private) and teacher (public and private) weights and approximately 9 percent of the district replicate weights fell outside a 95 percent confidence interval. These are nearly the expected 5 percent, indicating the bootstrap replicate weights are close to being distributed normally.

The computation of sampling errors using these replicate weights can be done easily using one of the following software: WesVar Complex Sample Software, SUDAAN (Research Triangle Institute 2001), AM Statistical Software, or STATA 9.

- *WesVar*. The user needs to create a new WesVar data file by specifying the full sample weight variable and the replicate weight variables as defined above, and the replication method, BRR. The replicate weights and the full sample weight can be highlighted and dragged to their appropriate place on the "New WesVar Data File" window. For more information, visit www.westat.com/wesvar/.

- *SUDAAN*. The user needs to specify the sample design as a "Balanced Repeated Replication" design as well as specifying the replicate weight variables. Specifying the sample design (DESIGN = BRR) is done in the procedure call statement (i.e., PROC DESCRIPT DESIGN = BRR;). The specification of the replicate weights is done with the REPWGT statement (i.e., to produce the sampling errors for estimates from the principal data files use the statement: REPWGT AREPWT1-AREPWT88;). For more information, visit www.rti.org/sudaan/.
- *AM*. The user needs to set the replicate weights along with the replication method using the right-click context menu in the variable list window. Once the "Set Replicate Weights" window is displayed, the replicate weights as identified above can be highlighted and dragged into the window. At the bottom of the window are four options for replication method; BRR should be selected. For more information, visit http://am.air.org.
- *STATA*. The use of replicate weights for the generation of standard errors is a new feature to STATA 9. First, the user needs to survey set the data (SVY SET) by defining: the probability weight ([pw =]); balanced repeated replication weights (brrweight(varlist)); variance estimation type ((vce(brr)); and turning on the mse formula (mse). Once these parameters are set, users are able to call up the survey settings and tell STATA which type of standard errors to produce using the SVY BRR command. SVY BRR also allows users to specify the statistics to be collected (exp_list) and the command to perform (e.g., mean or tab). For more information, visit http://www.stata.com.

Public and BIA-Funded School and School Principal Replicates

The bootstrap estimator as described in the previous section was used for developing both the public and BIA-funded school and principal replicates. The replicate weights for the public and BIA-funded school files are SREPWT1 through SREPWT88. The replicate weights for the public and BIA-funded principals are AREPWT1 through AREPWT88.

Private School and School Principal Replicates

For private schools, the list frame used the bootstrap methodology as described above. For the area frame, the sampling rates for the primary sampling units were very small; consequently, there is no advantage in using the bootstrap. BRR methodology was used in the area frame as it had been for all previous rounds of SASS. Half-samples are defined by pairing sample primary sampling units within each sampling stratum, forming variance strata. The final product is 88 replicate weights. After the variance strata were assigned, an orthogonal matrix (matrix H where: $HH^T = nI_n$, where I_n is the identity matrix of order n) was used to form the 88 balanced half-sample replicates. Thus, the same methodology can be applied to both the list frame and the area frame replicate weights to compute variances. The replicate weights for the private school file are SREPWT1 through SREPWT88.

Private school principal replicate weights were calculated similarly to the school replicate weights. The replicate weights for the private school principal file are AREPWT1 through AREPWT88.

School Library Media Center Replicates

The library replicate weights were developed similarly to the school bootstrap replicate weights. The replicate weights for the public and BIA-funded school library media center files are MREPWT1 through MREPWT88.

Teacher Replicates

The teacher replicate weights were generated at the same time as the school replicate weights as part of the 2003–04 bootstrap system.

BRR methodology was employed rather than bootstrap if a teacher was in the private school area frame. Teacher sample records were assigned replicate weights by multiplying the school BRR replicate weight times the teacher's conditional probability of selection given the school is selected in the SASS school sample. The replicate weights for the public, BIA-funded, and private teacher files are TREPWT1 through TREPWT88.

School District Replicates

To reflect that the districts were selected through the school, the school district bootstrap samples were drawn from a frame that reflected both the public school and district distributions. This frame was the major difference between the district bootstrap methodology and that described above for schools. The replicate weights for the district file are DREPWT1 through DREPWT88.

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Chapter 10. Reviewing the Quality of SASS Data

National Center for Education Statistics (NCES) program staff members have the responsibility of ensuring that data files are acceptable for public release. Before files are released to the public, staff members review the data for errors associated with the edit, imputation, and weighting programs. This review incorporates a number of checks that incorporate univariate, bivariate, and multivariate analysis that rigorously examine as many aspects of the data as possible without delaying timely release of the Schools and Staffing Survey (SASS).

Below are aspects of the datasets that were reviewed:

- general data quality;
- nonresponse;
- weighting;
- external data checks; and
- response variance.

General Data Quality

General data quality included a number of reviews that could be characterized as consistency edits. These checks involved an examination of the individual responses, patterns of response, and summary statistics for variables and files to ensure consistency within items, respondents, and files. In addition, key variables and crosstabulations of key variables were examined for distributions and relationships that were expected based upon prior administrations and other research, a check of face validity. The specific data checks included edits, frequency counts, and reasonableness of data, as described below.

Edits. The validity of the skip patterns in the questionnaire was established for each SASS questionnaire during the processing of the data; that is, Census Bureau analysts verified that each item in the questionnaire had the number of responses it should have if skip instructions were followed correctly. Quality checks on the edit specifications were performed and resulted in some corrections (which were treated as a form of imputation).

Frequency Counts. Unweighted record counts for every variable were examined from the restricted-use data files. Variables with out-of-range values or inconsistent values were identified, and these values were corrected.

Reasonableness of Data. Univariate, bivariate, and multivariate tabulations of key survey variables were obtained and compared to estimates from the previous SASS. Tabulations were reviewed to determine whether the basic relationships observed were within reasonable bounds, allowing for elements of change (such as random fluctuations in variance, or a trend such as overall population growth in a state). The distributions and relationships observed were consistent with expectations.

Response Rates

Response rates were examined for possible bias, and little evidence of bias at the unit or item level was found. The details of this analysis are discussed in greater detail in chapter 6, but the nonresponse analysis includes a detailed analysis of unit nonresponse and item nonresponse.

Unit Nonresponse. Response rates were calculated at the state or affiliation stratum level for all SASS data files. (See chapter 6 for unit response rate information.) Nonresponding districts, schools, principals, teachers, and library media centers were studied in greater detail to identify patterns of unit nonresponse. (See chapter 6 for information on the nonresponse unit bias analysis.) While no evidence of substantial bias was found, the response rate fell below 50 percent for particular respondents by state or affiliation stratum: public school districts in Vermont, public school library media centers in the District of Columbia, and principals in Amish private schools. Consequently, these data will not be reported separately in NCES publications.

Item Nonresponse. The extent of item nonresponse for each SASS data file was determined. (See chapter 6 for item response rate information.) Items with high nonresponse rates are identified and reported in tables. Following this review, no items were removed from the data files. However, items with a response rate lower than 70 percent are footnoted as such in published tables.

Replicated Weights

The review of the SASS replicate weights consisted of reviewing the distribution of these weights. The following was done:

1. For each replicate, the weights were totaled. Each replicate total, as well as the average of those numbers, was checked against the full-sample estimate. The standard error of the replicate totals was computed and checked for reasonableness.
2. A check was performed to verify that 95 percent of the replicate weights were contained in an appropriately computed 95 percent confidence interval. This was done with both the basic replicate weights and the final replicate weights.

External Data Checks

One way to verify the external validity of SASS data is to make comparisons to the survey universe, or frame, from which the sample is drawn. For public school districts, schools, principals, and teachers, the external file is an adjusted version of the Common Core of Data (CCD), an annual administrative census of all public schools, Bureau of Indian Affairs (BIA) funded schools, and public school districts in the United States and its territories. The corresponding frame for private schools, principals, and teachers is the Private School Universe Survey (PSS).

The sampling frame is generally drawn from the universe data files about 2 years prior to the field collection of SASS data. Direct comparison can be made between the estimated count of the survey unit, such as school districts or schools, and the corresponding CCD or PSS count. Such comparisons are usually made between SASS and the sampling frame year of the universe data files.

SASS survey estimates of a characteristic of districts or schools, such as enrollment, were compared to CCD or PSS estimates. Those comparisons are usually made to the concurrent years of the universe data files, as the data collected in the field for 1 year are only valid for the same year of the universe. The number of students attending school or the number of teachers employed is subject to more year-to-year change than the number of schools or districts.

Public School District Unit Count Comparison (Public School District File)

Comparisons of the number of public school districts by state and region were made to the CCD 2001–02 Public Education Agency Universe as well as to the CCD 2003–04 Public Education Agency Universe.

The CCD estimates are independent from SASS, because SASS collects its data directly from school districts that are in sample and CCD data are collected from the state education agencies. For the 2003–04 SASS, the district sample consisted of the set of districts that were associated with the SASS public school sample, including public charter schools that operated independently of a public school district. The districts in-scope (i.e., eligible) for SASS were those that employed elementary- and/or secondary-level teachers and were in operation in the 2003–04 school year. CCD utilizes a less restrictive definition of a district and collects information on supervisory unions and districts that neither administer schools nor hire teachers. Thus, two SASS-CCD comparisons were made; one to the total number of CCD districts for the state and one to the number of "regular" CCD districts (as defined by CCD) in the state. Depending upon the number of out-of-scope districts in each particular state, the SASS estimates are either closer to the total number of districts or to the number of regular districts in CCD.

Comparisons in counts of public school districts by state between CCD and SASS are shown in tables 46 and 47. The first table compares the estimated number of public school districts in SASS (calculated using the district final weight) with the number of total and regular school districts in the 2001–02 CCD Public Education Agency Universe. The second table compares the estimated number of public school districts in SASS (calculated using the district basic weight) with the adjusted frame developed by the sampling statisticians at the Census Bureau in preparation for SASS data collection. These are two different measures of "fit" between the weighted count from SASS and the frame count of districts. The sampling frame version of CCD used in table 47 is between the total number of districts and the number of regular districts.

Table 46. Estimated number and percentage of public school districts in 2003–04 SASS compared with total and regular districts in 2001–02 CCD Public Education Agency Universe, by state, region, and community type: 2001–02 and 2003–04

Characteristic	2001–02 CCD regular districts[1]	2001–02 CCD regular districts with students[2]	2001–02 CCD regular districts with schools[3]	2003–04 SASS frame (2001–02 CCD without charter and state run districts)[4]	2003–04 SASS frame (charter and state run districts only)[5]	2003–04 SASS districts (without charter and state run)[6]	2003–04 SASS districts (charter and state run only)[7]	SASS estimate as a percentage of CCD districts with schools[8]	SASS estimate as a percentage of 2003–04 SASS frame[9]
Total	14,559	14,229	14,974	14,421	1,327	14,331	1,207	95.7	99.4
State									
Alabama	128	128	131	128	3	126	7	96.2	98.4
Alaska	53	53	55	53	2	55	0	100.0	103.8
Arizona	323	301	231	239	253	202	273	87.4	84.5
Arkansas	312	312	323	320	5	314	8	97.2	98.1
California	986	986	1,046	1,024	25	1,021	28	97.6	99.7
Colorado	178	178	190	189	0	189	0	99.5	100.0
Connecticut	166	166	179	174	20	173	3	96.6	99.4
Delaware	19	19	20	20	10	21	9	105.0	105.0
District of Columbia	1	1	1	1	33	1	23	100.0	100.0
Florida	67	67	72	71	2	71	2	98.6	100.0
Georgia	180	180	178	178	2	181	1	101.7	101.7
Hawaii	1	1	1	1	0	1	0	100.0	100.0
Idaho	114	114	115	114	1	114	1	99.1	100.0
Illinois	893	893	1,008	1,002	7	996	5	98.8	99.4
Indiana	294	292	309	305	3	306	1	99.0	100.3
Iowa	371	371	371	371	0	371	0	100.0	100.0
Kansas	304	304	304	304	0	304	0	100.0	100.0
Kentucky	176	176	178	176	2	180	0	101.1	102.3
Louisiana	66	66	76	68	20	65	7	85.5	95.6
Maine	282	279	235	174	4	171	6	72.8	98.3
Maryland	24	24	24	24	0	24	0	100.0	100.0
Massachusetts	350	244	330	329	44	306	66	92.7	93.0
Michigan	554	554	611	611	187	593	210	97.1	97.1
Minnesota	417	413	391	382	74	393	54	100.5	102.9
Mississippi	152	152	162	152	10	156	7	96.3	102.6
Missouri	524	523	530	528	2	520	3	98.1	98.5
Montana	452	444	446	376	2	378	0	84.8	100.5
Nebraska	555	526	550	546	5	551	0	100.2	100.9
Nevada	17	17	18	17	1	16	1	88.9	94.1
New Hampshire	178	164	164	123	0	167	0	101.8	135.8

See notes at end of table.

Table 46. Estimated number and percentage of public school districts in 2003–04 SASS compared with total and regular districts in 2001–02 CCD Public Education Agency Universe, by state, region, and community type: 2001–02 and 2003–04—Continued

Characteristic	2001–02 CCD regular districts[1]	2001–02 CCD regular districts with students[2]	2001–02 CCD regular districts with schools[3]	2003–04 SASS frame (2001–02 CCD without charter and state run districts)[4]	2003–04 SASS frame (charter and state run districts only)[5]	2003–04 SASS districts (without charter and state run)[6]	2003–04 SASS districts (charter and state run only)[7]	SASS estimate as a percentage of CCD districts with schools[8]	SASS estimate as a percentage of 2003–04 SASS frame[9]
New Jersey	603	579	592	592	50	597	45	100.8	100.8
New Mexico	89	89	89	89	0	89	0	100.0	100.0
New York	703	701	739	718	44	724	35	98.0	100.8
North Carolina	121	121	119	117	94	125	81	105.0	106.8
North Dakota	222	218	259	256	3	210	0	81.1	82.0
Ohio	662	612	690	689	88	672	64	97.4	97.5
Oklahoma	543	543	543	544	0	545	0	100.4	100.2
Oregon	198	197	205	203	2	198	0	96.6	97.5
Pennsylvania	501	500	589	590	90	605	65	102.7	102.5
Rhode Island	36	36	37	36	4	39	1	105.4	108.3
South Carolina	89	86	103	103	0	105	0	101.9	101.9
South Dakota	176	173	187	183	5	173	5	92.5	94.5
Tennessee	138	138	138	138	0	138	0	100.0	100.0
Texas	1,040	1,040	1,055	1,041	192	1,010	193	95.7	97.0
Utah	40	40	42	40	2	40	1	95.2	100.0
Vermont	292	244	305	75	1	69	0	22.6	92.0
Virginia	137	132	192	171	23	167	1	87.0	97.7
Washington	296	296	296	296	0	307	0	103.7	103.7
West Virginia	55	55	57	55	2	56	1	98.2	101.8
Wisconsin	433	433	431	428	9	439	0	101.9	102.6
Wyoming	48	48	57	57	1	57	0	100.0	100.0
Region									
Northeast	3,111	2,913	3,170	2,811	252	2,851	220	89.9	101.4
Midwest	5,405	5,312	5,641	5,602	375	5,529	342	98.0	98.7
South	3,248	3,240	3,372	3,307	412	3,285	341	97.4	99.3
West	2,795	2,764	2,791	2,701	288	2,666	304	95.5	98.7
Community type (Census)									
Central city	†	†	820	787	801	751	697	91.6	95.4
Urban fringe	†	†	5,940	5,840	327	5,811	271	97.8	99.5
Non-MSA[10]	†	†	8,214	7,794	199	7,770	239	94.6	99.7

See notes at end of table.

Table 46. Estimated number and percentage of public school districts in 2003–04 SASS compared with total and regular districts in 2001–02 CCD Public Education Agency Universe, by state, region, and community type: 2001–02 and 2003–04—Continued

Characteristic	2001–02 CCD regular districts[1]	2001–02 CCD regular districts with students[2]	2001–02 CCD regular districts with schools[3]	2003–04 SASS frame (2001–02 CCD without charter and state run districts)[4]	2003–04 SASS frame (charter and state run districts only)[5]	2003–04 SASS districts (without charter and state run)[6]	2003–04 SASS districts (charter and state run only)[7]	SASS estimate as a percentage of CCD districts with schools[8]	SASS estimate as a percentage of 2003–04 SASS frame[9]
Community type									
Central city	†	†	820	787	801	751	697	91.6	95.4
Urban fringe/large town	†	†	6,060	5,954	347	5,915	303	97.6	99.3
Rural/small town	†	†	8,094	7,680	179	7,666	208	94.7	99.8

† Not applicable.
[1] *Overview of Public and Secondary Schools and Districts: School Year 2001–02* (NCES 2003-411), Table 2, Column 2 (regular school districts include those that are components of supervisory unions).
[2] *Overview of Public and Secondary Schools and Districts: School Year 2001–02* (NCES 2003-411), Table 4, Column 1.
[3] Common Core of Data (CCD), "Preliminary File," 2001–02, ag011a.sas7bdat (regular districts do not include those that supervise charter schools or are run by the state).
[4] Schools and Staffing Survey (SASS), 2003–04 SASS Frame (CCD 2001–02 with Adjustments) "Final District Frame Data File" (only includes regular school districts).
[5] Schools and Staffing Survey (SASS), 2003–04 SASS Frame (CCD 2001–02 with Adjustments) "Final District Frame Data File" (only includes charter and state run districts).
[6] Schools and Staffing Survey (SASS), "District Data File," 2003–04 (Final Weight—only includes regular school districts).
[7] Schools and Staffing Survey (SASS), "District Data File," 2003–04 (Final Weight—only includes charter school and state run districts).
[8] Column 6 / Column 3.
[9] Column 6 / Column 4.
[10] MSA refers to Metropolitan Statistical Area.
NOTE: CCD refers to the Common Core of Data. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Final District Frame Data File and District Data File," 2003–04; Common Core of Data (CCD), "Preliminary File," 2001–02, ag011a.sas7bdat; *Overview of Public and Secondary Schools and Districts: School Year 2001–02*, Common Core of Data (CCD), "Local Education Agency Universe Survey," 2001–02.

In the 2003–04 SASS, the sample selection for districts included "other" types of districts that have become more common in CCD. These "other" types of districts are largely (960 out of 1,066 "other" districts in the 2001–02 CCD) either administrative units that oversee charter schools or independent charter schools that are recognized within their state as if they were districts. Methodologically, single-school districts, some public charter schools, and state or federally-run schools were not sent a separate district questionnaire, but instead received the Unified School Questionnaire. The Unified School Questionnaire incorporated district-level items into the school questionnaire. When the data files were created from the questionnaires, district-level data for these "other" types of districts were included on the district data file. It is important to include these district-level data for a single-school district, state or federally funded school, or public charter school record on the district file in order to approximate the district data reported by CCD and to provide SASS data for "other" types of districts that exist at the elementary and secondary level. Table 47 provides the comparison between the total district count in CCD and the SASS estimate of districts, including those for public charter or state-run schools.

Differences in the count of districts between CCD and SASS do occur for various reasons. In New England, the main reason why CCD and SASS estimates diverge is because CCD counts all local districts

as districts. SASS, however, defines a district as an entity that operates at least one school and is responsible for hiring, firing, and setting policies. In Vermont and, to some extent, in Maine, the functions that define a district in SASS are performed by the supervisory union, school union, or co-op. Supervisory unions, school unions, or co-ops may oversee several districts, as defined by CCD. Consequently, the "district of record" in CCD may not actually be the district that directs the operations for these small, rural schools.

The adjusted SASS sampling frame reflects the changes that are made to better fit the SASS definition of eligible districts for sampling. Even after those adjustments are made, there are still some remaining discrepancies between the SASS sampling frame and the actual sample, as shown in table 46's rightmost column. In general, it is not possible to completely subtract districts that would be ineligible for SASS from CCD, because they are not always readily identifiable. For example, in some states supervisory units may oversee school operations, while in other states that is not as common.

Table 47. Estimated number and percentage of public school districts in 2003–04 SASS compared with total public school districts in 2001–02 CCD Public Education Agency Universe, by state and region: 2001–02 and 2003–04

Characteristic	2001–02 CCD total districts	2003–04 SASS frame total with charter and state-run schools	2003–04 SASS total districts (including charter and state-run)	SASS estimate as a percentage of CCD total districts[1]	SASS estimate as a percentage of 2003–04 SASS frame[2]
Total	17,085	15,748	15,538	90.9	98.7
State					
Alabama	131	131	133	101.5	101.5
Alaska	55	55	55	100.0	100.0
Arizona	513	492	475	92.6	96.5
Arkansas	338	325	322	95.3	99.1
California	1,056	1,049	1,049	99.3	100.0
Colorado	200	189	189	94.5	100.0
Connecticut	197	194	176	89.3	90.7
Delaware	30	30	30	100.0	100.0
District of Columbia	34	34	24	70.6	70.6
Florida	73	73	73	100.0	100.0
Georgia	180	180	182	101.1	101.1
Hawaii	1	1	1	100.0	100.0
Idaho	115	115	115	100.0	100.0
Illinois	1,060	1,009	1,001	94.4	99.2
Indiana	326	308	307	94.2	99.7
Iowa	386	371	371	96.1	100.0
Kansas	304	304	304	100.0	100.0
Kentucky	196	178	180	91.8	101.1
Louisiana	88	88	72	81.8	81.8
Maine	325	178	177	54.5	99.4
Maryland	24	24	24	100.0	100.0
Massachusetts	479	373	372	77.7	99.7
Michigan	799	798	803	100.5	100.6
Minnesota	485	456	447	92.2	98.0
Mississippi	162	162	163	100.6	100.6
Missouri	530	530	523	98.7	98.7
Montana	531	378	366	68.9	96.8
Nebraska	671	551	551	82.1	100.0
Nevada	18	18	17	94.4	94.4
New Hampshire	257	123	168	65.4	136.6
New Jersey	665	642	642	96.5	100.0
New Mexico	89	89	89	100.0	100.0
New York	787	762	759	96.4	99.6
North Carolina	212	211	206	97.2	97.6
North Dakota	263	259	222	84.4	85.7

See notes at end of table.

Table 47. Estimated number and percentage of public school districts in 2003–04 SASS compared with total public school districts in 2001–02 CCD Public Education Agency Universe, by state and region: 2001–02 and 2003–04—Continued

Characteristic	2001–02 CCD total districts	2003–04 SASS frame total with charter and state-run schools	2003–04 SASS total districts (including charter and state-run)	SASS estimate as a percentage of CCD total districts[1]	SASS estimate as a percentage of 2003–04 SASS frame[2]
Ohio	817	777	736	90.1	94.7
Oklahoma	566	544	545	96.3	100.2
Oregon	221	205	198	89.6	96.6
Pennsylvania	695	680	670	96.4	98.5
Rhode Island	41	40	40	97.6	100.0
South Carolina	103	103	105	101.9	101.9
South Dakota	199	188	178	89.4	94.7
Tennessee	138	138	138	100.0	100.0
Texas	1,254	1,233	1,203	95.9	97.6
Utah	46	42	41	89.1	97.6
Vermont	354	76	68	19.2	89.5
Virginia	199	194	168	84.4	86.6
Washington	305	296	307	100.7	103.7
West Virginia	57	57	57	100.0	100.0
Wisconsin	452	437	439	97.1	100.5
Wyoming	58	58	57	98.3	98.3
Region					
Northeast	3,800	3,063	3,071	80.8	100.3
Midwest	6,292	5,977	5,882	93.5	98.4
South	3,785	3,719	3,626	95.8	97.5
West	3,208	2,989	2,959	92.2	99.0

[1] Column 3 / column 1.
[2] Column 3 / column 2.
NOTE: Total school districts include all types of education agencies that manage traditional public or public charter schools. CCD refers to the Common Core of Data. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Preliminary Public Education Agency Universe Survey File," 2001–02; Schools and Staffing Survey (SASS), "Final District Frame Data File," 2003–04.

Public School Unit Count Comparison (Public School and BIA-Funded[33] School Files)

Comparisons of the number of public schools in SASS were made to the total number of public schools and the number of public schools with students in the 2001–02 CCD, the year in which SASS drew its sample of schools. The number of public schools in SASS is 2.1 percentage points smaller than the number of CCD public schools with students (table 48). Two states have an estimated number of public schools for SASS that is below 90 percent of the SASS frame: Alaska and Minnesota. There are 14 states in which SASS estimates are higher than the CCD estimates: Arkansas, Hawaii, Illinois, Iowa, Kansas, Maryland, Mississippi, Montana, Nebraska, New Hampshire, New Jersey, Ohio, Oklahoma, and Wisconsin. Ten of those states are within 1 percentage point of the CCD estimates (Hawaii, Illinois, Iowa, Maryland, Mississippi, Montana, New Hampshire, New Jersey, Ohio, and Wisconsin), while the SASS estimates for the other four range from 2.4 percentage points to 13 percentage points higher than the CCD counts (Arkansas, Kansas, Nebraska, and Oklahoma). Overall, the percentage difference between SASS and the frame year CCD count of public schools was 6.4; this narrows to 2.1, once the school collapsing operation is taken into consideration.

The school collapsing operation described in chapter 9 was expected to reduce the consistency of the count of schools between CCD (particularly in the frame year) and SASS, in some states. These are states in which K–12 schools may be broken up administratively into several different schools for either internal state administrative reasons or for reporting to CCD.

[33] BIA refers to the Bureau of Indian Affairs.

Table 48. Estimated number and percentage of public and BIA-funded schools in 2003–04 SASS compared with 2001–02 CCD, by state, region, and community type: 2001–02 and 2003–04

Characteristic	2001–02 CCD public schools[1]	2003–04 SASS frame (2001–02 CCD with adjustments)[2]	2003–04 SASS public schools[3]	SASS estimate as a percentage of CCD[4]	SASS estimate as a percentage of SASS frame[5]
Total	94,112	90,015	88,113	93.6	97.9
State					
Alabama	1,526	1,507	1,490	97.6	98.9
Alaska	522	512	447	85.6	87.3
Arizona	1,815	1,760	1,703	93.8	96.8
Arkansas	1,153	948	1,071	92.9	113.0
California	8,916	9,152	8,866	99.4	96.9
Colorado	1,667	1,544	1,516	90.9	98.2
Connecticut	1,246	1,036	1,008	80.9	97.3
Delaware	199	193	183	92.0	94.8
District of Columbia	198	196	193	97.5	98.5
Florida	3,419	3,343	3,089	90.3	92.4
Georgia	1,969	1,957	1,874	95.2	95.8
Hawaii	279	279	281	100.7	100.7
Idaho	688	670	651	94.6	97.2
Illinois	4,351	4,111	4,150	95.4	100.9
Indiana	1,980	1,947	1,901	96.0	97.6
Iowa	1,521	1,322	1,326	87.2	100.3
Kansas	1,431	1,382	1,415	98.9	102.4
Kentucky	1,459	1,405	1,397	95.8	99.4
Louisiana	1,540	1,514	1,465	95.1	96.8
Maine	711	703	698	98.2	99.3
Maryland	1,385	1,358	1,362	98.3	100.3
Massachusetts	1,908	1,843	1,797	94.2	97.5
Michigan	3,984	3,849	3,675	92.2	95.5
Minnesota	2,408	2,122	1,782	74.0	84.0
Mississippi	1,037	1,032	1,035	99.8	100.3
Missouri	2,380	2,027	1,998	83.9	98.6
Montana	871	580	585	67.2	100.9
Nebraska	1,307	1,107	1,146	87.7	103.5
Nevada	531	511	499	94.0	97.7
New Hampshire	472	436	437	92.6	100.2
New Jersey	2,430	2,389	2,390	98.4	100.0
New Mexico	793	737	703	88.7	95.4
New York	4,351	4,281	4,257	97.8	99.4
North Carolina	2,234	2,229	2,201	98.5	98.7
North Dakota	569	436	400	70.3	91.7

See notes at end of table.

Table 48. Estimated number and percentage of public and BIA-funded schools in 2003–04 SASS compared with 2001–02 CCD, by state, region, and community type: 2001–02 and 2003–04—Continued

Characteristic	2001–02 CCD public schools[1]	2003–04 SASS frame (2001–02 CCD with adjustments)[2]	2003–04 SASS public schools[3]	SASS estimate as a percentage of CCD[4]	SASS estimate as a percentage of SASS frame[5]
Ohio	3,912	3,841	3,875	99.1	100.9
Oklahoma	1,824	1,484	1,564	85.7	105.4
Oregon	1,300	1,293	1,248	96.0	96.5
Pennsylvania	3,251	3,333	3,108	95.6	93.2
Rhode Island	333	320	303	91.0	94.7
South Carolina	1,145	1,134	1,119	97.7	98.7
South Dakota	762	514	493	64.7	95.9
Tennessee	1,646	1,636	1,634	99.3	99.9
Texas	7,761	7,493	7,420	95.6	99.0
Utah	791	787	776	98.1	98.6
Vermont	392	355	329	83.9	92.7
Virginia	2,090	2,064	2,004	95.9	97.1
Washington	2,233	2,138	2,072	92.8	96.9
West Virginia	822	813	776	94.4	95.4
Wisconsin	2,212	2,036	2,050	92.7	100.7
Wyoming	388	356	353	91.0	99.2
Region					
Northeast	15,094	14,696	14,328	94.9	97.5
Midwest	26,817	24,694	24,209	90.3	98.0
South	31,407	30,306	29,876	95.1	98.6
West	20,794	20,319	19,699	94.7	96.9
Community type (Census)					
Central city	23,158	22,869	21,410	92.5	93.6
Urban fringe	41,066	39,986	39,072	95.1	97.7
Non-MSA[6]	29,888	27,160	27,631	92.4	101.7
Community type					
Central city	23,158	22,869	21,410	92.5	93.6
Urban fringe/large town	42,269	41,162	40,107	94.9	97.4
Rural/small town	28,685	25,984	26,596	92.7	102.4
BIA-funded schools only	189	166	168	88.9	101.2

[1] Common Core of Data (CCD), "Preliminary File," 2001–02, sc011a.sas7bdat (only includes schools that are not closed).
[2] Schools and Staffing Survey (SASS), 2003–04 SASS Frame (2001–02 CCD with Adjustments) "Final Public School Frame Data File," 2003–04 (Final Basic Weight).
[3] Schools and Staffing Survey (SASS), "Public School Data File," 2003–04 (Final School Weight).
[4] Column 3 / Column 1.
[5] Column 3 / Column 2.
[6] MSA refers to Metropolitan Statistical Area.
NOTE: CCD refers to the Common Core of Data. BIA refers to the Bureau of Indian Affairs. BIA-funded schools are not included in the total. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Preliminary File," 2001–02, sc011a.sas7bdat; Schools and Staffing Survey (SASS), "Final Public School Frame and Public School Data Files," 2003–04.

Public School Student Count Comparison (Public School and BIA-Funded School Files)

Comparisons of the number of public school students in SASS were made to the frame year of CCD from the published student counts for 2001–02 and to the 2003–04 CCD (table 49). Two comparisons were made, one to the CCD total number of students, and the other to the CCD K–12 student count. The latter count does not include any prekindergarten students. The SASS student counts are for K–12 grade levels, as long as the school reporting a kindergarten also has a 1st grade. While there are at least some public schools included in CCD's definition of K–12 that may not have been eligible for SASS, in general most public kindergarten students would be eligible as students in SASS; therefore, it does not make sense to exclude kindergarten from the student counts when making the comparison to CCD.

Overall, the SASS student count is about 1 percent higher than CCD's count of total K–12 students from 2 years prior to SASS and 0.6 percent lower than CCD's count of total K–12 students from the same year as SASS (table 49). There were 866,969 prekindergarten students included in CCD in 2001–02 and 949,643 prekindergarten students included in CCD in 2003–04. Excluding them brings the SASS student count into a closer degree of "fit" than was achieved with the comparison of the number of schools in SASS to CCD. However, excluding the prekindergarten students enlarges the amount of difference in those states for which SASS has a higher number of students than the prekindergarten–12 frame year CCD counts. Population growth (i.e., births and/or migration) may account for SASS count in 2003–04 being higher than the frame year CCD count, but that does not help to explain why the SASS count of students in 2003–04 is lower for some states than the frame year CCD count. The amount of that difference is reduced in some states when comparing the SASS data to the same year of CCD. Exceptions to this pattern are California, Colorado, Connecticut, Georgia, Illinois, Indiana, New Hampshire, New Jersey, and Utah. There were 14 states in which the number of students was higher in SASS compared to the 2003–04 CCD, but because of a declining number of students reported in the CCD between 2001–02 and 2003–04, the SASS student count was closer to the frame year: Hawaii, Louisiana, Maine, Minnesota, Mississippi, Nebraska, New York, North Dakota, Oklahoma, South Dakota, Vermont, West Virginia, Wisconsin, and Wyoming. Some of these changes were relatively small; and some of these states are among those that have sometimes had overreporting of enrollment and teachers in SASS. This may indicate that the school collapsing operation narrowed, but did not entirely eliminate, the overreporting of students.

Table 49. Estimated number and percentage of public and BIA-funded school students in 2003–04 SASS compared to 2001–02 and 2003–04 CCD, by state and region: 2001–02 and 2003–04

Characteristic	2001–02 CCD public students[1]	2001–02 CCD public students less pre-K[2]	2003–04 CCD public students[3]	2003–04 CCD public students less pre-K[4]	2003–04 SASS public students[5]	SASS as a percentage of 2001–02 CCD less pre-K[6]	SASS as a percentage of 2003–04 CCD less pre-K[7]
Total	47,687,871	46,820,902	48,540,725	47,591,082	47,315,662	101.1	99.4
State							
Alabama	737,294	725,349	731,220	729,368	742,813	102.4	101.8
Alaska	134,358	133,105	133,933	132,050	125,226	94.1	94.8
Arizona	922,180	915,556	1,012,068	1,002,692	979,096	106.9	97.6
Arkansas	449,805	448,182	454,523	451,950	489,070	109.1	108.2
California	6,248,610	6,147,375	6,413,862	6,298,928	5,771,918	93.9	91.6
Colorado	742,145	722,629	757,693	737,700	716,172	99.1	97.1
Connecticut	570,228	559,178	577,203	565,380	541,893	96.9	95.8
Delaware	115,555	114,969	117,668	117,026	116,341	101.2	99.4
District of Columbia	75,392	71,287	78,057	72,889	72,908	102.3	100.0
Florida	2,500,478	2,443,440	2,587,628	2,538,040	2,518,510	103.1	99.2
Georgia	1,470,634	1,437,324	1,522,611	1,486,125	1,383,173	96.2	93.1
Hawaii	184,546	183,629	183,609	182,434	196,159	106.8	107.5
Idaho	246,521	244,180	252,120	249,448	250,955	102.8	100.6
Illinois	2,071,391	2,013,841	2,100,961	2,033,813	1,993,566	99.0	98.0
Indiana	996,133	989,986	1,011,130	1,005,569	987,794	99.8	98.2
Iowa	485,932	480,218	481,226	474,319	475,145	98.9	100.2
Kansas	470,205	468,173	470,490	468,044	445,556	95.2	95.2
Kentucky	654,363	621,956	663,885	631,851	676,189	108.7	107.0
Louisiana	731,328	714,129	727,709	704,522	727,449	101.9	103.3
Maine	205,586	204,253	202,084	200,287	222,411	108.9	111.0
Maryland	860,640	840,326	869,113	847,722	859,556	102.3	101.4
Massachusetts	973,140	952,474	980,459	957,926	1,017,085	106.8	106.2
Michigan	1,730,668	1,714,106	1,757,604	1,735,880	1,740,115	101.5	100.2
Minnesota	851,384	841,713	842,854	831,978	862,457	102.5	103.7
Mississippi	493,507	491,702	493,540	491,332	510,002	103.7	103.8
Missouri	909,792	891,277	905,941	894,726	906,237	101.7	101.3
Montana	151,947	151,441	148,356	147,692	147,302	97.3	99.7
Nebraska	285,095	280,031	285,542	279,622	295,166	105.4	105.6
Nevada	356,814	354,667	385,401	382,623	363,066	102.4	94.9
New Hampshire	206,847	205,017	207,417	205,196	199,749	97.4	97.3
New Jersey	1,341,656	1,321,905	1,380,753	1,358,007	1,297,491	98.2	95.5
New Mexico	320,260	316,761	323,066	319,090	323,357	102.1	101.3
New York	2,872,132	2,831,920	2,864,775	2,823,319	2,905,019	102.6	102.9
North Carolina	1,315,363	1,306,043	1,360,209	1,348,523	1,347,202	103.2	99.9
North Dakota	106,047	105,326	102,233	101,481	108,355	102.9	106.8

See notes at end of table.

Table 49. Estimated number and percentage of public and BIA-funded school students in 2003–04 SASS compared to 2001–02 and 2003–04 CCD, by state and region: 2001–02 and 2003–04—Continued

Characteristic	2001–02 CCD public students[1]	2001–02 CCD public students less pre-K[2]	2003–04 CCD public students[3]	2003–04 CCD public students less pre-K[4]	2003–04 SASS public students[5]	SASS as a percentage of 2001–02 CCD less pre-K[6]	SASS as a percentage of 2003–04 CCD less pre-K[7]
Ohio	1,830,985	1,807,129	1,845,428	1,819,277	1,900,029	105.1	104.4
Oklahoma	622,139	596,432	626,160	595,957	650,332	109.0	109.1
Oregon	551,480	551,018	551,273	550,874	543,147	98.2	98.6
Pennsylvania	1,821,627	1,819,090	1,821,146	1,818,558	1,760,770	96.8	96.3
Rhode Island	158,046	156,817	159,375	157,902	165,159	105.3	104.6
South Carolina	691,078	671,797	699,198	679,091	684,420	101.9	100.8
South Dakota	127,542	126,366	125,537	123,405	125,783	99.5	101.9
Tennessee	925,030	910,043	936,681	919,896	932,358	102.5	101.4
Texas	4,163,447	3,993,346	4,331,751	4,137,601	4,097,317	102.6	99.0
Utah	484,677	477,801	495,981	487,383	459,567	96.2	94.3
Vermont	101,179	98,612	99,103	96,076	99,967	101.4	104.0
Virginia	1,163,091	1,148,954	1,192,092	1,175,568	1,188,166	103.4	101.1
Washington	1,009,200	1,001,098	1,021,349	1,009,997	1,078,591	107.7	106.8
West Virginia	282,885	276,115	281,215	273,304	296,515	107.4	108.5
Wisconsin	879,361	854,688	880,031	853,363	929,145	108.7	108.9
Wyoming	88,128	88,128	87,462	85,278	89,894	102.0	105.4
Region							
Northeast	8,250,441	8,149,266	8,292,315	8,182,651	8,209,543	100.7	100.2
Midwest	10,744,535	10,572,854	10,808,977	10,621,477	10,769,348	101.9	101.4
South	17,252,029	16,811,394	17,673,260	17,200,765	17,292,320	102.9	100.5
West	11,440,866	11,287,388	11,766,173	11,586,189	11,044,451	97.8	95.3
BIA-funded students only	46,476	46,476	45,828	—	44,306	95.3	†

— Not available.

† Not applicable.

[1] Common Core of Data (CCD), "Preliminary File," 2001–02, sc011a.sas7bdata (Total Student Count).

[2] Common Core of Data (CCD), "Preliminary File," 2001–02, sc011a.sas7bdata (Total Student Count without Total Prekindergarten Students).

[3] *Public Elementary and Secondary School Students, Staff, Schools, and School Districts: School Year 2003–04* (NCES 2006-307), Table C-1, Column 1.

[4] *Public Elementary and Secondary School Students, Staff, Schools, and School Districts: School Year 2003–04* (NCES 2006-307), Table C-1, Column 1 minus Column 2.

[5] Schools and Staffing Survey (SASS), "Public School and BIA School Documentation Data Files," 2003–04 (Total Student Count, School Final Weight).

[6] Column 5 / Column 2.

[7] Column 5 / Column 4.

NOTE: CCD refers to Common Core of Data. BIA refers to the Bureau of Indian Affairs. BIA students are not included in the total. Pre-K refers to prekindergarten. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Preliminary File," 2001–02, sc011a.sas7bdata; Schools and Staffing Survey (SASS), "Public School and BIA School Documentation Data Files," 2003–04; *Public Elementary and Secondary Students, Staff, Schools, and School Districts: School Year 2003–04*, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2003–04, Version 1a.

Public School Teacher FTE Comparison (Public School Teacher and BIA-Funded School Teacher Files)

The comparison between the number of teachers in the SASS Public School data file and the CCD State Nonfiscal Survey is an **approximation**, since the public school teacher data are reported in head counts, not full-time equivalents (FTE) (table 50). As an external check, this spots gross differences. There are several reasons why the number of teachers, approximated to FTE counts from the Public School Teacher data file, would differ from CCD State Nonfiscal Survey counts. CCD counts are statewide official tallies of teaching positions, reported from a central agency, and unduplicated to account for teachers in multiple districts or schools. The teacher count from SASS depends in part on the cooperation of the schools to provide a list of all teachers. Approximately 11 percent of schools in 2003–04 SASS did not provide a teacher list. The CCD count reflects some teaching positions for which the teacher is away from the school during the SASS data collection, such as a teacher who is on maternity leave. The assumptions about the proportions of part-time to full-time teachers, which are used to adjust the headcount data to FTEs, may be reasonable overall but may not be as accurate on a state-by-state basis. When a public school in sample for SASS is declared out-of-scope, such as when that school merged with another nonsampled school, the teachers that would have been or actually were sampled are also declared out-of-scope. While such factors affect relatively small proportions of the sampled cases, there may be a cumulative effect on the overall count of teachers in some states.

Table 50. Estimated number and percentage of full-time-equivalent (FTE) teachers in public and BIA-funded schools in 2003–04 SASS compared to the 2001–02 and 2003–04 CCD, by state and region: 2001–02 and 2003–04

Characteristic	2001–02 CCD FTE public school teachers[1]	2003–04 CCD FTE public school teachers[2]	2003–04 SASS FTE public school teachers (teacher file)[3]	2003–04 SASS public school teachers (approx. FTE) (school file)[4]	SASS school file (approx. FTE) as a percentage of 2001–02 CCD[5]	SASS school file (approx. FTE) as a percentage of 2003–04 CCD[6]	SASS teacher file as a percentage of SASS school file[7]
Total	2,997,741	3,048,549	3,117,208	3,129,360	104.5	102.8	99.6
State							
Alabama	46,796	58,070	49,215	49,676	106.2	85.5	99.1
Alaska	8,026	7,808	8,300	8,218	102.4	105.3	101.0
Arizona	46,015	47,507	54,038	54,006	117.4	113.7	100.1
Arkansas	33,079	30,876	35,954	35,986	108.8	116.5	99.9
California	304,296	304,311	274,298	276,080	90.7	90.7	99.4
Colorado	44,182	44,904	45,699	45,652	103.3	101.7	100.1
Connecticut	41,773	42,370	42,625	42,829	102.5	101.1	99.5
Delaware	7,571	7,749	7,689	7,995	105.6	103.2	96.2
District of Columbia	4,951	5,676	5,371	5,736	115.9	101.1	93.6
Florida	134,684	144,955	154,047	153,435	113.9	105.9	100.4

See notes at end of table.

Table 50. Estimated number and percentage of full-time-equivalent (FTE) teachers in public and BIA-funded schools in 2003–04 SASS compared to the 2001–02 and 2003–04 CCD, by state and region: 2001–02 and 2003–04—Continued

Characteristic	2001–02 CCD FTE public school teachers[1]	2003–04 CCD FTE public school teachers[2]	2003–04 SASS FTE public school teachers (teacher file)[3]	2003–04 SASS public school teachers (approx. FTE) (school file)[4]	SASS school file (approx. FTE) as a percentage of 2001–02 CCD[5]	SASS school file (approx. FTE) as a percentage of 2003–04 CCD[6]	SASS teacher file as a percentage of SASS school file[7]
Georgia	92,732	97,150	99,268	99,570	107.4	102.5	99.7
Hawaii	11,007	11,129	13,176	13,252	120.4	119.1	99.4
Idaho	13,854	14,049	14,610	14,572	105.2	103.7	100.3
Illinois	129,600	127,669	133,366	133,225	102.8	104.4	100.1
Indiana	59,658	59,924	60,254	60,618	101.6	101.2	99.4
Iowa	34,906	34,791	36,272	35,832	102.7	103.0	101.2
Kansas	33,084	32,589	35,467	34,931	105.6	107.2	101.5
Kentucky	40,375	41,201	46,256	46,607	115.4	113.1	99.2
Louisiana	49,980	50,495	51,018	51,451	102.9	101.9	99.2
Maine	16,741	17,621	17,653	17,787	106.3	100.9	99.2
Maryland	53,774	55,140	56,055	56,803	105.6	103.0	98.7
Massachusetts	68,942	72,062	80,049	80,483	116.7	111.7	99.5
Michigan	98,849	97,014	94,177	94,567	95.7	97.5	99.6
Minnesota	53,081	51,611	56,879	56,349	106.2	109.2	100.9
Mississippi	31,213	32,591	33,574	33,782	108.2	103.7	99.4
Missouri	65,240	65,169	70,896	71,514	109.6	109.7	99.1
Montana	10,408	10,301	11,360	11,655	112.0	113.1	97.5
Nebraska	21,083	20,921	24,333	24,174	114.7	115.5	100.7
Nevada	19,276	20,234	19,236	19,347	100.4	95.6	99.4
New Hampshire	14,677	15,112	15,625	15,756	107.4	104.3	99.2
New Jersey	103,611	109,077	107,692	110,442	106.6	101.3	97.5
New Mexico	21,823	21,569	20,455	21,070	96.6	97.7	97.1
New York	209,128	216,116	226,176	226,983	108.5	105.0	99.6
North Carolina	85,684	89,988	93,256	93,173	108.7	103.5	100.1
North Dakota	8,035	8,037	8,911	9,016	112.2	112.2	98.8
Ohio	122,115	121,735	127,458	128,310	105.1	105.4	99.3
Oklahoma	41,632	39,253	44,045	44,602	107.1	113.6	98.8
Oregon	28,402	26,732	27,356	27,066	95.3	101.2	101.1
Pennsylvania	118,470	119,889	118,855	120,902	102.1	100.8	98.3
Rhode Island	11,103	11,918	12,990	12,891	116.1	108.2	100.8
South Carolina	46,616	45,830	46,429	46,059	98.8	100.5	100.8
South Dakota	9,370	9,245	10,329	10,233	109.2	110.7	100.9
Tennessee	58,357	59,584	62,997	62,767	107.6	105.3	100.4
Texas	282,846	289,481	286,603	285,613	101.0	98.7	100.3
Utah	22,211	22,147	22,393	21,990	99.0	99.3	101.8

See notes at end of table.

Table 50. Estimated number and percentage of full-time-equivalent (FTE) teachers in public and BIA-funded schools in 2003–04 SASS compared to the 2001–02 and 2003–04 CCD, by state and region: 2001–02 and 2003–04—Continued

Characteristic	2001–02 CCD FTE public school teachers[1]	2003–04 CCD FTE public school teachers[2]	2003–04 SASS FTE public school teachers (teacher file)[3]	2003–04 SASS public school teachers (approx. FTE) (school file)[4]	SASS school file (approx. FTE) as a percentage of 2001–02 CCD[5]	SASS school file (approx. FTE) as a percentage of 2003–04 CCD[6]	SASS teacher file as a percentage of SASS school file[7]
Vermont	8,554	8,749	9,086	9,232	107.9	105.5	98.4
Virginia	89,314	90,573	87,639	88,878	99.5	98.1	98.6
Washington	52,534	52,824	59,022	59,547	113.3	112.7	99.1
West Virginia	20,139	20,020	21,635	21,832	108.4	109.0	99.1
Wisconsin	60,918	58,216	69,735	69,579	114.2	119.5	100.2
Wyoming	7,026	6,567	7,386	7,287	103.7	111.0	101.4
Region							
Northeast	592,999	612,914	670,793	637,357	107	104	105.2
Midwest	695,939	686,921	729,177	729,457	105	106	100.0
South	1,119,743	1,158,632	1,181,430	1,184,446	106	102	99.7
West	589,060	590,082	579,665	582,060	99	99	99.6
BIA-funded teachers only	—	†	3,855	3,962	†	†	97.3

— Not available.

† Not applicable.

[1] *Public School Student, Staff, and Graduate Counts, by State: School Year 2001–02* (NCES 2003-358R), Table 2, Column 3 (Full-time-equivalency Count).

[2] *Public Elementary and Secondary School Students, Staff, Schools, and School Districts: School Year 2003–04* (NCES 2006-307), Table 2, Column 5 (Full-time-equivalency Count).

[3] Schools and Staffing Survey (SASS), "Public School Teacher and BIA School Teacher Data Files," 2003–04 (Full-time-equivalent Count, Teacher Final Weight).

[4] Sum of full-time teachers in the 2003–04 SASS Public School Data File and half of the part-time teachers reported in 2003–04 SASS Public School Data File.

[5] Column 4 / Column 1.

[6] Column 4 / Column 2.

[7] Column 3 / Column 4.

NOTE: CCD refers to the Common Core of Data. BIA refers to the Bureau of Indian Affairs. BIA teachers are not included in the total. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher and BIA School Teacher Data Files," 2003–04; *Public School Student, Staff, and Graduate Counts, by State, School Year 2001–02*, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2001–02; *Public Elementary and Secondary Students, Staff, Schools, and School Districts: School Year 2003–04*, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2003–04, Version 1a.

The SASS teacher estimate of the number of FTE teachers (table 50) was 4.5 percent higher overall than the frame year CCD count of FTE teachers, and 2.8 percent higher overall than the same year CCD count of teachers. There could be several reasons for this. One reason is that the approximation of FTE teachers from SASS is not as accurate as the reporting of FTE positions in CCD. Another possible reason is that the school collapsing operation in SASS may not have completely taken care of the overreporting of teachers in combined K–12 schools.

Public Charter School Comparison (Public School File)

Public charter schools in the 2003–04 SASS were selected to be representative at the national level only, since the data on public charter schools would be published only at the national level. The comparisons that are shown in table 51 should not be interpreted as a critique of the sampling that was employed to draw a national sample. Rather, the comparisons show how closely the sample does or does not fit to subnational counts of public charter schools as identified in the CCD frame year. Comparisons are made to the frame year from CCD, as opposed to the concurrent data collection year, because the sample as drawn from the frame year has no way to include any newly-created schools. This is of particular importance for public charter schools, which are counted after the state grants a charter for the school and permits the school to begin operation.

Table 51. Estimated number and percentage of public charter schools in 2003–04 SASS compared to 2001–02 CCD, by state, region, and community type: 2001–02 and 2003–04

Characteristic	2001–02 CCD public charter schools[1]	2003–04 SASS frame (2001–02 CCD with adjustments)[2]	2003–04 SASS public charter schools (CCD identified)[3]	SASS estimate as a percentage of CCD[4]	SASS estimate as a percentage of SASS frame[5]
Total	2,348	2,309	2,200	93.7	95.3
State					
Arizona	370	365	367	99.2	100.5
California	350	343	317	90.6	92.4
Colorado	86	85	88	102.3	103.5
Florida	192	182	191	99.5	104.9
Michigan	204	201	204	100.0	101.5
North Carolina	93	92	81	87.1	88.0
Ohio	85	85	67	78.8	78.8
Pennsylvania	77	75	62	80.5	82.7
Texas	243	241	218	89.7	90.5
Wisconsin	109	99	100	91.7	101.0
All other states	539	541	507	94.1	93.7
Region					
Northeast	237	234	222	93.7	94.9
Midwest	531	521	494	93.0	94.8
South	666	652	611	91.7	93.7
West	914	902	873	95.5	96.8
Community type (Census)					
Central city	1,244	1,226	1,267	101.8	103.3
Urban fringe	739	724	568	76.2	77.8
Non-MSA[6]	365	359	371	101.6	103.3
Community type					
Central city	1,244	1,226	1,267	101.8	103.3
Urban fringe/large town	763	748	586	76.8	78.3
Rural/small town	341	335	347	101.8	103.6

[1] *Overview of Public and Secondary Schools and Districts: School Year 2001–02* (NCES 2003-411), Table 9, Column 7.
[2] Schools and Staffing Survey (SASS), "Public School Frame" (CCD 2001–02 with Adjustments—Charter School Indicator), 2003–04 (Final School Weight).
[3] Schools and Staffing Survey (SASS), "Public School (Charter Schools Only) and BIA School Documentation Data Files," 2003–04.
[4] Column 3 / Column 1.
[5] Column 3 / Column 2.
[6] MSA refers to Metropolitan Statistical Area.
NOTE: CCD refers to the Common Core of Data. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Frame and Public School Documentation Data Files," 2003–04; *Overview of Public and Secondary Schools and Districts: School Year 2001–02*, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2001–02.

The counts shown for the 2003–04 SASS public charter schools were calculated before the final interview status was determined, so these counts will not match exactly to published counts of public charter schools from the released data files. Adjustments were made by Census to the CCD public charter school frame in accordance with procedures described in chapter 4.

Private School Comparison (Private School File)

Comparisons were made of the number of private schools in SASS to the number of private schools in the frame year of the PSS. By construction, the total number of private schools in SASS 2003–04 matches the total number of schools in PSS 2003–04, although there is sampling variability in the number of private schools for subsets of SASS, such as private schools by affiliation stratum and NCES typology.

Table 52. Estimated number and percentage of private schools in 2003–04 SASS compared to the 2001–02 PSS, by affiliation stratum, NCES typology, and region: 2001–02 and 2003–04

Characteristic	2001–02 PSS traditional private schools[1]	2003–04 SASS private schools[2]	SASS estimate as a percentage of PSS[3]
Total	29,272	28,384	97.0
Affiliation stratum			
Catholic—parochial	4,347	4,074	93.7
Catholic—diocesan	2,933	2,947	100.5
Catholic—private	927	897	96.8
Amish	761	736	96.7
Assembly of God	429	440	102.6
Baptist	2,548	2,195	86.1
Episcopal	347	342	98.6
Jewish	730	811	111.1
Lutheran, Missouri Synod	1,110	1,100	99.1
Wisconsin Evangelical Lutheran Synod	411	367	89.3
Mennonite	393	458	116.5
Pentecostal	582	389	66.8
Seventh-Day Adventist	961	956	99.5
All other religious	6,115	5,865	95.9
Nonsectarian—regular	2,939	2,963	100.8
Nonsectarian—special emphasis	2,381	2,392	100.5
Nonsectarian—special education	1,358	1,451	106.8
NCES typology			
Catholic	8,207	7,919	96.5
Other religious	14,387	13,659	94.9
Nonsectarian	6,678	6,806	101.9
Region			
Northeast	6,556	6,693	102.1
Midwest	7,455	6,981	93.4
South	9,171	8,611	93.9
West	6,092	6,100	100.1

[1] Private School Universe Survey (PSS), "Final File" (Only Traditional Schools), 2001–02 (Final School Weight).
[2] Schools and Staffing Survey (SASS), "Private School Data File," 2003–04 (Final School Weight).
[3] Column 2 / Column 1.
NOTE: PSS refers to the Private School Universe Survey. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Private School Universe Survey (PSS), "Final File," 2001–02; Schools and Staffing Survey (SASS), "Private School Data File," 2003–04.

The comparisons in table 52 show that the number of private schools measured by SASS in 2003–04 are lower than the comparable number of private schools from PSS in 2001–02. However, the number of private schools measured in the 2003–04 SASS has been adjusted to match the number of private schools in the 2003–04 PSS, and the number of private schools in the PSS did decrease from 2001–02 to 2003–04.

The stratification groups for the 2003–04 SASS (termed Affiliation stratum in these tables) are somewhat different from what had been used for all previous SASS data collections. The previous 19 groups, plus "other," a rather large category, were streamlined into 17 categories including an "All other religious" category that is smaller than the previous "other" category. The new stratification groups do not use the association membership responses for forming any of the categories; rather, only the religious orientation and religious affiliation items are used.

Private School Student Comparison (Private School File)

Comparisons were made of the number of private school students in SASS to the number of private school students in the frame year (2001–02) as well as to the concurrent year of PSS. Overall, the SASS student count is about 5 percent lower than the PSS count in 2001–02 and about 1.2 percent lower than the concurrent year's student count in PSS (table 53). By affiliation stratum, SASS estimates as a percentage of the 2001–02 SASS ranged from 49.8 for the Pentecostal program category to 119.7 for Mennonite program category, and the SASS estimates as a percentage of the 2003–04 PSS ranged from 75.1 for the Pentecostal program category to 117.7 for the Nonsectarian—regular program category. However, by NCES typology, the SASS count of private school students was slightly lower for two out of the three typology categories when compared to the 2003–04 PSS, with the Nonsectarian category higher by about 8 percent.

The percentage differences between SASS and the concurrent PSS are smaller than the differences between SASS and the frame year PSS. While the differences are smaller, sampling variability for some of the smaller strata may account for percentage differences greater than 10 percent.

Table 53. Estimated number of private school students in 2003–04 SASS compared to 2001–02 and 2003–04 PSS, by affiliation stratum, NCES typology, and region: 2001–02 and 2003–04

Characteristic	2001–02 PSS private students in traditional schools[1]	2003–04 PSS private students in traditional schools[2]	2003–04 SASS private students[3]	SASS estimate as a percentage of 2001–02 PSS[4]	SASS estimate as a percentage of 2003–04 PSS[5]
Total	5,341,513	5,122,772	5,059,449	94.7	98.8
Affiliation stratum					
Catholic—parochial	1,221,685	1,097,417	1,091,982	89.4	99.5
Catholic—diocesan	925,288	908,583	894,102	96.6	98.4
Catholic—private	368,552	359,220	333,958	90.6	93.0
Amish	24,538	22,287	20,297	82.7	91.1
Assembly of God	66,038	62,360	63,246	95.8	101.4
Baptist	314,684	272,556	246,286	78.3	90.4
Episcopal	100,403	99,675	89,759	89.4	90.1
Jewish	198,478	201,901	216,883	109.3	107.4
Lutheran, Missouri Synod	162,301	148,824	149,973	92.4	100.8
Wisconsin Evangelical Lutheran Synod	35,584	32,477	29,183	82.0	89.9
Mennonite	23,670	25,977	28,324	119.7	109.0
Pentecostal	39,300	26,039	19,564	49.8	75.1
Seventh-Day Adventist	60,681	57,891	52,155	85.9	90.1
All other religious	899,197	885,571	830,793	92.4	93.8
Nonsectarian—regular	622,715	603,442	710,240	114.1	117.7
Nonsectarian—special emphasis	176,987	213,986	192,792	108.9	90.1
Nonsectarian—special education	101,412	104,566	89,913	88.7	86.0
NCES typology					
Catholic	2,515,525	2,365,220	2,320,042	92.2	98.1
Other religious	1,924,874	1,835,559	1,746,463	90.7	95.1
Nonsectarian	901,114	921,993	992,944	110.2	107.7
Region					
Northeast	1,336,770	1,273,012	1,283,613	96.0	100.9
Midwest	1,354,861	1,270,736	1,223,969	90.3	96.3
South	1,641,474	1,611,775	1,598,467	97.4	99.2
West	1,008,408	967,249	953,400	94.5	98.6

[1] Private School Universe Survey (PSS), "Final File" (only traditional schools), 2001–02 (Total Student Count, Final School Weight).
[2] *Characteristics of Private Schools in the United States: Results from the 2003–04 Private School Universe Survey* (NCES 2006-319), Table 7, Column 1, and Table 9, Column 1.
[3] Schools and Staffing Survey (SASS), "Private School Data File," 2003–04 (Total Student Count, Final School Weight).
[4] Column 3 / Column 1.
[5] Column 3 /Column 2.
NOTE: PSS refers to the Private School Universe Survey. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Private School Universe Survey (PSS), "Final File," 2001–02; Schools and Staffing Survey (SASS), "Private School Data File," 2003–04; *Characteristics of Private Schools in the United States: Results from the 2003–04 Private School Universe Survey*, Private School Universe Survey (PSS), 2003–04.

Private FTE Teacher Comparison (Private School Teacher File)

In 2003–04, the number of teachers collected on the SASS Private School Teacher data file was collected in part-time and full-time headcounts that were converted to full-time-equivalent (FTE) counts. PSS always reports FTE counts of teachers. For ease of comparison, the headcounts of teachers in SASS were converted to approximate FTE counts.

The number of private FTE teachers in SASS (table 54) is 2.1 percent lower overall than the frame year count of teachers in PSS and 2 percent lower overall than the concurrent year's count. However, both the frame year and concurrent year's PSS teacher counts are quite close in absolute numbers. There are much larger differences by affiliation strata, ranging from about 14 percent below the concurrent PSS count for Nonsectarian special education school teachers to about 17 percent above the PSS count for Mennonite teachers. The small sample size of both of these groups (and consequently, relatively larger variance estimates) probably contributes to the large percentage differences in FTE teacher counts.

While the overall number of private schools in SASS is controlled to the concurrent PSS total, this is not true of the number of FTE teachers. There are several factors that contribute to differences between SASS estimates and PSS estimates. Schools that closed between the sampling year of 2001–02 and 2003–04 would tend to lower the FTE estimate in SASS relative to the 2003–04 PSS, at least to the extent that there are differences in the number of FTE teachers between schools that closed and schools that remained open. Similarly, growth in the number of schools would be reflected in the current PSS and to a lesser extent in SASS; both used the same frame, but the 2003–04 SASS used the 2001–02 PSS area frame instead of the 2003–04 PSS area frame. The difference in area frames could either raise or lower the FTE estimates of teachers in SASS.

A higher estimate of FTE teachers in SASS by NCES typology could result from one or more factors. The overall count of private schools in SASS is controlled to the 2003–04 PSS, but not within each type of private school, so that the number of schools by NCES typology category may be higher in SASS than in PSS. In addition, differences in the area frames between SASS and PSS may contribute to this effect.

Table 54. Estimated number and percentage of full-time-equivalent (FTE) private school teachers in 2003–04 SASS compared to 2001–02 and 2003–04 PSS, by affiliation stratum, NCES typology, and region: 2001–02 and 2003–04

Characteristic	2001–02 PSS FTE private school teachers in traditional schools[1]	2003–04 PSS FTE private teachers in traditional schools[2]	2003–04 SASS private teachers (approx. FTE) (school file)[3]	SASS school file (approx. FTE) as a percentage of 2001–02 PSS[4]	SASS school file (approx. FTE) as a percentage of 2003–04 PSS[5]
Total	425,406	425,238	416,920	97.9	98.0
Affiliation stratum					
Catholic—parochial	71,058	66,874	68,275	93.3	102.1
Catholic—diocesan	56,343	57,330	56,272	99.0	98.1
Catholic—private	28,113	28,406	25,872	95.0	
Amish	1,170	1,051	971	81.7	92.4
Assembly of God	5,196	5,045	5,108	96.3	100.0
Baptist	26,670	24,037	22,224	81.1	90.7
Episcopal	11,053	11,137	9,817	87.7	88.1
Jewish	19,813	20,968	20,919	114.2	99.8
Lutheran, Missouri Synod	10,914	10,522	10,900	100.0	103.6
Wisconsin Evangelical Lutheran Synod	2,419	2,343	2,074	85.1	88.5
Mennonite	1,913	2,223	2,605	133.2	117.2
Pentecostal	3,961	2,677	2,384	58.9	89.1
Seventh-Day Adventist	4,636	4,550	4,441	93.7	97.6
All other religious	78,260	78,326	70,155	92.2	90.2
Nonsectarian—regular	67,326	66,953	74,934	110.3	111.7
Nonsectarian—special emphasis	20,433	24,794	24,525	115.1	99.2
Nonsectarian—special education	16,128	18,002	15,444	95.8	86.1
NCES typology					
Catholic	155,514	152,611	150,419	95.7	98.4
Other religious	166,005	162,878	151,622	92.9	93.6
Nonsectarian	103,887	109,749	114,878	109.0	104.1
Region					
Northeast	111,127	111,333	109,073	100.6	98.0
Midwest	95,501	94,059	95,348	96.4	101.4
South	142,650	143,222	139,034	97.6	97.1
West	76,128	76,624	73,465	96.1	95.9

[1] Private School Universe Survey (PSS), "Final File" (only traditional schools), 2001–02 (Full-time-equivalent Count, Final School Weight).
[2] *Characteristics of Private Schools in the United States: Results of the 2003–04 Private School Universe Survey* (NCES 2006-319), Table 17, Column 1, and Table 18, Column 1.
[3] Schools and Staffing Survey (SASS), "Private School Data File," 2003–04 (Approximate Full-time-equivalent Count, Final Teacher Weight).
[4] Column 3 / Column 1.
[5] Column 3 / Column 2.
NOTE: PSS refers to the Private School Universe Survey. Detail may not sum to totals because of rounding or missing values in cells with too few sample cases.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Private School Universe Survey (PSS), "Final File," 2001–02; Schools and Staffing Survey (SASS), "Private School Data File," 2003–04; *Characteristics of Private Schools in the United States: Results of the 2003–04 Private School Universe Survey*, Private School Universe Survey (PSS), 2003–04.

Non-Charter Public School Library Media Center Comparison (Public School Library Media Center and BIA-Funded School Library Media Center Files)

There are no external frame comparisons that can be made for the school library counts, since no such comparable data are collected in CCD. Rather, the only comparisons that can be made are the changes between the previous school library counts and the current count. Without any external data for verification, it can be difficult to tell how much of the difference between the two counts is due to sampling variability or nonresponse rate change and how much to substantive change (i.e., a change in the number of schools with library media centers).

Although public charter schools were included both in 1999–2000 and 2003–04 SASS, the way that charter schools were sampled and the way that the data were collected for library media centers differed enough so that public charter schools were excluded from the comparison.

The counts presented in this section are almost entirely from the Public School Library Media Center data file. The last column does use the count of schools both with and without school library media centers from the Public School data file.

Changes in the number of non-charter public schools that lack a library media center are much larger in percentage terms than the change in the number of non-charter public schools with a school library media center (table 55). While the percentage of non-charter public schools lacking such a center is relatively low, some of the percentage difference in the count of these schools, especially by state, can be quite large. These changes are large enough that it is unlikely that they are entirely due to sampling variability. Given the general historical pattern that the percentage of schools lacking a library media center is declining over time, these data seem to suggest that budgetary pressures may be forcing some schools to close their library media centers (probably by laying off any paid library staffers). Another factor is that, with turnover in library media center staff, there may have been no one in the school who could serve as a respondent for the library media center questionnaire items concerning the previous school year. There was evidence that the noninterview rate for the library media center questionnaire was higher in 2003–04 than in 1999–2000.

Table 55. Estimated number and percentage of non-charter public school library media centers (LMCs) in 2003–04 SASS compared to 1999–2000 SASS estimates, by state, region, and community type: 1999–2000 and 2003–04

Characteristic	1999–2000 SASS non-charter public schools with no LMC[1]	2003–04 SASS non-charter public schools with no LMC (LMC file)[2]	2003–04 SASS as a percentage of 1999–2000 SASS[3]	1999–2000 SASS non-charter public schools with LMC[4]	2003–04 SASS non-charter public schools with LMC (LMC file)[5]	2003–04 SASS as a percentage of 1999–2000 SASS[6]	2003–04 SASS non-charter public schools with and without an LMC (school file)[7]	2003–04 SASS non-charter public schools with and without an LMC (LMC file)[8]
Total	7,017	8,569	122.1	76,807	77,319	100.7	85,934	85,888
State								
Alabama	30	151	511.3	1,299	1,343	103.3	1,490	1,494
Alaska	100	60	60.0	366	377	103.0	435	437
Arizona	184	71	38.5	991	1,260	127.2	1,326	1,331
Arkansas	9	22	239.9	1,089	1,039	95.4	1,063	1,061
California	1,720	1,592	92.6	6,340	6,986	110.2	8,564	8,578
Colorado	57	95	167.0	1,355	1,332	98.3	1,429	1,427
Connecticut	75	58	77.0	934	953	102.1	1,008	1,011
Delaware	19	7	37.0	136	165	121.3	170	172
District of Columbia	20	39	193.3	138	118	85.6	158	157
Florida	165	338	204.6	2,436	2,569	105.5	2,912	2,907
Georgia	25	31	124.9	1,710	1,827	106.8	1,859	1,858
Hawaii	#	#	†	247	257	104.2	259	257
Idaho	76	67	88.7	545	568	104.1	645	635
Illinois	338	732	216.6	3,638	3,417	93.9	4,131	4,149
Indiana	44	167	383.7	1,737	1,735	99.9	1,901	1,902
Iowa	22	27	123.2	1,463	1,304	89.1	1,326	1,331
Kansas	27	31	114.5	1,374	1,384	100.7	1,415	1,415
Kentucky	95	104	110.0	1,222	1,291	105.6	1,397	1,395
Louisiana	159	164	103.1	1,269	1,295	102.1	1,457	1,459
Maine	87	48	55.5	621	649	104.4	698	697
Maryland	37	67	182.1	1,226	1,289	105.1	1,362	1,356
Massachusetts	103	160	155.5	1,609	1,582	98.3	1,737	1,742
Michigan	471	827	175.7	2,942	2,611	88.7	3,471	3,438
Minnesota	191	254	133.0	1,483	1,427	96.2	1,683	1,681
Mississippi	75	154	206.3	859	880	102.4	1,035	1,034
Missouri	82	154	188.0	1,906	1,849	97.0	1,998	2,003
Montana	135	60	44.5	745	529	71.0	585	589
Nebraska	183	207	113.2	1,014	940	92.7	1,146	1,147
Nevada	19	21	111.7	420	462	109.9	483	483

See notes at end of table.

Table 55. Estimated number and percentage of non-charter public school library media centers (LMCs) in 2003–04 SASS compared to 1999–2000 SASS estimates, by state, region, and community type: 1999–2000 and 2003–04—Continued

Characteristic	1999–2000 SASS non-charter public schools with no LMC[1]	2003–04 SASS non-charter public schools with no LMC (LMC file)[2]	2003–04 SASS as a percentage of 1999–2000 SASS[3]	1999–2000 SASS non-charter public schools with LMC[4]	2003–04 SASS non-charter public schools with LMC (LMC file)[5]	2003–04 SASS as a percentage of 1999–2000 SASS[6]	2003–04 SASS non-charter public schools with and without an LMC (school file)[7]	2003–04 SASS non-charter public schools with and without an LMC (LMC file)[8]
New Hampshire	21	8	37.4	432	428	99.2	437	436
New Jersey	161	320	198.4	2,086	2,015	96.6	2,345	2,335
New Mexico	25	18	70.9	684	684	100.1	703	702
New York	352	115	32.6	3,738	4,087	109.3	4,216	4,202
North Carolina	137	52	38.0	1,877	2,072	110.4	2,120	2,124
North Dakota	91	30	32.8	461	373	81.0	400	403
Ohio	114	381	335.5	3,584	3,391	94.6	3,808	3,772
Oklahoma	40	38	96.2	1,782	1,521	85.3	1,557	1,559
Oregon	53	113	211.6	1,118	1,102	98.6	1,215	1,215
Pennsylvania	180	279	155.0	2,941	2,767	94.1	3,047	3,046
Rhode Island	15	9	61.8	277	298	107.4	303	307
South Carolina	31	52	165.1	1,035	1,042	100.7	1,096	1,094
South Dakota	208	100	48.2	571	404	70.7	493	504
Tennessee	46	48	104.9	1,488	1,586	106.6	1,634	1,634
Texas	404	580	143.4	6,246	6,615	105.9	7,202	7,195
Utah	47	32	68.6	693	724	104.4	755	756
Vermont	#	22	†	332	301	90.7	329	323
Virginia	138	100	72.6	1,602	1,905	118.9	2,004	2,005
Washington	167	229	136.8	1,841	1,844	100.2	2,072	2,073
West Virginia	188	172	91.3	610	601	98.6	776	773
Wisconsin	4	114	2878.8	1,948	1,817	93.3	1,927	1,931
Wyoming	49	50	101.6	346	304	87.9	353	354
Region								
Northeast	995	1,019	102.5	12,969	13,081	100.9	14,121	14,100
Midwest	1,775	3,024	170.3	22,123	20,651	93.3	23,698	23,675
South	1,615	2,118	131.1	26,025	27,158	104.4	29,291	29,276
West	2,632	2,407	91.5	15,690	16,429	104.7	18,824	18,836
Community type (Census)								
Central city	1,714	2,498	145.8	18,038	17,721	98.2	20,164	20,219
Urban fringe	2,810	3,558	126.6	34,754	35,048	100.8	38,548	38,606
Non-MSA[9]	2,493	2,513	100.8	24,015	24,550	102.2	27,223	27,063

See notes at end of table.

Table 55. Estimated number and percentage of non-charter public school library media centers (LMCs) in 2003–04 SASS compared to 1999–2000 SASS estimates, by state, region, and community type: 1999–2000 and 2003–04—Continued

Characteristic	1999–2000 SASS non-charter public schools with no LMC[1]	2003–04 SASS non-charter public schools with no LMC (LMC file)[2]	2003–04 SASS as a percentage of 1999–2000 SASS[3]	1999–2000 SASS non-charter public schools with LMC[4]	2003–04 SASS non-charter public schools with LMC (LMC file)[5]	2003–04 SASS as a percentage of 1999–2000 SASS[6]	2003–04 SASS non-charter public schools with and without an LMC (school file)[7]	2003–04 SASS non-charter public schools with and without an LMC (LMC file)[8]
Community type								
Central city	†	2,498	†	†	17,721	†	20,164	20,219
Urban fringe/large town	†	3,626	†	†	35,963	†	39,560	39,589
Rural/small town	†	2,445	†	†	23,635	†	26,210	26,080
BIA-funded schools only[10]	24	14	58.3	153	148	96.7	162	162

† Not applicable.
# Rounds to zero.
[1] Schools and Staffing Survey (SASS), "Public School Library Media Center Data File," 1999–2000 (Final Library Weight); *The Status of Public and Private Library Media Centers in the United States: 1999–2000* (NCES 2004-313), Table 1a, Column 1 minus Column 2.
[2] Schools and Staffing Survey (SASS), "Public School Library Media Center Data File," 2003–04 (LMC Indicator, Final Library Weight).
[3] Column 2 / Column 1.
[4] Schools and Staffing Survey (SASS), "Public School Library Media Center Data File," 1999–2000 (Final Library Weight); *Status of Public and Private Library Media Centers in the United States: 1999–2000* (NCES 2004-313), Table 1a, Column 2.
[5] Schools and Staffing Survey (SASS), "Public School Library Media Center Data File," 2003–04 (LMC Indicator, Final Library Weight).
[6] Column 5 / Column 4.
[7] Schools and Staffing Survey (SASS), "Public School Data File," 2003–04 (Final School Weight).
[8] Column 2 + Column 5.
[9] MSA refers to Metropolitan Statistical Area.
[10] BIA refers to the Bureau of Indian Affairs.
NOTE: For the 1999–2000 SASS, public charter schools did not receive a separate school library media center questionnaire, so estimates for public charter library media centers are not comparable between the 1999–2000 and 2003–04 SASS. There is no "universe survey" that is used as the frame for school library media centers, so data from the previous SASS are used as the comparison. BIA-funded schools are not included in the total. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Library Media Center Survey," 1999–2000; Schools and Staffing Survey (SASS), "Public School Library Media Center Survey and Public School Data Files," 2003–04; *The Status of Public and Private Library Media Centers in the United States: 1999–2000*, Schools and Staffing Survey (SASS), "Public School Library Media Center Questionnaire," 1999–2000, and "SASS 1999–2000 Schools Without Libraries Restricted-Use Data File," September 2003.

Response Variance

A reinterview study has been conducted for each SASS administration. Reinterview programs are typically designed to evaluate fieldwork and/or estimate error components, such as simple response variance and response bias, in a survey model (Forsman and Schreiner, pp. 279–301). The purpose of the SASS reinterview programs was to estimate simple response variance; that is, to measure the consistency in response between the original survey and the reinterview (reliability of the data) for certain questions considered critical to the survey or suspected to be problematic. High response variance (i.e.,

inconsistency) indicates there is a problem with the design of the question or the nature of the data being collected. It also can often indicate the presence of bias in the data. However, while reinterview studies allow the detection of problems in the questions, they usually cannot identify causes of response error or correct the problems. The 2003–04 SASS reinterview program consisted of administering reinterview questionnaires that consisted of a subset of questions from the original questionnaires. There were four reinterview questionnaires: the Principal Reinterview Questionnaire (for private and public school principals), the School Reinterview Questionnaire (for private and public schools), the Private School Teacher Reinterview Questionnaire, and the Public School Teacher Reinterview Questionnaire.

This section summarizes material from the full report contained in "Appendix S. Response Variance in the 2003–04 Schools and Staffing Survey."

Content of Reinterview Questionnaires

There were 17 questions evaluated from the Principal Reinterview Questionnaire for private school principals, and 20 questions evaluated from the Principal Reinterview Questionnaire for public school principals. The topics included experience, training, and working conditions; teacher and school performance; school climate and safety; parent or guardian involvement; and demographic information.

There were 20 questions evaluated from the School Reinterview Questionnaire for private schools, and 38 questions evaluated from the School Reinterview Questionnaire for public schools. The topics included general information, staffing, and special programs and services.

There were 24 questions evaluated from the Private School Teacher Reinterview Questionnaire for private school teachers, and 26 questions evaluated from the Public School Teacher Reinterview Questionnaire for public school teachers. The topics included general information; class organization; educational background; certification and training; professional development; resources and assessments of students; and working conditions.

Reinterview Procedures

The sample included the cases selected for reinterview where Census Bureau clerical staff received a completed original questionnaire from the respondent. Then, staff mailed out the appropriate reinterview questionnaires with a letter explaining the purpose of the reinterview to the respondents. The respondents completed the reinterview questionnaires (self-administered) and then mailed the questionnaires back to the Census Bureau in the provided envelopes.

Reinterview Sample Design

The reinterview sample for each of the SASS surveys was a random subsample of that survey's full sample. The sample size was designed to obtain a certain number of completed interviews. The cases selected for reinterview included 686 cases for private school principals and private schools, 1,951 cases for public school principals and public schools, 1,375 cases for private school teachers, and 2,758 for public school teachers.

Reinterview Response Rates

There were 278 Principal Reinterview Questionnaires completed for private school principals, for a reinterview response rate of 61 percent, and 1,055 completed for public school principals, for a reinterview response rate of 68 percent (table 56). There were 244 School Reinterview Questionnaires

completed for private schools, for a reinterview response rate of 53 percent, and 667 completed for public schools, for a reinterview response rate of 43 percent. There were 304 completed Private Teacher Reinterview Questionnaires, for a reinterview response rate of 61 percent, and 763 completed Public Teacher Reinterview Questionnaires, for a reinterview response rate of 58 percent.

Table 56. Reinterview response rates, by school type and respondent: 2003–04

Respondent	School type	Number completed	Response rate (percent)
Principal	Private	278	61
Principal	Public	1,055	68
School	Private	244	53
School	Public	667	43
Teacher	Private	304	61
Teacher	Public	763	58

SOURCE: *Response Variance in the 2003–04 Schools and Staffing Survey*, U.S. Census Bureau, 2005.

Measures

The response error reinterview model assumed that the reinterview was an independent replication of the original interview. The reinterview data was weighted to reflect the sample design and to obtain an unbiased estimate.

The index of inconsistency and the gross difference rate were the principal measures of response variance in the categorical data. The index of inconsistency was the principal measure of response variance in continuous data.

The net difference rate (NDR) indicated how well the reinterview met the model assumptions for categorical data. The McNemar Test for the Yes/No questions tested whether the NDR is significant. The Hui-Walter Method was used to calculate the index for the Yes/No questions if the NDR was found to be significant. The Bowker Test is an extension of the McNemar Test and was used for questions that had multiple categories. For the quantitative questions the mean difference between the paired responses was tested to see if it was significantly different from zero. This test provided information analogous to the NDR.

For the questions with high indexes, logistic regression was used to test a model for inconsistency with explanatory variables gender, age, race, and ethnicity for the principals and teachers. The data were not distributed properly for logistic regression to be appropriate for the categorical questions. The logistic regression was used for the quantitative questions where the *t* test did not fail.

In some cases where questions in the 2003–04 SASS were asked in previous administrations of SASS, the 1999–2000 reinterview results were given for the comparison.

Major Findings

Of the 17 questions evaluated from the Principal Reinterview Questionnaire for private school principals, 41 percent displayed high response variance, suggesting poor reliability. Response variance was moderate for 47 percent of the questions analyzed and low for 12 percent. The attitudinal questions (6 of them) had high response variance. If attitudinal questions were excluded for private school principals, then 9 percent

of the 11 questions had high response variance, 73 percent had moderate variance, and 18 percent had low variance.

Of the 20 questions evaluated from the Principal Reinterview Questionnaire for public school principals, 65 percent displayed high response variance, suggesting poor reliability. Response variance was moderate for 30 percent of the questions analyzed and low for 5 percent. The attitudinal questions (5 of them) had high response variance. If attitudinal questions were excluded for public school principals, then 53 percent of the 15 questions had high response variance, 40 percent had moderate variance, and 7 percent had low variance.

Of the 20 questions evaluated from the School Reinterview Questionnaire for private schools, 5 percent displayed high response variance, suggesting poor reliability. Response variance was moderate for 15 percent of the questions analyzed and low for 80 percent.

Of the 38 questions evaluated from the School Reinterview Questionnaire for public schools, 18 percent displayed high response variance, suggesting poor reliability. Response variance was moderate for 32 percent of the questions analyzed and low for 50 percent.

For private school teachers, 25 percent of the 24 questions from the Private Teacher Reinterview Questionnaire displayed high response variance, suggesting problems with reliability. There was moderate response variance for 29 percent of the questions analyzed and low response variance for 46 percent. There was one attitudinal question that had high response variance. If attitudinal question was excluded for private school teachers, then 22 percent of the 23 questions had high response variance, 30 percent had moderate variance, and 48 percent had low variance.

For public school teachers, 19 percent of the 26 questions from the Public Teacher Reinterview Questionnaire displayed high response variance, suggesting problems with reliability. There was moderate response variance for 46 percent of the questions analyzed and low response variance for 35 percent. There was one attitudinal question that had high response variance. If attitudinal question was excluded for public teachers, then 16 percent of the 25 questions had high response variance, 48 percent had moderate variance, and 36 percent had low variance.

Chapter 11. Information on Data Files and Merging Components

The Schools and Staffing Survey (SASS) is composed of nine survey questionnaires: the School District Questionnaire, School Questionnaire, Private School Questionnaire, Unified School Questionnaire, Principal Questionnaire, Private School Principal Questionnaire, Teacher Questionnaire, Private School Teacher Questionnaire, and Library Media Center Questionnaire. The Unified School Questionnaire was given to schools that function independently from regular school districts or are the only school within a regular school district. This included Bureau of Indian Affairs (BIA) funded schools, public charter schools that were not operated within a public school district or managing entity, traditional public schools that were single-school districts, and state-run schools such as schools for the blind. (See chapter 5 for details.) These nine questionnaires were transformed into 12 data files that separate each type of respondent into three sectors: public, private, and BIA-funded. Private school library media centers were not given a questionnaire to complete, due to budget reasons; therefore, there is no private school library media center data file. The table below identifies each data file and the questionnaire data used to build the file.

Table 57. Names of data files and the questionnaires from which the data were drawn: 2003–04

Data file	Questionnaire source
Public School District	School District Questionnaire, Unified School Questionnaire
Public School	School Questionnaire, Unified School Questionnaire
Private School	Private School Questionnaire
BIA School[1]	Unified School Questionnaire
Public School Principal	Principal Questionnaire
Private School Principal	Private School Principal Questionnaire
BIA School Principal[1]	Principal Questionnaire
Public School Teacher	Teacher Questionnaire
Private School Teacher	Private School Teacher Questionnaire
BIA School Teacher[1]	Teacher Questionnaire
Public School Library Media Center	Library Media Center Questionnaire
BIA School Library Media Center[1]	Library Media Center Questionnaire

[1] BIA refers to the Bureau of Indian Affairs.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

Availability of Data

SASS data are available as restricted-use data files in the form of an Electronic Codebook (ECB) and through an online Data Analysis System (DAS). Both restricted-use and public-use data include confidentiality edits, which add "noise" to the data in order to make the identification of respondents in published data less certain. (See the section below on "Confidentiality Edits to the Data.") Access to the restricted-use data files is limited to individuals associated with organizations that have received a license to use SASS data, while the DAS is available to the public. How to receive a restricted-use license is discussed in the next section.

Restricted-use data are accessed through an ECB, which is a searchable codebook, or data dictionary, on a CD-ROM that produces data files as specified by the user. Data are restricted-use because they contain individually identifiable information, which is confidential and protected by law. While direct identifiers, such as the respondent's name, are not included on the data files, the restricted-use data files do feature more variables that can indirectly identify a respondent or that can be used to link SASS with Common Core of Data (CCD) or other data files, which could provide the name of the school and lead to the identification of individual respondents.

The National Center for Education Statistics (NCES) uses the term "public-use data" for survey data when the individually identifiable variables and data have been removed, recoded to collapse the number of categories, or perturbed to protect the confidentiality of survey respondents. The DAS constitutes public-use data. The DAS system will be available online and will produce survey results in tables on demand for the general public.

The 2003–04 SASS data are released in accordance with the provisions of the amended National Education Statistics Act of 1994 (20 U.S.C. 9017), as amended, the Privacy Act of 1974, the Computer Security Act of 1987, and the U.S. Patriot Act of 2001. Under the provisions of Section 183 of the Education Sciences Reform Act of 2002, Public Law 107–279 (20 U.S.C. 9873), NCES is responsible for protecting the confidentiality of individual respondents and releases data (CD-ROMs) for statistical purposes only. Record matching or deductive disclosure by any user is prohibited by federal law.

How to Get Restricted-Use Data Files

Researchers who can demonstrate a need for more detailed information may request access to the restricted-use datasets for statistical research purposes, provided that they follow computer security requirements and fill out an Affidavit of Nondisclosure.

Researchers requesting access to the restricted-use datasets must obtain a license to use those data by providing the following information:

- the title of the survey(s) to which access is desired;
- a detailed discussion of the statistical research project that necessitates accessing the NCES survey;
- the name of the principal project officer at the institution who will be heading up the research effort and who will enforce the legal provisions of the license agreement;
- the number, name(s), and job title(s) of professional and technical staff, including graduate students, who will be accessing the survey dataset; and
- the estimated loan period necessary for accessing the NCES survey dataset.

Return all of the above information to

NCES Data Security Office
Department of Education/NCES/ODC/SSP
1990 K Street NW
Room 9061
Washington, DC 20006

All of these procedures are detailed in the *NCES Restricted-Use Data Procedures Manual*, available for download at http://nces.ed.gov/statprog/rudman.

After the access request has been reviewed, the requestor will be informed whether a license to use the restricted data has been approved.

Requestors and/or institutions that violate the agreement are subject to a fine of not more than $250,000 (under the provisions of 18 U.S.C. 3559 and 3571) or imprisonment for not more than 5 years, or both. The confidentiality provisions that NCES must follow by law can be found at http://nces.ed.gov/statprog.

How to Access Public-Use Data

The public-use version of the teacher (public and private) and school (public and private) data files will be available through an online Data Analysis System (DAS) in early 2007. The DAS permits the user to create crosstabulations and standard errors. The user is not able to link datasets. While the user may recode variables in the DAS, many continuous variables have been recoded into created variables to facilitate the use of the DAS.

All NCES public-use data files can be accessed at no cost from the NCES website. At the time of publication, the DAS for this set of surveys was in development. It will be accessible on the NCES website for SASS at http://nces.ed.gov/surveys/sass/.

Understanding the Data Files

Confidentiality Edits to the Data

The restricted-use data files, which are also the source for data accessed through the DAS, have been altered according to NCES standards. Known as confidentiality edits, "noise" was added to the data in order to make the identification of respondents in published data less certain. These edits directly alter some data for individual respondents, but preserve the overall distributions and level of detail in all variables included on the data file. There are several ways in which the data can be altered, including blanking and imputing for randomly selected records; blurring (e.g., combining multiple records through some averaging process into a single record); adding random noise; and data swapping or switching (e.g., switching the variable for age from a predetermined pair of individuals). All 12 restricted-use data files were altered through one or more of these methods.

Treatment of Public Charter Schools and BIA-Funded Schools

Public charter schools were first included in the 1999–2000 administration of SASS. At that time, the number of public charter schools was small enough that all known to be operational in 1998–99 and still operating in 1999–2000 were surveyed. The number of public charter schools has continued to grow, making it more feasible to sample public charter schools. A sample of 303 public charter schools was selected for SASS. (See chapter 4 for details.) Data from these respondents were included in the public sector data files. The variable CHARFLAG, which identifies whether or not the public school is a traditional public school or a public charter school, can be used for separately analyzing public charter data.

Public charter schools received either the Unified School Questionnaire or the School Questionnaire, depending upon whether or not the school was associated with a regular school district as defined by CCD. When a public charter school was selected, the sample file (CCD) had information about whether the public charter was part of a regular school district or was under the authority of a chartering agency. Public charter schools operating under the jurisdiction of a district followed the procedure for traditional public schools. Public charter schools that were their own school district or that were under another type

of chartering agency filled out the Unified School Questionnaire, which included district items (e.g., data on salary schedules and hiring policies).

All schools funded by BIA were given the Unified School Questionnaire. The variable BIAFLAG identifies whether or not a school is BIA-funded. These schools were placed on separate data files that only include BIA-funded school-related components. Public schools with a high American Indian student enrollment (defined as at least 19.5 percent of the total enrollment) were oversampled for SASS. (See chapter 4 for details.) These cases were included on the public sector data files.

There were instances when schools did not fit exclusively into the categories of traditional public, public charter, or BIA-funded schools. In these instances, the following priority for determining school sector was applied:

- schools included on the BIA Directory of schools were categorized as BIA-funded schools and included on the BIA data files; and
- schools that were on the BIA Directory of schools but also indicated that they were charter schools were categorized as BIA-funded schools and included on the BIA data files.

In addition, how a school was classified on CCD (as public, public charter, or BIA) may not match how the school classified itself on the questionnaire. The following decisions were made to assign the school's sector:

- schools that were classified as public charter schools on CCD but did not claim charter school status on the questionnaire were categorized as traditional public schools;
- schools that were classified as public schools on CCD but claimed to be charter schools on the questionnaire were categorized as public charter schools;
- schools were not asked on the questionnaire whether or not they were funded by BIA; there were no inconsistencies with the school's sector as it was assigned on the sampling frame or on the data files.

Categories of Variables

Variables on SASS data files were organized into the following five categories on each record layout: frame, survey, created, weighting, and imputation flag variables. Each of these categories was further separated into subcategories that provide more detail on each variable's source. The purpose of these categories is to help the user better understand what types of variables are included on the data files and what the sources were for the variables.

Variables were classified as frame variables if they were drawn from or based on the SASS sampling frame, CCD, or the Private School Universe Survey (PSS). Frame variables may or may not have been used for sampling. (See chapter 4 for details on sampling variables.) There are four types of frame variables, or subcategories, identifying the source of each frame variable: 2001–02 CCD or PSS, SASS frame, 2003–04 CCD or PSS, or CAPI. The CAPI instrument was used in the field by field representatives to verify school information and determine whether schools were in-scope or out-of-scope. (See chapter 5 for more details.) Only one variable, the school's physical address ZIP code (SC_ZIP), was used from the CAPI on the private school data file. This is because the private school sampling frame did not include the physical address ZIP code for the school. Selected variables from these sources were included on the data file if they provided potentially valuable information to the user that was not available from the survey itself. Examples of frame variables include the respondent's control, or identification, number (i.e., CNTLNUMS for schools, CNTLNUMT for teachers,

CNTLNUMD for districts, CNTLNUMP for principals, and CNTLNUML for school library media centers) and locale codes (i.e., SLOCP_99, SLOCP_03, and URBANS03 on the school data files). The frame variables are listed in "Appendix T. Frame and Created Variables."
Survey variables are the actual variables drawn from the questionnaire responses. Each item on a questionnaire has a small number printed to the left. This series of numbers is the source code. A single letter was added to the beginning of the series to signify which type of respondent (i.e., district, school, principal, teacher, or school library media center) is associated with a source code. Consequently, the letter "D" was added for district, "S" for school, "A" for principal or administrator, "T" for teacher, and "M" was added for school library media center. For example, on the School District Questionnaire, item 1a has the source code 0035 printed to the left. On the data file, the source code for this item is D0035.

Created variables are based on survey variables, frame variables, other created variables, or a combination of these. These variables are frequently used in NCES publications and have been added to the data files to facilitate data analysis. The code used to create these variables can be found in the description of each variable in the Codebook Window of the restricted-use Electronic Codebook. There are two subcategories for created variables based on whether the data used to create the variable are on the same data file. Created variables labeled as being "within" a file are based on data found on the same data file. For example, the variable TEALEV on the teacher data files identifies whether a teacher teaches primary, middle, or high school grade levels, or a combination of grade levels. It is built from the individual grades that the teacher indicated he or she teaches on the Teacher or Private School Teacher Questionnaire; consequently, the created variable is located on the same data file from which the source data are drawn. A created variable labeled as being "other" is on one data file but based on data from a different data file. "Other" created variables are typically based on the school or public school district data files and then placed on the teacher, principal, or school library media center data files as a convenience to the user. For example, the variable SCHLEVEL, which identifies whether a school is an elementary, secondary, or combined school, is considered an "other" created variable on the principal, teacher, and school library media center data files. This is because the individual grade levels used to build this variable were reported by the school and are located on the school data files. The created variables are listed in "Appendix T. Frame and Created Variables."

There are two types of weighting variables on each data file. (For more information on weighting and standard errors, see chapter 9.) The first is the sampling weight, or final weight for the respondent, and the second includes the 88 replicate weights. The final weight adjusts for nonresponse and oversampling and is used so that estimates represent the population rather than simply the sample. The replicate weights are used as a set to generate standard errors for estimates. On the school data files, the final weight is called SFNLWGT and the replicate weights are SREPWT1 through SREPWT88.

The imputation flags identify whether or not a survey item was imputed for missing data (as discussed in more detail in chapter 8) or whether a created variable was imputed because of a nonresponding school or district. In addition, there is one frame variable, SLOCP_03, that has a corresponding imputation flag (FL_SLC03) on all public sector files, except the public school district data file. This variable and its flag were pulled directly from the 2003–04 CCD. No other frame variable has a corresponding imputation flag. All survey variables have a corresponding imputation flag that indicates whether a value was imputed and, if so, what method was used. All survey imputation flags begin with "F_" and are followed by the name of the variable. For example, the imputation flag for T0026 from the teacher data files is F_T0026. Certain created variables were also given imputation flags. These created variables were built with data from either the public school district or school data files and placed on the teacher, principal, or school library media center data files. However, if the public school district or school failed to respond to SASS, data would not be available to place on other data files. These data were imputed using data from the sampling frame, if available, or imputed by hand. The imputation flag for these created variables indicates whether or not the school or public school district failed to respond to SASS and, if so, then

what type of imputation was used as the source for the data. All created variable imputation flags begin with "FL_" and are followed by at least the beginning of the name of the created variable. For example, the variable ENRK12UG comes from the school data file and provides the total K–12 and ungraded enrollment in the school. It is placed on each school's associated principal, teacher, and school library media center data files. If the school did not respond to SASS, data are still present for this variable on the other data files. The variable's imputation flag is called FL_ENRK.

Nonresponding Units

As described in chapter 4 on sampling selection, the school is the primary sampling unit. For each sampled school, the principal, selected teachers, the school library media center, and the public school district, if applicable, were included in SASS. Not all of these types of respondents chose to participate in SASS. Consequently, it is possible to have several teacher records but no corresponding school record, because the school did not complete a school questionnaire. Similarly, the public school district could have agreed to participate in SASS but failed to complete the questionnaire, resulting in having completed questionnaires for schools and principals but no corresponding public school district data. Table 58 below identifies the number of cases that have a corresponding unit that did not respond. This information is particularly useful for identifying how many cases are missing when merging data files.

Table 58. Number of missing cases in combined datasets, by nonresponding component and dataset providing unit of analysis: 2003–04

		Nonresponding public component			
Unit of analysis	Observations	Public school districts	Principals	Schools	School library media centers
Public school principal	8,143	1,288	†	407	1,249
Public school	7,991	1,221	255	†	1,213
Public school teacher	43,244	6,637	2,166	2,965	5,607
Public school library media center	7,229	1,126	335	451	†

		Nonresponding private component			
Unit of analysis	Observations	†[1]	Principals	Schools	†[1]
Private school principal	2,376	†	†	88	†
Private school	2,456	†	168	†	†
Private school teacher	7,979	†	509	475	†

		Nonresponding BIA-funded component[2]			
Unit of analysis	Observations	†[3]	Principals	Schools	School library media centers
BIA-funded school principal[2]	146	†	†	5	24
BIA-funded school[2]	145	†	4	†	23
BIA-funded school teacher[2]	624	†	21	30	81
BIA-funded school library media center[2]	124	†	2	2	†

† Not applicable.

[1] Private schools did not receive the School District Questionnaire or the School Library Media Center Questionnaire.

[2] BIA refers to the Bureau of Indian Affairs.

[3] BIA-funded schools did not receive the School District Questionnaire.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

Linking Data Files Within SASS

When each school was selected for the school sample, its principal or school head was also selected for the principal sample, along with a sample of teachers at that school who received teacher questionnaires. For public schools, the public school district having jurisdiction over the sampled school was selected for the public school district sample. For public and BIA-funded schools, a staff member who was responsible for the school library media center, if any, was also included in the sample for the School Library Media Center Questionnaire. The School Library Media Center Questionnaire was not given to private schools.

On the restricted-use files, any combination of the school, principal, teacher, and school library media center (if applicable) datasets within each SASS school sector can be merged using the school's control number (CNTLNUMS). The school control number is present on all of these data files and will link them together.

The public teacher, school, principal, and school library media center datasets may be merged with the public school district dataset. School and public school district datasets can be merged using the district's control number (CNTLNUMD) or by parsing out the first five digits of the school's control number and the district's control number.

There are two ways in which data files can be merged. The first involves merging data files by matching them using the school's control number. An example of this is when the user would like to merge a school's record with the records of its teachers. The school and the teachers are linked through the school's control number. Instructions on how to match merge data files in SAS, SPSS, and Stata are provided below. The second method of merging is appending, or concatenating, data files. For example, if the user would like to analyze public and private school data, these files can be appended together. Because these data files do not need to be "matched," no control number needs to be specified to append the data files. This type of merging is not discussed in this chapter. Please see the manual for the statistical program being used to determine how to append data files and for additional information on how to merge data files.

Sample SAS Syntax for Merging Data Files and Attaching Variable Labels

Merging Restricted-Use Data Files Using the School Control Number (CNTLNUMS)

When merging any of the school, principal, teacher, or school library media center data files together for a given school, the school's control number, CNTLNUMS, is used to match data files. In the SAS code below, please note that both data files being merged must be sorted by the variable listed in the "by" statement prior to performing the merge. Comments to explain lines of code are contained within "/* */" Words in italics are meant to be replaced by meaningful file or variable names.

```
proc sort data = dataset1;
by CNTLNUMS;
run;
proc sort data = dataset2;
by CNTLNUMS;
run;
data newfilename;                    /* create new merged file name */
merge dataset1 (in=a) dataset2;      /* merge the two files and specify dataset1 as
                                        unit of analysis */
```

```
by CNTLNUMS;
if a=1;                                  /* keep all dataset1 records and only matching
                                            dataset2 records */
run;
```

Merging the Restricted-use Public School District Data File with Other Public Sector Data Files

There are two ways to merge the public school district data file with other public sector data files. The first is with the district's control number (CNTLNUMD). This variable is included on the public school district data file as well as the public school data file. The sample code provided above is correct, except that the merging variable will be CNTLNUMD.

The second method is by parsing out the first five digits of the district's and the school's control number. Users will need to use this method if the school did not respond to SASS. The first five digits of CNTLNUMS and CNTLNUMD are identical, so users can create a new variable using a substring of these control numbers and merge the data files by the new variable name. The SAS syntax provided below illustrates how to merge the public school district data file with other data files using a substring. Please note that the data files being merged must be sorted by the variable listed in the "by" statement prior to performing the merge.

```
data workfilename1;
set school_or_principal_or_teacherdatafile;
newvariablename = substr (CNTLNUMS,1,5);
run;
proc sort;
by newvariablename;
run;
data workfilename2;
set districtdatafile;
newvariablename = substr (CNTLNUMD,1, 5);
run;
proc sort;
by newvariablename;
run;
data mergedfilename;
merge workfilename1 workfilename2;    /* no unit of analysis file is identified, so all
                                            records from both files will remain */
by newvariablename;
run;
```

Attaching Value Labels to Variables Extracted from the Electronic Codebook (ECB)

While the formatting syntax is provided, it is up to the user to call up the labels. There are three primary ways to accomplish this.

First, value labels for each variable can be reviewed within the ECB. When variables are extracted from the ECB there is a box on the right-hand side of the pop-up window that requests the creation of a codebook. Check this box in order to have the ECB create a text file with the codebook information for all extracted variables. Then within this text file use the find function to locate the variable and determine the value labels.

Second, labels may be manually attached using the PROC step in SAS. To do this, review the syntax created from the extraction process to determine the value label name associated with each variable. In general, the Format name drops the last digit or letter in the variable name and adds the letter "F" at the end. There are exceptions to this rule.

For example, the appropriate SAS syntax for a PROC FREQ is

proc freq;
format *varname formatname.*;
tables *varname*;
run;

A third method is to create a permanent value label library in SAS. This requires users to manipulate the SAS syntax generated from the extraction. To begin, users need to create a permanent library for the value formats that includes all of the value formats they would like to keep. The SAS syntax is as follows:

libname library '*C:\librarypath*'; /* assigns format library, libname must be "library" */

proc format library=library; /* creates permanent formats in the directory specified in library libname statement */

[List all of the value formats here]
VALUE URBANIF
1 = "Large or mid-size central city"
2 = "Urban fringe of large or mid-size city"
3 = "Small town/rural"
;
VALUE VIOLPRF
0 = "School does not have a violence prevention program"
1 = "School has a violence prevention program but no formal procedure for assessing its effectiveness"
2 = "School has a violence prevention program and a formal procedure for assessing its effectiveness";

The above syntax is written before the user's first data step and set statements. Within the data step programming that follows, the following format commands must be included:

FORMAT *varname valuename.*;

A complete list of variables and their assigned formats can be found in the ECB under the ECB's Documentation/Supplemental Materials label, in the table, "SASS Format Names for the SAS Programming Language."

Sample SPSS Syntax for Merging Data Files Within SASS

NOTE: Both data files being merged must be sorted by the variable listed in the "by" statement prior to performing the merge. In SPSS, value labels are attached automatically during the extraction process. Words in italics are meant to be replaced by meaningful file or variable names.

Merging Data Files Using the School Control Number (CNTLNUMS)

When merging any of the school, principal, teacher, or school library media center data files together for a given school, the school's control number, CNTLNUMS, is used to merge data files. The SPSS syntax is provided below.

```
get file = 'dataset1.sav';
sort cases by CNTLNUMS(A);
save outfile = 'dataset1.sav';
get file = 'dataset2.sav';
sort cases by CNTLNUMS(A);
save outfile = 'dataset2.sav';
match files file = 'dataset1.sav'
        /table 'dataset2'
        /by CNTLNUMS;
save outfile = 'mergeddatafile.sav';
```

Merging the Public School District Data File with Other Public Sector Data Files

There are two ways to merge the public school district data file with other public sector data files. The first is with the district's control number (CNTLNUMD). This variable is included on the public school district data file as well as the public school data file. The sample code provided above is correct, except that the merging variable will be CNTLNUMD.

The second method is by parsing out the first five digits of the district's and the school's control number. Users will need to use this method if the school did not respond to SASS. The first five digits of CNTLNUMS and CNTLNUMD are identical, so users can create a new variable using a substring of these control numbers and merge the data files by the new variable name. The SPSS syntax provided below illustrates how to merge the public school district data file with other data files using a substring. Please note that the data files being merged must be sorted by the variable listed in the "by" statement prior to performing the merge. In addition, including "(a5)" for the substring specifies the new variable as a five-character alphanumeric variable.

```
get file = 'school_or_principal_or_teacher_or_librarydatafile.sav';
string newvariablename (a5);
compute newvariablename = substr(CNTLNUMS,1,5);
sort cases by newvariablename;
save outfile = 'temporarydatafile.sav';
get file = 'districtdatafile.sav';
string newvariablename (a5);
compute newvariablename = substr(CNTLNUMD,1,5);
sort cases by newvariablename;
save outfile = 'temporarydistrictdatafile.sav';
match files file = 'temporarydatafile.sav'
    /table 'temporarydistrictdatafile'
    /by newvariablename;
save outfile = 'mergeddatafile.sav';
```

Sample Stata Syntax for Merging Data Files Within SASS

Merging Restricted-use Data Files Using the School Control Number (CNTLNUMS)

When merging any of the school, principal, teacher, or school library media center data files together for a given school, the school's control number, CNTLNUMS, is used to merge data files. The Stata syntax is provided below. Notice that both data files being merged must be sorted by the school control number prior to performing the merge. Words in italics are meant to be replaced by meaningful file or variable names.

use *dataset1*
sort CNTLNUMS
save *dataset1*, **replace**
use *dataset2*
sort CNTLNUMS
save *dataset2*, **replace**
merge CNTLNUMS using *dataset1*

Merging the Restricted-use Public School District Data File with Other Public Sector Data Files

There are two ways to merge the public school district data file with other public sector data files. The first is with the district's control number (CNTLNUMD). This variable is included on the public school district data file as well as the public school data file. The sample code provided above is correct, except that the merging variable will be CNTLNUMD. However, since CNTLNUMD is not included on the principal, teacher, or school library media center data file, merging the public school district data file with these data files requires a different approach. Users will also need to use this method if the school did not respond to SASS.

The second method parses out the first five digits of the district's and the school's control number. The first five digits of CNTLNUMS and CNTLNUMD are identical, so users can create a new variable using a substring of these control numbers and merge the data files by the new variable name. The Stata syntax provided below illustrates how to merge the public school district data file with other data files using a substring. Please note that the data files being merged must be sorted by the variable listed in the "sort" statement prior to performing the merge. Users may need to increase memory before beginning the merge.

use *districtfile*
generate *newvariablename* = **substr**(CNTLNUMD,1,5)
sort *newvariablename*
save *tempdistrictfile*, **replace**
use *school_or_principal_or_teacher_or_libraryfile*
generate *newvariablename* = **substr**(CNTLNUMS,1,5)
sort *newvariablename*
save *tempschool_or_principal_or_teacher_or_libraryfile*, replace
merge *newvariablename* **using** *tempdistrictfile*
drop if _merge= =2
save *mergedfile*, **replace**

Unless specified, the default name of the merge variable created during the merging of files is _merge. The variable _merge identifies the various categories of data in a one-to-one merge. For example, if users merge the public school district ("using" data file) file onto the principal file ("master" data file):

_merge= =1	observations from principal data file, no public school district data added (occurs with district nonresponse)
_merge= =2	observations from only public school district data file (e.g., district responded, but there is no principal from that district)
_merge= =3	observations from public school district and principal data files

By dropping the _merge= =2 observations, the merged data file will contain only principals, regardless of whether their district responded. No observations will remain when a district responded without a principal.

Chapter 12. User Notes and Cautions

The following notes cover the created variable for percent minority enrollment (MINENR), Title 1 data in Bureau of Indian Affairs (BIA) funded schools, data anomalies in created variables, the effect of missing data across files, the locale codes used on the 2003–04 Schools and Staffing Survey (SASS), departmentalized and elementary enrichment teachers with no reported classes, and the existence of leading spaces on certain character variables in extracted SPSS files.

Users may also be interested in examining the crosswalk of variables contained in "Appendix U. Crosswalk Among Items in the 1987–88, 1990–91, 1993–94, 1999–2000, and 2003–04 SASS." This appendix has crosswalks for each SASS questionnaire as well as four crosswalks that compare similarities and differences across the 2003–04 SASS questionnaires given to each type of respondent (i.e., district, principal, school, or teacher). "Appendix V. Main Teaching Assignment Variable" may also be of interest. It contains a crosswalk that outlines how the changes in teaching assignment fields from the 1999–2000 SASS to the 2003–04 SASS were grouped to produce the main teacher assignment variable (ASSIGN03).

Percent Minority Enrollment (MINENR)

This created variable is based on data from the school questionnaires and is placed on the principal, teacher, and school library media center data files. In cases where a sampled school did not respond to the SASS school questionnaire (i.e., unit nonresponse), this variable was created based on data from the Common Core of Data (CCD—for public and public charter schools only) for 2001–02, which is the frame year. For about 400 records, the data that were pulled from the frame dataset onto the SASS principal, teacher, or school library media center file resulted in minority enrollment percentages that exceeded 100 percent. This occurred because data on total minority enrollment exceeded the data for total enrollment on CCD. These data were not edited to the same level of consistency that the SASS questionnaire variables received. Consequently, MINENR was edited so as not to exceed 100 percent; these cases have a value of 3 for the corresponding imputation flag variable (FL_MINEN). This affects 351 public school teachers, 73 public school principals, and 65 public school library media centers.

Title I Data in Bureau of Indian Affairs (BIA) Funded Schools

Some data checks for reasonableness do not require exact correspondence between the frame year and the SASS data collection year. One such case is that for the BIA-funded schools, where the Common Core of Data (CCD) data indicated that 100 percent were receiving Title I schoolwide funding in 2002–03. Schoolwide funding does not pay for particular teachers or services, but serves the school overall; eligible schools must have at least 40 percent of the students' families fall below the poverty threshold. In the 2003–04 SASS, only about 14.5 percent of the BIA-funded schools reported receiving Title I funding. This could be due to respondent error. Since BIA-funded schools already receive their funding from federal programs, at the school level, the respondents may not realize that Title I funds had also been received. The CCD information on Title I funding for BIA-funded schools comes directly from the Bureau of Indian Affairs. Upon reviewing the reported data and noting the inconsistency with the CCD data, all of the Title I related variables, S0635 through S0656, were deleted from the BIA school data file. These are the only items removed from any of the 2003–04 SASS data files.

Data Anomalies in Created Variables

Consistency edits were not always performed on created variables, which may result in some data anomalies. As one example, nine private schools reported a higher number of K–12 students participated in the free and reduced-price lunch program (S0634) than were enrolled in those grades (S0422). The created variable NSLAPP_S, which measures the percentage of K–12 students participating in the National School Lunch Program, was truncated to 100 percent for these nine cases.

Missing Data Can Cause Inconsistencies Across Files

Consistency edits are applied to survey items for each questionnaire, but there are some cases in which the inconsistencies cannot be resolved. For example, on the private school teacher data file, if the school did not respond to the 2003–04 SASS, but one or more teachers did respond, the school's program type (PGMTYPE), typology (TYPOLOGY), affiliation (AFF_99), affiliation stratum (STRATA), and religious classification (RELIG) may have inconsistent data. When the school questionnaire is not filled out, assumptions are made about which type of school it is in order to put that information on the principal, teacher, or school library media center data file. It is assumed that the sampling frame information is correct.

Locale Codes Based on 1990 and 2000 Census Geography

The locale codes that exist on the 2003–04 SASS data files are based upon the geographic concepts used in the 1990 and 2000 Decennial Censuses. (SLOCP_99 uses the 1990 Census metropolitan areas, and SLOCP_03 and URBANS03 use the 2000 Census metropolitan areas.) That is, while the district classifications reported in the locale codes are based on the Census Bureau's annual update, the specific categories reported in the 2003–04 SASS and how these categories are defined are based, respectively, upon the 1990 or 2000 set of definitions for central city, urban fringe of large or medium-sized central city, large or small town, and rural areas either inside a metropolitan area or outside a metropolitan area.

Over time, how metropolitan and nonmetropolitan areas are defined has evolved. The 1990 Decennial Census geographic areas were based upon countywide definitions of metropolitan or nonmetropolitan areas. By the 2000 Census, urban and rural classifications were based on a subcounty level. In 2003, the Office of Management and Budget changed the terminology, replacing "central city" with "principal city" and "Standardized Metropolitan Statistical Area" (SMSA) with "Core-based Statistical Area" (CBSA). However, these newer terms and locale codes could not be used in the 2003–04 SASS because the 2003 geographic classification of schools or school districts had not been completely implemented into the Common Core of Data (CCD) or the Private School Universe Survey (PSS), which serve as the sampling frames for SASS, by the time the 2003–04 SASS data were being processed. Since then, the 2003–04 CCD and 2003–04 PSS have incorporated a new set of 12-level locale codes.

Departmentalized and Elementary Enrichment Teachers With No Reported Classes (T0076)

On the 2003–04 SASS teacher data files (public, private, and BIA), respondents with departmentalized and elementary enrichment classes were asked to report the number of separate classes (or sections) they currently teach (Q18, T0076). For each class (or section), they were to provide detailed information on the subject, grade level, and enrollment of each class (Q19). Of all departmentalized and elementary enrichment teachers, a total of 26 teachers reported teaching no classes in question 18. No edit was done

on teachers reporting zero classes and question 18 was not imputed for any of the 26 teachers (F_T0076 = 0). Since all teachers in the SASS sample should be teaching in some capacity, this is an anomaly of which users should be aware. These teachers differ on a variety of characteristics, including sector, classroom organization, employment status, main assignment, teacher and school level, and urbanicity. For example, of the 26 teachers

- nineteen are departmentalized and seven are elementary enrichment; and
- twenty-one come from public schools, four from private schools, and one from a BIA-funded school.

These teachers have been included in analyses done by the National Center for Education Statistics (NCES). Researchers who choose to exclude them will produce slightly different estimates.

Leading Spaces on Character Variables

Several character variables on the 2003–04 SASS data files have been formatted with leading spaces: SC_NEID and the teacher grade-level codes (T0078, T0081, T0084, T0087, T0090, T0093, T0096, T0099, T0102, and T0105). This occurs only on the extracted SPSS files and not the SAS or Stata files. When using these variables to run an analysis in SPSS involving a restriction on the type of cases to include (e.g., "select if" or "filter by" statements), users will need to either enter the leading space(s) in the syntax or recode the variable(s) to remove the spaces. The following code demonstrates how to recode character variables with leading spaces.

The single character grade-level codes (1–9 and K) contain one leading space. The following sample code demonstrates how to recode these variables using T0078 as an example:

```
RECODE T0078 (' 1'='1') (' 2'='2') (' 3'='3') (' 4'='4') (' 5'='5') (' 6'='6') (' 7'='7') (' 8'='8') (' 9'='9')
(' K' = 'K')
```

Cases assigned a valid skip on SC_NEID contain 10 leading spaces before the -8 value. Use the following code to recode this variable:

```
RECODE SC_NEID ('          -8'='-8').
```

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