

Documentation for the 2011–12 Schools and Staffing Survey

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Chapter 1. Overview

The National Center for Education Statistics (NCES) sponsors the Schools and Staffing Survey (SASS) on behalf of the U.S. Department of Education in order to collect data on public and private elementary and secondary schools in the United States. The U.S. Census Bureau conducts the survey for NCES. 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 a large-scale sample survey of K–12 school districts, schools, administrators, teachers, and library media centers in the United States. It includes data from the public and private sectors. Therefore, SASS provides a wide range of opportunities for analysis and reporting on elementary and secondary educational issues.

The 2011–12 SASS data products include eight restricted-use data files: Public School District, Public School, Public School Principal, Public School Teacher, Public School Library Media Center, Private School, Private School Principal, and Private School Teacher. Data users can link these files together for additional analytical opportunities. The 201112 SASS data will also appear in PowerStats (<http://nces.ed.gov/datalab/sass>), which allows users to create tables and regressions.

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 began in 1983 with a series of 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 methodological and content-related 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, which resulted in the Schools and Staffing Survey.

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 them. SASS was designed to provide a national snapshot of America's public and private schools, with the first administration in the 1987–88 school year. In order to achieve high

response rates and to maintain consistency in procedures across the different SASS questionnaires, NCES selected the U.S. Census Bureau to collect and process the data.

After the 1987–88 administration of SASS, the survey was conducted again during the 1990–91, 1993–94, 1999–2000, 2003–04, 2007–08, and 2011–12 school years. 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 that included recommendations regarding improving and expanding 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 four-year longitudinal survey, the 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. Public charter schools that met the definition of a SASS school were sampled at 100 percent for the 1999–2000 SASS.¹

The 2003–04 SASS did not continue the practice of including all eligible charter schools. Instead, the 2003–04 SASS drew a sample of charter schools. 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. The sampling of public charter schools continued for the 2007–08 and 2011–12 SASS, with an expanded sample size for the 2011–12 SASS to improve national estimates. Public charter school data are included with traditional public school data, as has been done since the 2003–04 SASS.

While SASS included Bureau of Indian Education-funded (BIE)² schools since its inception in the 1987–88 through 2007–08 collections, SASS has treated BIE-funded schools inconsistently over time. For the first administration of SASS, BIE-funded schools were included in the public school frame and treated like other public sector schools throughout the survey lifecycle. For the 1990–91 SASS, a sample of BIE-funded schools was drawn from a list of BIE-funded schools. The BIE-funded schools in the SASS sample were identified as a separate school sector with separate data files. From the 1993–94 SASS through the 2007–08 SASS, BIE-funded schools that met the definition of a SASS school were sampled at 100 percent. Due to funding constraints, BIE-funded schools were not sampled for the 2011–12 SASS and therefore are not included in the data files.

The 2011–12 SASS provides valuable data for educators, researchers, and policymakers on public school districts (Local Education Agencies); public (including public charter) and private schools, principals, and

¹ A school was eligible for SASS if it had students in any of grades 1–12 and was in operation during the SASS data collection year.

² The Office of Indian Education Programs of the Bureau of Indian Affairs (BIA) was renamed and established as the Bureau of Indian Education (BIE) in 2006. BIE-funded schools were referred to as BIA schools in the documentation for SASS administrations prior to 2007–08.

teachers; and public school library media centers. Chapter 2 includes details on the changes to questionnaires since the 2007–08 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 2011–12 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 school versions (Principal Questionnaire, School Questionnaire, Public School Questionnaire (With District Items), and 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 2011–12.³ The School Library Media Center Questionnaire was administered to public (including public charter) schools in 2011–12.

School District Questionnaire (Form SASS-1A)

The purpose of the 2011–12 School District Questionnaire was to obtain information about school districts. The applicable sections for private schools (e.g., comparable sections on hiring, etc.) were added to the Private School Questionnaire. Public charter schools and schools that were the only school in the district received the Public School Questionnaire (With District Items) rather than the School District Questionnaire. The Public School Questionnaire (With District Items) included all of the items included on the School Questionnaire in addition to selected items from the School District Questionnaire.

The 2011–12 School District Questionnaire had these seven sections:

- *Section I—General Information About This District* obtained information on grades offered, enrollment, counts of students by race, participation in the National School Lunch Program, the number of days in the school year, full-time equivalent (FTE) counts of all teachers employed by the school district, counts of teachers by race/ethnicity, number of short-term substitute teachers, policies to encourage teacher attendance, existence of a teacher/principal union, length of contract year for teachers/principals, number of principals in the district, tenure system for principals, and presence of a district-wide library media center coordinator.
- *Section II—Recruitment and Hiring of Staff* collected information on recruitment incentives, newly hired teachers and principals, training or development for aspiring school administrators, dismissal of teachers from the previous school year, and reasons for dismissals.
- *Section III—Principal and Teacher Compensation* collected data on salary schedules, benefits, and pay incentives.

³ The 2011–12 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 included all of the PSS questions so that private schools selected for SASS would not be asked to complete two separate questionnaires.

- *Section IV—Student Assignment* obtained information about the availability of choice and magnet programs in the district, whether school boundaries were adjusted the previous year, and the existence and monitoring of homeschooled students.
- *Section V—Graduation Requirements* collected data on high school graduation instructional requirements, community service requirements, and other assessments necessary for graduation.
- *Section VI—Migrant Education* obtained information about the enrollment of migrant students and the services provided for them.
- *Section VII—District Performance* collected data on Adequate Yearly Progress.

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

The purpose of the 2011–12 principal questionnaires was to obtain information about principals/school heads. 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 2011–12 Principal Questionnaire and Private School Principal Questionnaire had these 10 sections:

- *Section I—Principal or School Head Experience and Training* obtained information about principal work experience, previous positions held, and licensure/certificate in school administration.
- *Section II—Principal or School Head Education and Professional Development* focused on education level, major fields of study, and professional development.
- *Section III—Goals and Decision Making* obtained attitudinal information about educational goals and principal's influence on school governance.
- *Section IV—Teacher and Aide Professional Development* collected information on professional development opportunities and activities for teachers and instructional aides.
- *Section V—School Climate and Safety* obtained information on expulsions and suspensions, security practices, programs to encourage student achievement, health and safety issues at the school, parent or guardian participation in school events, and school resources to encourage parental involvement.
- *Section VI—Instructional Time* collected information about the approximate amount of time that third and/or eighth grade students spent in core academic subjects, and the approximate amount of time that third grade students spent in select non-academic subjects during the most recent full week of school.
- *Section VII—Working Conditions and Principal Perceptions* collected information on time spent on school-related activities and interacting with students, percentage of time spent on various activities, contractual number of working days, union representation (for public school principals only), formal evaluation process for principals, and plans to remain a principal.
- *Section VIII—Teacher and School Performance* collected information about barriers to dismissal of poor-performing teachers, frequency of informal and formal evaluations of teachers, information included in formal evaluation of teachers, impact of evaluation on teacher compensation, and Adequate Yearly Progress.
- *Section IX—Demographic Information* obtained information about the principal's gender, race/ethnicity, age, and salary.
- *Section X—Contact Information* obtained the principal's name and contact information.

School Questionnaire (Form SASS-3A)

The purpose of the 2011–12 School Questionnaire was to obtain information about public schools. The 2011–12 School Questionnaire had these seven sections:

- *Section I—General Information About This School* obtained information about grade range, enrollment, migrant students, number of male students, race/ethnicity of students, school type, attendance, length of the school day and school year, length of school day for kindergarten students, and whether the school has a library media center.
- *Section II—Admissions and Programs* collected information on requirements for admission, use of lottery for enrollment, presence of magnet program, and school programs and services offered, including summer school.
- *Section III—Students and Class Organization* collected information about class and calendar organization, career preparation, graduation rates, and percentage of graduates that went to a four-year college.
- *Section IV—Staffing* obtained information about the number of full- and part-time staff, race/ethnicity of teachers, specialist and teacher coaching assignments, level of difficulty involved in filling teacher vacancies, and newly hired teachers.
- *Section V—Special Programs and Services* obtained information about students with Individual Education Plans, instructional settings for students with disabilities, services for limited-English proficient students and assessments of their progress, services for parents with limited-English skills, the National School Lunch Program, and Title I services.
- *Section VI—Charter School Information* collected information from public charter schools on the year the school first offered instruction as a public charter school, the origin of the charter school, the institution granting the charter, the governance structure, and whether support is offered to homeschooled students.
- *Section VII—Contact Information* collected the respondent's name, title, and contact information.

Private School Questionnaire (Form SASS-3B)

The purpose of the 2011–12 Private School Questionnaire was to obtain information about private schools. This questionnaire was an expanded version of the School Questionnaire and included items from the School District Questionnaire (form SASS-1A). The 2011–12 Private School Questionnaire had these nine sections:

- *Section I—General Information and School Affiliation* obtained information about grade range, total enrollment and enrollment by grade, whether school is coeducational and number of male students, race/ethnicity of students, attendance, length of the school day and school year, length of school day for kindergarten students, whether the school has a library media center, school type, support offered to homeschooled students, religious orientation, and affiliation with religious and nonreligious organizations.
- *Section II—Admissions, Programs, and Tuition* collected information on student boarding, tuition, tuition discounts, requirements for admission, use of lottery for enrollment, and school programs and services offered.
- *Section III—Students and Class Organization* collected information about class and calendar organization.
- *Section IV—Graduation Requirements* collected data on high school graduation instructional requirements, community service requirements, graduation rates, and percentage of graduates that went to a four-year college.
- *Section V—Staffing* obtained information about the number of full- and part-time staff, race/ethnicity of teachers, policies to encourage teacher attendance, and specialist and teacher coaching assignments.
- *Section VI—Special Programs and Services* obtained information about students with a formally identified disability, instructional settings for students with disabilities, services for limited-

English proficient students and assessments of their progress, services for parents with limited-English skills, the National School Lunch Program, and Title I services.

- *Section VII—Recruitment and Hiring of Staff* collected information about teaching vacancies, level of difficulty involved in filling teacher vacancies, newly hired teachers, training in shortage fields for staff, whether principal was newly hired and whether incentives were used to recruit principal, dismissal of teachers from the previous school year and reasons for dismissals.
- *Section VIII—Principal/School Head and Teacher Compensation* collected data on salary schedules, benefits, pay incentives, the number of days in the normal contract year for teachers and principals, and whether principals receive tenure.
- *Section IX—Contact Information* collected the respondent's name, title, and contact information.

Public School Questionnaire (With District Items) (Form SASS-3Y)

The purpose of the 2011–12 Public School Questionnaire (With District Items) was to obtain information about public schools. Schools that are the only school in the district, state-run schools (e.g., schools for the blind), and public charter schools received the Public School Questionnaire (With District Items), an expanded version of the School Questionnaire that included items from the School District Questionnaire (form SASS-1A). The 2011–12 Public School Questionnaire (With District Items) had these 12 sections:

- *Section I—General Information About This School* obtained information about grade range, enrollment, migrant students, number of male students, race/ethnicity of students, school type, attendance, length of the school day and school year, length of school day for kindergarten students, and whether the school has a library media center.
- *Section II—Admissions and Programs* collected information on requirements for admission, use of lottery for enrollment, presence of a magnet program, and school programs and services offered, including summer school.
- *Section III—Students and Class Organization* collected information about class and calendar organization and career preparation.
- *Section IV—Staffing* obtained information about the number of full- and part-time staff, race/ethnicity of teachers, specialist and teacher coaching assignments, availability of short-term substitute teachers, and policies to encourage teacher attendance.
- *Section V—Recruitment and Hiring of Staff* collected information about teaching vacancies, level of difficulty involved in filling teacher vacancies, newly hired teachers, recruitment incentives, dismissal of teachers from the previous school year, reasons for dismissals, whether principal was newly hired, whether incentives were used to recruit principal, and training or development for aspiring school administrators.
- *Section VI—Teacher Compensation* collected data on salary schedules, teacher benefits, and pay incentives.
- *Section VII—Teacher and Principal Contracts* collected information on the existence of a teacher/principal union, length of contract year for teachers/principals, and tenure system for principals.
- *Section VIII—Graduation Requirements* collected data on high school graduation instructional requirements, community service requirements, other assessments necessary for graduation, graduation rates, and percentage of graduates that went to a four-year college.
- *Section IX—Special Programs and Services* obtained information about students with Individual Education Plans, instructional settings for students with disabilities, services for limited-English proficient students and assessments of their progress, services for parents with limited-English skills, the National School Lunch Program, and Title I services.
- *Section X—Charter Schools and Homeschooling Information* collected information from public charter schools on the year the school first offered instruction as a public charter school, the

origin of the charter school, the institution granting the charter, the governance structure, and whether support is offered to homeschooled students.

- *Section XI—School Performance* collected data on Adequate Yearly Progress.
- *Section XII—Contact Information* collected the respondent's name, title, and contact information.

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

The purpose of the 2011–12 teacher questionnaires was to obtain information about teachers. The 2011–12 Teacher Questionnaire and Private School Teacher Questionnaire had these nine sections:

- *Section I—General Information* obtained general information about teaching status, number of days in contract, year teacher began teaching in current school, main activity the previous year, number of schools in which teacher has taught, and years of teaching experience.
- *Section II—Class Organization* obtained information about grades taught, students with an Individualized Education Program, students of limited-English proficiency, main teaching assignment, whether teacher teaches the same group of students multiple years, organization of classes, subjects taught, and class size.
- *Section III—Education and Training* collected information on academic degrees, major and minor fields of study, graduate/undergraduate courses on teaching methods or strategies, student teaching, teacher preparation programs, and support for and mentoring of first-year teachers.
- *Section IV—Certification* obtained information on types of teaching certificates held by the teacher, content areas and grade ranges covered by the certification, certification by the National Board for Professional Teaching Standards, passage of various Praxis tests, whether the teacher entered teaching through an alternative certification program, and whether the teacher met Highly Qualified Teacher requirements.
- *Section V—Professional Development* collected information about professional development activities and their usefulness, whether the teacher received credits toward certification/re-certification, various support received for professional development activities, and other professional activities.
- *Section VI—Working Conditions* obtained information about hours worked, leadership or extracurricular activities, money spent on classroom supplies without reimbursement, frequency of formal and informal evaluations, and inclusion of student test scores or growth scores in evaluation process.
- *Section VII—School Climate and Teacher Attitudes* obtained attitudinal information on teacher influence on school policy as well as classroom planning and teaching, satisfaction with teaching and school environment, student problems, plans to remain in teaching, and school safety.
- *Section VIII—General Employment and Background Information* obtained information about teacher salary, additional compensation based on student performance, supplemental income, union affiliation, tenure system, gender, marital status, race/ethnicity, and year of birth.
- *Section IX—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 2011–12 School Library Media Center Questionnaire was to obtain information about public school library media centers and librarians. The 2011–12 School Library Media Center Questionnaire had these four sections:

- *Section I—Facilities, Services, and Policies* obtained information about the scheduling of classes and activities, times of day the library is available to students, availability for community members, frequency of student use, programs offered, and policies of the library media center.
- *Section II—Staffing* collected information about the number of full- and part-time paid staff, number of professional staff with master’s degree or certification for classroom teaching, use of volunteers, and whether staff are shared with another school.
- *Section III—Technology and Information Literacy* obtained information about the different technology resources in the school, such as computer work stations, online databases, DVD players, laptops, etc. Questions also ask about whether an information literacy curriculum is followed and who teaches it.
- *Section IV—Last School Year’s Collections and Expenditures* collected information about the size of and expenditures for the library media collection.

Target Populations, Estimates, and Respondent Status

Target Populations

The target populations for the 2011–12 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 in operation in the 2011–12 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. Public school districts that governed a public charter school sampled for SASS were sent a School District Questionnaire. All sampled public charter schools or single-school districts received the Public School Questionnaire (With District Items). The Public School Questionnaire (With District Items) contains items from both the School Questionnaire and the School District Questionnaire. The SASS sample design selected the school first and consequently sampled the districts associated with the sampled schools.
- *Schools.* The target population included traditional public, public charter, and private schools with students in any of grades 1–12 or in comparable ungraded levels and in operation in the 2011–12 school year. Bureau of Indian Education-funded schools were not included.
- *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 2011–12 school year.
- *School library media centers.* The target population included school library media centers, libraries, or resource centers in traditional public and public charter schools that have such a facility. A school library was defined as an organized collection of printed and/or audiovisual and/or computer resources which is administered as a unit, is located in a designated place or places, and makes resources and services available to students, teachers, and administrators.

The sampling frame for public schools was an adjusted version of the 2009–10 Common Core of Data (CCD), which reflects the population of public schools in the 2009–10 school year. CCD includes traditional public schools, public charter schools, DoD-operated domestic military base schools, and special purpose schools, such as special education, vocational, and alternative schools. Schools outside of the United States, schools that teach only prekindergarten, kindergarten, or postsecondary students, and Bureau of Indian Education-funded schools were deleted from the CCD frame prior to sampling for

SASS. Public schools that closed in school year 2009–10 or were not yet opened were not included. Prior to stratification and sampling, CCD schools were collapsed to match the SASS definition of a school. The purpose and operations of this collapsing activity are discussed in chapter 4.

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 2009–10 PSS, updated with private school organization lists and state lists collected by the Census Bureau in the summer of 2010. An area frame was used to find schools missing from the list frame, thereby compensating for the incomplete coverage of the list frame. The area frame was also based on the 2009–10 PSS, but no updates were made.

The sampling frame for the teacher questionnaires consisted of lists of teachers provided by school districts or schools in the SASS sample. Teachers were defined as any staff who taught a regularly scheduled class to students in grades K–12 or comparable ungraded levels. Census Bureau staff requested the Teacher Listing Form (TLF) or an electronic list of teachers from districts or schools for all traditional public, public charter, and private 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: the teacher’s assignment (subject matter), full- or part-time status, and level of experience. The sample of teachers was selected from all of the sampled schools for which a Teacher Listing Form or an electronic list of teachers was collected.

All districts,⁴ principals, and library media centers from sampled schools were also surveyed for SASS.

Estimates

SASS was designed to produce national, regional, and state estimates for public primary, middle, and high schools and related components (e.g., schools, teachers, principals, school districts, and school library media centers); national estimates for public schools with combined grade levels and for public charter schools and related components (e.g., schools, teachers, principals, and school library media centers); and national, regional, and affiliation strata estimates for the private school sector (e.g., schools, teachers, and principals). The affiliation strata for private schools were:

- Catholic—parochial;
- Catholic—diocesan;
- Catholic—private;
- Baptist;
- Jewish;
- Lutheran;
- Seventh-Day Adventist;
- Other religious;
- Nonsectarian—regular;
- Nonsectarian—special emphasis; and
- Nonsectarian—special education.

⁴ Four dependent charter schools within two regular districts that contained only charter schools were included in the school sample. Due to operational error, the associated districts themselves were not sampled or mailed a District Questionnaire. In addition, there were 40 dependent charter schools sampled that were the only school sampled from their associated regular school district. Due to operational error, the associated districts were not mailed a District Questionnaire. These 42 districts were classified as noninterviews on the Public School District data file.

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

The teacher survey was designed to support comparisons between new and experienced teachers (three years or less of experience vs. more than three years of experience) at the state level for public school teachers and at the regional or affiliation strata level for private school teachers. Comparisons between teachers by race/ethnicity, detailed experience level (first year, second and third year, fourth or more years) 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.

Respondent Status

The number of respondents that were sampled, determined to be in-scope for SASS, and completed the interview is presented in the table below. These data are based on how respondents are organized into data files, rather than on which questionnaire respondents received. Sampled respondents are those who were selected for participation in SASS for each respondent type. Sampled respondents were classified as in-scope if they were deemed eligible for SASS during the screening operation or data collection period. Interviews are in-scope respondents that completed their questionnaire. Cases were classified as having completed the questionnaire if specific items as well as a specific percentage of items had responses; these criteria differ by questionnaire. For details on sampling, see chapter 4. For details on in-scope and out-of-scope cases and on determining how many sampled respondents completed interviews (i.e., final interview status), see chapter 7.

Table 1. Number of school districts, schools, principals, teachers, and school library media centers, by sector and interview status: 2011–12

Respondent and interview status	Total	Public school sector	Private school sector
School district			
Sampled	5,798	5,798	†
In-scope	5,617	5,617	†
Interviews	4,641	4,641	†
School			
Sampled	14,000	11,000	3,000
In-scope	13,070	10,355	2,715
Interviews	9,239	7,481	1,758
Principal			
Sampled	14,000	11,000	3,000
In-scope	13,008	10,355	2,674
Interviews	9,235	7,481	1,723
Teacher			
Sampled	58,128	51,062	7,066
In-scope	55,515	48,829	6,686
Interviews	42,020	37,497	4,523
School library media center			
Sampled	11,000	11,000	†
In-scope	9,616	9,616	†
Interviews	7,003	7,003	†

† Not applicable.

NOTE: Cases that met sampling requirements are included in the “sampled” category. Of those cases, “in-scope” refers to the sampled cases that met SASS eligibility requirements (i.e., interviews as well as non-interviews). “Interviews” consist of eligible (in-scope) cases for which data were collected.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

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 costs and the time needed to complete a data collection and processing cycle. A three-year cycle was maintained for the first three data collections but proved too frequent to incorporate the analysis of the previous SASS 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 four years provided the best balance between data needs and operational needs. The 1999–2000, 2003–04, 2007–08, and 2011–12 SASS were conducted on four-year intervals.

Contents

This report contains chapters on the following topics: changes in SASS design, content, and methodology from 2007–08; preparation for the 2011–12 SASS; frame creation and sample selection; data collection; response rates and bias analysis; data processing; weighting and variance estimation; and data quality.

Information in the chapters is supported by the following appendixes:

- A. Key Terms for SASS;
- B. Questionnaire Availability;
- C. Poverty Analysis for SASS 2011–12 Public School Sample;
- D. Bureau of Indian Education-Funded Schools and Career and Technology Centers Sampling Change;
- E. 2011–12 SASS Redesign—Precision Analysis;
- F. Summary of the 2009 Field Test Findings and Recommendations for the 2011–12 SASS Methodology;
- G. Cognitive Testing of Schools and Staffing Survey Items Summary of Findings and Recommendations, September 2010;
- H. Cognitive Testing of Schools and Staffing Survey Items Summary of Findings and Recommendations, May 2011;
- I. School and Teacher Sample Allocation Procedure;
- J. Report on Results of Special Contact Districts;
- K. 2011–12 SASS Unit Nonresponse Bias Analysis;
- L. Quality Assurance for Data Capture and Mailout Operations;
- M. Crosswalk of Public School Questionnaire (With District Items) items onto the Public School Questionnaire and School District Questionnaire;
- N. Changes Made to Variables During the Computer Edit, by Data File;
- O. List of Matching Variables for the 2011–12 SASS;
- P. Imputation Changes to Variables, by Data File;
- Q. Weighting Adjustment Cells; and
- R. Crosswalk Among Items in the 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, 2007–08, and 2011–12 SASS and Crosswalk of Variables Across the 2011–12 SASS Questionnaires.

Chapter 2. Changes in SASS Sample Design, Content, and Methodology From 2007–08 to 2011–12

After the conclusion of the 2007–08 Schools and Staffing Survey (SASS), the National Center for Education Statistics (NCES) and the U.S. Census Bureau worked together to improve the sample design, survey content, and data collection methodology for the 2011–12 SASS. This chapter describes the changes implemented in the 2011–12 SASS.

Sample Design Changes

Changes to the Sample Design for 2011–12 SASS

In response to changing needs in education data (i.e., emerging need for more robust statistics for middle schools and high-poverty schools), the 2011–12 SASS introduced a revised stratification of public schools in the sample design. To improve the efficiency of the 2011–12 SASS sample design and ensure that the new as well as existing sampling goals as reflected in the revised stratification were met, the school and teacher sample allocations were optimized. While no stratification changes were made to the private school sample design, the private school and teacher sample allocations were optimized in conjunction with the public sector samples. This section discusses how the sample design and sample allocation were modified and the research that was done to inform these changes. Details on the sampling design and goals for the 2011–12 SASS are discussed in chapter 4.

After the 2007–08 SASS, researchers addressed the emerging issues in education and how to improve the SASS sample design to inform them. Researchers investigated four methods, each of which is introduced in this paragraph and then discussed in greater depth in the individual sections below. First, researchers investigated methods for incorporating a proxy for school poverty in the sample design. Second, they assessed the impact of removing Career and Technology Centers and Bureau of Indian Education-funded schools from the 2007–08 stratification design. Third, they conducted a precision analysis to evaluate how well the 2007–08 sampling allocation would meet the 2011–12 SASS analysis goals using the proposed stratification. Finally, they produced and evaluated a new sample allocation using the 2011–12 SASS stratification design.

The following is a summary of the changes made to the public school sample design:

- Four school levels (primary, middle, high, and combined) were used in the traditional public school stratification rather than three (elementary, secondary, and combined); three school levels continued to be used for stratifying public charter and private schools.
- Eligibility for the National School Lunch Program, which is a proxy measure for school poverty, was added as a sorting variable for all public schools.
- Career and Technology Centers (CTC) and schools with high American Indian (HAI) enrollment were not stratified separately from other public schools.
- Bureau of Indian Education-funded (BIE) schools were excluded from the sampling frame.
- Delaware was removed from the special district strata where all districts in these selected states had at least one school in sample.
- Districts governing public charter schools sampled for SASS received the School District Questionnaire. In 2007–08, these districts only received a School District Questionnaire if a

regular public school in the district also was in the SASS sample. All public charter schools still received the Public School Questionnaire (With District Items).⁵

The following change was made to the teacher sample design:

- The Teacher Listing Form (TLF) item asking whether or not the teacher was expected to be teaching in the school the subsequent school year was removed from the TLF and thus was not used for selecting the teacher sample.

Sampling High-Poverty Schools

In order to evaluate the efficiency of sampling public schools by poverty status in the 2011–12 SASS, the Education Statistics Services Institute (ESSI) performed several analyses on the 2007–08 SASS data. A complete report of the analysis is in “Appendix C. Poverty Analysis for SASS 2011–12 Public School Sample.” ESSI examined the coefficients of variation (CV) of key analysis variables, such as grade level, then conducted a regression analysis of the CV associations. Response rates of high-poverty and non-high-poverty public schools were also compared to determine if differential sampling rates were needed to produce reliable estimates of high-poverty and non-high-poverty schools. ESSI also examined the sampling rates for high-poverty and non-high-poverty public schools. These tests were done to determine how well high-poverty public schools were represented in the 2007–08 SASS sample, using two definitions for high-poverty schools: (1) schools with at least 50 percent of enrolled students approved for the free or reduced-price lunch program, and (2) schools with at least 75 percent of enrolled students approved for the free or reduced-price lunch program. These two definitions of high-poverty schools were used to examine the distribution of high poverty across several reporting domains, as well as the distribution of key analysis variables, as defined by NCES. Because no standard definition of poverty in the SASS target population is currently in use by NCES or the research community, this analysis incorporated two definitions to ensure the results reported here were not sensitive to a particular definition.

The analyses showed that the representation of high-poverty schools in the SASS sample could be improved. The regression models revealed that high-poverty schools sometimes had less precise estimates (i.e., larger CVs) than non-high-poverty schools. Improving how well high-poverty schools are represented in the sample should reduce the CVs. The response rates were comparable for high- and non-high-poverty schools; therefore, the SASS sample did not need to be explicitly controlled by using poverty as a stratification variable. Instead, ESSI recommended using the free or reduced-price lunch variable as a sort variable prior to sample selection to improve the representation of high-poverty schools in the 2011–12 SASS sample. This approach should improve high-poverty estimates without increasing the overall public school sample size or noticeably reducing the reliability of non-high-poverty school estimates, which would likely occur if poverty was added as a sampling stratum. This recommendation was implemented for the 2011–12 SASS.

⁵ There were two regular districts that contained only charter schools. The schools within these districts were part of the school sample and received the Public School Questionnaire (With District Items), however due to operational error, the associated districts themselves were not mailed a District Questionnaire. In addition, 40 regular school districts only had a single dependent charter school sampled. These schools received the Public School Questionnaire (With District Items) and due to operational error, the associated districts were not mailed a District Questionnaire. These 42 districts were classified as noninterviews on the Public School District data file.

Sampling Career and Technology Centers and Bureau of Indian Education Schools

ESSI investigated the impact on the public school sample if Career and Technology Centers (CTC) and Bureau of Indian Education-funded (BIE) schools were included on the sampling frame but not sampled at higher rates. A complete report of the investigation is in “Appendix D. Bureau of Indian Education-Funded Schools and Career and Technology Centers Sampling Change.” For the analysis, the 2007–08 SASS public school sampling frame was used to produce a new sample reflecting the proposed stratification changes. To achieve this, the stratification proposed for the 2011–12 SASS was applied to the 2007–08 SASS sampling frame and sample, which were used to determine the number of schools on the frame and the number of schools sampled within each new stratification level. These sample counts were used to calculate the probability of selection for each school on the frame.

The analysis for CTC schools indicated that the number of these schools expected to be sampled under the new stratification would be larger than the number originally sampled in the 2007–08 SASS. This increase in sample size was most likely the result of CTC schools having a larger median full-time equivalent count of teachers than other public schools, resulting in a higher probability of selection, on average, for CTC schools compared to other public schools. After adjusting for nonresponse, the revised sampling stratification resulted in a 22 percent increase in the number of responding CTC schools compared to the 2007–08 SASS. This increase appeared to have a minor impact on the sampling of other public schools, given that there was only a 0.01 percent change in the expected number of other public schools that would respond.

The analysis for BIE schools indicated that there would be a large difference between the new expected sample counts and the original sample counts. If BIE schools were sampled, rather than taken with certainty, it was expected that around 50 BIE schools would be selected. In comparison, there were 178 BIE schools selected for the 2007–08 SASS. After controlling for nonresponse, there was an expected drop of 73 percent in responding BIE schools from the 2007–08 SASS to the 2011–12 SASS, which reflects the change from certainty sampling to probability sampling. While this drop in the number of BIE schools was expected given their very small population size, this would prevent producing national estimates for BIE schools. BIE schools could be represented in the overall public school estimates if they were sampled with public schools. However, doing so would cause a break in the reporting trends, given that SASS public school estimates have not included BIE schools since the 1990–91 SASS. NCES determined not to alter the definition of a public school by sampling the BIE schools with the public schools and causing a break in reporting trends; instead, BIE schools were excluded from the 2011–12 SASS entirely. This decision is expected to have no noticeable impact on public school CVs.

Precision Analysis of the 2007–08 SASS

ESSI evaluated the precision of statistics for selected key variables from the 2007–08 SASS. In conjunction with NCES, ESSI identified the key variables within each respondent type (i.e., school districts, schools, principals, teachers, and school library media centers). The precision analysis was designed to determine whether the 2011–12 SASS sample design was expected to achieve the desired level of precision for the selected key variables and domains using the 2007–08 SASS data as a proxy. To accomplish that, the analysis computed coefficients of variation (CV) for statistics on the key variables and examined whether the CV was at or below 15 percent within expected levels of representativeness (e.g., national, regional, or state/affiliation strata levels). Below is a summary of the analysis and the implications for the 2011–12 SASS sample design. The full report is located in “Appendix E. 2011–12 SASS Redesign—Precision Analysis.”

For the selected key variables, the precision goal was not consistently met for each of the respondent types in the 2007–08 SASS. For public sector estimates, ESSI recommended that additional sample be

considered for middle schools to achieve state-level estimates as well as for public charter schools to achieve school-level estimates at the national level. High schools also did not consistently meet the expected level of precision, which warranted additional sample in targeted states, such as North Dakota, that frequently exhibited higher CVs than other states.

Among public school teachers, estimates for first-year teachers did not consistently achieve the 15 percent CV target at the state level for traditional public school teachers and at the national level for public charter school teachers. The evaluation determined that additional first year teachers should be sampled to achieve the 15 percent CV target. As a result, the teaching experience item on the Teacher Listing Form was modified to include a response category for first year teachers. These teachers were then sampled at an appropriate rate. For both public school principals and teachers, consideration of race/ethnicity in the sampling design was recommended to improve the precision of 2011–12 estimates as compared to 2007–08 SASS estimates and to broaden the levels of analysis. Race/ethnicity estimates can only be produced at the national level because there is no practical method for schools to report reliable race/ethnicity on teachers and principals, allowing them to be sampled at adequate rates to produce reliable estimates at the state level. This recommendation was rejected for this reason.

For all private sector (i.e., private school, principal, and teacher) estimates, the sampling goals were met or exceeded. Overall, it may be possible to reduce the sample size or selectively reduce it by affiliation strata given the over-performance of the school-level variables and the generally low CVs for teacher-level estimates.

Sample Allocation for the 2011–12 SASS

The 2011–12 SASS school sample optimization process used standard errors from the 2003–04 and 2007–08 surveys along with collection cost data from the 2007–08 survey to minimize the standard errors for a fixed cost. For a fixed overall sample size of 14,000 schools, the procedure determined that the optimum allocation was 3,000 private schools, 750 public charter schools, and 10,250 traditional public schools. For traditional public schools, sample was allocated to grade levels within states with the following goals:

- Maintain a 15 percent CV for primary schools, 20 percent CV for middle schools, and 10 percent CV for high schools.
- Set the sample size for combined schools to a point that will not negatively impact state totals.
- Select no more than 60 percent of schools from any particular grade level within state.

For private schools, the goal was to maintain CVs of no more than 15 percent for affiliations and for grade levels at the national level. Once sample sizes for affiliation by grade level were determined at the national level, sample was allocated to regions within affiliation and grade level proportional to size. For public charter schools, sample was allocated to grade level with the goal of maintaining 10 percent CVs nationally. Sample was further allocated to states proportional to size, which is defined as the cumulative square root of the number of teachers at the school.

For teachers in traditional public schools, average cluster sizes per school were set with the goal of producing CVs at the state by grade level with CVs of 15 percent, 20 percent, and 15 percent, respectively, for primary, middle, and high schools. For private school teachers and public charter school teachers, the same goals as for the school sample allocation were applied.

See chapter 4 for further details on the sample allocation and stratification.

Content Changes

Prior to the 2011–12 administration, extensive pretesting was undertaken. For a detailed explanation of these processes, please refer to chapter 3. As a result of this pretesting and changes in priorities for SASS, revisions were made to the 2007–08 SASS instruments. Exhibit 1 includes a synopsis of actions (Deleted, Newly Added, Revised, or No Changes) that occurred to questionnaire items during the revision process, by questionnaire type. The items with 9000 series source codes are not included in the counts below because these are either respondent verification or contact information items that are not included on the restricted-use data files.

Exhibit 1. Number of deleted, added, revised, and unchanged source codes, by data file: 2011–12

Questionnaire	Number of source codes deleted	Number of source codes on the 2011–12 SASS			
		Newly added	Revised	No changes	Total
School District	3	16	28	88	132
Principal	59	69	16	107	192
Private School Principal	45	69	15	103	187
School	12	25	46	130	201
Private School	22	32	40	240	312
Public School (With District Items)	12	43	55	164	262
Teacher	18	61	95	226	382
Private School Teacher	22	62	121	224	407
School Library Media Center	14	7	17	31	55

NOTE: 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) Questionnaires, 2007–08 and 2011–12.

Items that were deleted for this administration fell within the following topics: whether school choice and magnet programs were designed to increase racial/ethnic diversity; presence of school and teacher websites; use and scheduling of the library media center as a classroom; and homeschooling. The sections below present detailed information on questions that were deleted. The specific question numbers from the 2007–08 SASS are included in parentheses following the question wording for the items deleted.

Some of the new content included in the 2011–12 SASS delves into topics such as teacher and principal evaluations and incentives; teacher performance and dismissal; professional development; principal time-use; parent participation; and community use of school resources. Detailed information on questions that were added is presented in the sections below. The specific question numbers from the 2011–12 SASS questionnaires are included in parentheses following the question wording for the items added.

An item crosswalk (by source codes) of the 2011–12 SASS with the 2007–08 SASS for each questionnaire type is located in “Appendix R. Crosswalks Among Items in the 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, 2007–08 and 2011–12 SASS and Crosswalk of Variables across the 2011–12 SASS Questionnaires.” Also included in this appendix are crosswalks that compare similarities and differences across the 2011–12 SASS questionnaires given to each type of respondent (i.e., public school district, school, principal, or teacher).

School District Questionnaire

School District Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS

- STUDENT ASSIGNMENT
 - Is one of the purposes of this district’s “choice” program to ACHIEVE RACIAL BALANCE OR REDUCE RACIAL ISOLATION? (31b)
 - Was ACHIEVING RACIAL BALANCE OR REDUCING RACIAL ISOLATION one of the factors considered when boundaries were drawn? (35b)
 - Is one of the purposes of this district’s magnet program to ACHIEVE RACIAL BALANCE OR REDUCE RACIAL ISOLATION? (36b)

School District Questionnaire—Questions Added to the 2011–12 SASS

- GENERAL INFORMATION ABOUT THIS DISTRICT
 - Around the first of October, how many STUDENTS in grades K–12 and comparable ungraded levels were: (e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (4e, 4g)
 - Now thinking about head counts, 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: (e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (9e, 9g)
 - Around the first of October, how many SHORT-TERM substitute teachers of any grades K–12 were available to teach in this district? (10)
 - Does this district have a policy to encourage teacher attendance or prevent teachers from using an excessive amount of unplanned leave? (11)
- RECRUITMENT AND HIRING OF STAFF
 - Does this district currently use any incentives to recruit principals? (22)
 - LAST SCHOOL YEAR (2010–11), how many teachers of the following types were DISMISSED or did not have their contracts renewed? (a) Total teachers who were DISMISSED or did not have their contracts renewed; (b) Total teachers who were dismissed or did not have their contracts renewed as a result of POOR PERFORMANCE (24a, 24b)
 - From the reasons listed above, what was the most common reason that teachers were dismissed or did not have their contracts renewed last school year? (25a)
 - From the reasons listed above, what was the SECOND most common reason that teachers were dismissed or did not have their contracts renewed last school year? (25b)
 - From the reasons listed above, what was the THIRD most common reason that teachers were dismissed or did not have their contracts renewed last school year? (25c)
- PRINCIPAL AND TEACHER COMPENSATION
 - According to the salary schedule, what is the normal yearly base salary for—A teacher with a master’s degree and 15 years of teaching experience? (30e)

Principal Questionnaire

Principal Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS

- PRINCIPAL EXPERIENCE AND TRAINING
 - Do you have a master’s degree or higher in Education Administration? (9)
- GOALS AND DECISION MAKING
 - How much ACTUAL influence do you think each group or person has on decisions concerning the following activities? (a) Setting performance standards for students of this

- school; (b) Establishing curriculum at this school; (c) Determining the content of in-service professional development programs for teachers of this school; (d) Evaluating teachers of this school; (e) Hiring new full-time teachers of this school; (f) Setting discipline policy at this school; (g) Deciding how your school budget will be spent. Each sub-item included the following groups or people: (1) State department of education or other state-level bodies (e.g., state board of education); (2) Local school board; (3) School district staff; (5) Teachers; (6) Curriculum specialists; (7) Parent associations; (8) College and university partners—for sub-item 12c only (12a–12g subparts 1–3, 5–8)
- **SCHOOL CLIMATE AND SAFETY**
 - THIS school year (2007–08), does this school have the following? A service that allows parents to retrieve homework assignments (e.g., a website or an automated voice response system) (22b)
 - **INSTRUCTIONAL TIME**
 - Does this school have THIRD and/or EIGHTH grades? (23)
 - **TEACHER AND SCHOOL PERFORMANCE**
 - For the 2007–08 school year, how many FULL-TIME K–12 CLASSROOM TEACHERS would you put in the following categories, based on your overall opinion of their TEACHING ABILITY? (a) Outstanding teachers; (b) Good teachers; (c) Fair teachers—(1) Of these teachers, how many are tenured teachers? (d) Unsatisfactory teachers—(1) Of these teachers, how many are tenured teachers? (30a–30d)
 - **WORKING CONDITIONS AND PRINCIPAL PERCEPTIONS**
 - Please indicate the extent to which you agree or disagree with each of the following statements. (a) The stress and disappointments involved in serving as principal at this school aren't really worth it. (b) The faculty and staff at this school like being here; I would describe them as a satisfied group. (c) I like the way things are run in this district. (d) If I could get a higher paying job I'd leave education as soon as possible. (e) I think about transferring to another school. (f) I don't seem to have as much enthusiasm now as I did when I began my career as a principal. (g) I think about staying home from school because I'm just too tired to go. (38a–38g)

Principal Questionnaire—Questions Added to the 2011–12 SASS

- **PRINCIPAL EXPERIENCE AND TRAINING**
 - BEFORE you became a principal, did you hold the following school positions? (a) Department head; (b) Curriculum specialist or coordinator; (c) Assistant principal or program director; (d) Guidance counselor; (e) Library media specialist/Librarian; (f) Athletic coach/Athletic director; (g) Sponsor for student clubs, debate teams (6a–6g)
 - Do you currently hold a license/certificate in “school administration”? (8)
- **PRINCIPAL EDUCATION AND PROFESSIONAL DEVELOPMENT**
 - Do you have a bachelor's degree? (10a)
 - Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education? (10b)
 - What was your major field of study? (10c)
 - Did you have a second major field of study? (10d)
 - What was your second major field of study? (10e)
 - Do you have a master's degree? (11a)
 - Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education? (11b)
 - What was your major field of study? (11c)

- In the past 12 months, have YOU participated in the following kinds of professional development? (a) University courses related to your role as principal; (b) Visits to other schools designed to improve your own work as principal; (c) Individual or collaborative research on a topic of interest to you professionally; (d) Mentoring and/or peer observation and coaching of principals, as part of a formal arrangement that is recognized or supported by the school or district; (e) Participating in a principal network (e.g., a group of principals organized by an outside agency or through the Internet); (f) Workshops, conferences, or training in which you were a presenter; (g) Other workshops or conferences in which you were not a presenter (14a–14g)
- SCHOOL CLIMATE AND SAFETY
 - THIS school year (2011–12), does this school have any of the following? (a) Programs or activities where students participate in the community during or after normal school hours (e.g., service learning and community service projects); (b) Programs to acknowledge student achievement (e.g., assemblies, principal list/honor roll, or student of the week/month); (c) An incentive/reward program that encourages students' academic success (e.g., pizza parties, cash for grades); (d) A program designed to help students prepare for the next grade or college (24a–24d)
 - LAST SCHOOL YEAR (2010–11), what percentage of students had at least one parent or guardian participating in the following events? (d) Parent education workshops or courses; (e) Signing of a school-parent compact (This is an agreement between school community members [e.g., parents, principals, teachers, and students] that acknowledges the shared responsibility for student learning and/or the school's policies); (g) Involvement in school instructional issues (e.g., planning classroom learning activities, providing feedback on curriculum); (h) Involvement in governance (e.g., PTA or PTO meetings, school board, parent booster clubs); (i) Involvement in budget decisions (26d, 26e, 26g, 26h, 26i)
- WORKING CONDITIONS AND PRINCIPAL PERCEPTIONS
 - On average throughout the school year, what percentage of time do you estimate that you spend on the following tasks in this school? (a) Internal administrative tasks, including human resource/personnel issues, regulations, reports, school budget; (b) Curriculum and teaching-related tasks, including teaching, lesson preparation, classroom observations, mentoring teachers; (c) Student interactions, including discipline and academic guidance; (d) Parent interactions, including formal and informal interactions; (e) Other—please specify (36a–36e)
 - Were you, or are you going to be, rated in a FORMAL evaluation this school year? (39a)
 - Are student test score outcomes or test score growth included as an evaluation criterion in your FORMAL evaluation this school year? (39b)
 - How often are you rated in a FORMAL evaluation? (39c)
 - How long do you plan to remain a principal? (40)
- TEACHER AND SCHOOL PERFORMANCE
 - How often are INFORMAL classroom observations typically conducted on TENURED OR EXPERIENCED TEACHERS of grades K–12 or comparable ungraded levels? (42a)
 - How often are INFORMAL classroom observations typically conducted on NONTENURED OR NEW TEACHERS of grades K–12 or comparable ungraded levels? (42b)
 - How many FORMAL classroom observations are typically conducted prior to completing an evaluation on a TENURED OR EXPERIENCED TEACHER of grades K–12 or comparable ungraded levels? (43a)
 - How many FORMAL classroom observations are typically conducted prior to completing an evaluation on a NONTENURED OR NEW TEACHER of grades K–12 or comparable ungraded levels? (43b)

- How long is the typical FORMAL classroom observation that occurs prior to completing an evaluation on a TENURED OR EXPERIENCED TEACHER of grades K–12 or comparable ungraded levels? (44a)
- How long is the typical FORMAL classroom observation that occurs prior to completing an evaluation on a NONTENURED OR NEW TEACHER of grades K–12 or comparable ungraded levels? (44b)
- For TENURED OR EXPERIENCED K–12 TEACHERS, how often are teachers rated in FORMAL evaluations? (45a)
- For NONTENURED OR NEW K–12 TEACHERS, how often are teachers rated in FORMAL evaluations? (45b)
- Did you answer “No formal evaluations are conducted” to both item 45a AND 45b? (46)
- Are any of the following types of information included in the formal evaluation of any regular classroom teachers of grades K–12 and comparable ungraded levels? (a) Evaluation by the principal (describe type); (b) Evaluation by peers (describe type); (c) Evaluation by the vice principal or assistant principal; (d) Evaluation by an outside group (e.g., consultant); (e) Conference with the principal; (f) Teacher self-evaluation; (g) Students’ test score outcomes or test score growth; (h) Student ratings of the teacher; (i) Teacher’s portfolio of examples of student learning (e.g., student essays, lab reports); (j) Completion of professional development activities; (k) Other (please specify) (47a–47k)
- Are teachers’ evaluations used, at least in part, to determine a teacher’s compensation? (48)

Private School Principal Questionnaire

Private School Principal Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS

- PRINCIPAL OR SCHOOL HEAD EXPERIENCE AND TRAINING
 - Do you have a master’s degree or higher in Education Administration? (9)
- GOALS AND DECISION MAKING
 - How much ACTUAL influence do you think each group or person has on decisions concerning the following activities? (a) Setting performance standards for students of this school; (b) Establishing curriculum at this school; (c) Determining the content of in-service professional development programs for teachers of this school; (d) Evaluating teachers of this school; (e) Hiring new full-time teachers of this school; (f) Setting discipline policy at this school; (g) Deciding how your school budget will be spent. Items asked about the following groups or people: (1) Governing/Diocesan board; (3) Teachers; (4) Curriculum specialists; (5) Parent association; (6) College and university partners—for sub-item 12c only (12a–12g subparts 1, 3, 4–6)
- SCHOOL CLIMATE AND SAFETY
 - THIS school year (2007–08), does this school have the following? A service that allows parents to retrieve homework assignments (e.g., a website or an automated voice response system) (22b)
- INSTRUCTIONAL TIME
 - Does this school have THIRD and/or EIGHTH grades? (23)
- TEACHER AND SCHOOL PERFORMANCE
 - For the 2007–08 school year, how many FULL-TIME K–12 CLASSROOM TEACHERS would you put in the following categories, based on your overall opinion of their TEACHING ABILITY? (a) Outstanding teachers; (b) Good teachers; (c) Fair teachers—(1) Of these teachers, how many are tenured teachers?; (d) Unsatisfactory teachers—(1) Of these teachers, how many are tenured teachers? (30a–30d)
- WORKING CONDITIONS AND PRINCIPAL OR SCHOOL HEAD PERCEPTIONS

- Please indicate the extent to which you agree or disagree with each of the following statements. (a) The stress and disappointments involved in serving as principal or school head at this school aren't really worth it; (b) The faculty and staff at this school like being here; I would describe them as a satisfied group; (c) If I could get a higher paying job I'd leave education as soon as possible; (d) I think about transferring to another school; (e) I don't seem to have as much enthusiasm now as I did when I began my career as a principal or school head; (f) I think about staying home from school because I'm just too tired to go. (35a–35f)
- DEMOGRAPHIC INFORMATION
 - Are you enrolled in a state or federally recognized tribe? (38b)

Private School Principal Questionnaire—Questions Added to the 2011–12 SASS

- PRINCIPAL OR SCHOOL HEAD EXPERIENCE AND TRAINING
 - BEFORE you became a principal or school head, did you hold the following school positions? (a) Department head; (b) Curriculum specialist or coordinator; (c) Assistant principal or program director; (d) Guidance counselor; (e) Library media specialist/Librarian; (f) Athletic coach/Athletic director; (g) Sponsor for student clubs, debate teams (6a–6g)
 - Do you currently hold a license/certificate in “school administration”? (8)
- PRINCIPAL OR SCHOOL HEAD EDUCATION AND PROFESSIONAL DEVELOPMENT
 - Do you have a bachelor's degree? (10a)
 - Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education? (10b)
 - What was your major field of study? (10c)
 - Did you have a second major field of study? (10d)
 - What was your second major field of study? (10e)
 - Do you have a master's degree? (11a)
 - Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education? (11b)
 - What was your major field of study? (11c)
 - In the past 12 months, have YOU participated in the following kinds of professional development? (a) University courses related to your role as principal or school head; (b) Visits to other schools designed to improve your own work as principal or school head; (c) Individual or collaborative research on a topic of interest to you professionally; (d) Mentoring and/or peer observation and coaching of principals or school heads, as part of a formal arrangement that is recognized or supported by the school; (e) Participating in a principal network (e.g., a group of principals or school heads organized by an outside agency or through the Internet); (f) Workshops, conferences, or training in which you were a presenter; (g) Other workshops or conferences in which you were not a presenter (14a–14g)
- SCHOOL CLIMATE AND SAFETY
 - THIS school year (2011–12), does this school have any of the following? (a) Programs or activities where students participate in the community during or after normal school hours (e.g., service learning and community service projects); (b) Programs to acknowledge student achievement (e.g., assemblies, principal list/honor roll, or student of the week/month); (c) An incentive/reward program that encourages students' academic success (e.g., pizza parties, cash for grades); (d) A program designed to help students prepare for the next grade or college (24a–24d)
 - LAST SCHOOL YEAR (2010–11), what percentage of students had at least one parent or guardian participating in the following events? (d) Parent education workshops or courses; (e) Signing of a school-parent compact (This is an agreement between school community members [e.g., parents, principals, teachers, and students] that acknowledges the shared

- responsibility for student learning and/or the school’s policies); (g) Involvement in school instructional issues (e.g., planning classroom learning activities, providing feedback on curriculum); (h) Involvement in governance (e.g., PTA or PTO meetings, school board, parent booster clubs); (i) Involvement in budget decisions (26d, 26e, 26g, 26h, 26i)
- **WORKING CONDITIONS AND PRINCIPAL PERCEPTIONS**
 - On average throughout the school year, what percentage of time do you estimate that you spend on the following tasks in this school? (a) Internal administrative tasks, including human resource/personnel issues, regulations, reports, school budget; (b) Curriculum and teaching-related tasks, including teaching, lesson preparation, classroom observations, mentoring teachers; (c) Student interactions, including discipline and academic guidance; (d) Parent interactions, including formal and informal interactions; (e) Other—please specify (36a–36e)
 - Were you, or are you going to be, rated in a FORMAL evaluation this school year? (38a)
 - Are student test score outcomes or test score growth included as an evaluation criterion in your FORMAL evaluation this school year? (38b)
 - How often are you rated in a FORMAL evaluation? (38c)
 - How long do you plan to remain a principal? (39)
 - **TEACHER AND SCHOOL PERFORMANCE**
 - How often are INFORMAL classroom observations typically conducted on TENURED OR EXPERIENCED TEACHERS of grades K–12 or comparable ungraded levels? (41a)
 - How often are INFORMAL classroom observations typically conducted on NONTENURED OR NEW TEACHERS of grades K–12 or comparable ungraded levels? (41b)
 - How many FORMAL classroom observations are typically conducted prior to completing an evaluation on a TENURED OR EXPERIENCED TEACHER of grades K–12 or comparable ungraded levels? (42a)
 - How many FORMAL classroom observations are typically conducted prior to completing an evaluation on a NONTENURED OR NEW TEACHER of grades K–12 or comparable ungraded levels? (42b)
 - How long is the typical FORMAL classroom observation that occurs prior to completing an evaluation on a TENURED OR EXPERIENCED TEACHER of grades K–12 or comparable ungraded levels? (43a)
 - How long is the typical FORMAL classroom observation that occurs prior to completing an evaluation on a NONTENURED OR NEW TEACHER of grades K–12 or comparable ungraded levels? (43b)
 - For TENURED OR EXPERIENCED K–12 TEACHERS, how often are teachers rated in FORMAL evaluations? (44a)
 - For NONTENURED OR NEW K–12 TEACHERS, how often are teachers rated in FORMAL evaluations? (44b)
 - Did you answer “No formal evaluations are conducted” to both item 44a AND 44b? (45)
 - Are any of the following types of information included in the formal evaluation of any regular classroom teachers of grades K–12 and comparable ungraded levels? (a) Evaluation by the principal or school head (describe type); (b) Evaluation by peers (describe type); (c) Evaluation by the vice principal, assistant principal, or assistant school head; (d) Evaluation by an outside group (e.g., consultant); (e) Conference with the principal or school head; (f) Teacher self-evaluation; (g) Students’ test score outcomes or test score growth; (h) Student ratings of the teacher; (i) Teacher’s portfolio of examples of student learning (e.g., student essays, lab reports); (j) Completion of professional development activities; (k) Other (please specify) (46a–46k)
 - Are teachers’ evaluations used, at least in part, to determine teachers’ compensation? (47)

School Questionnaire***School Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS***

- GENERAL INFORMATION ABOUT THIS SCHOOL
 - Does this school have its own website OR a web page that is located on the district’s website? (13)
 - How often is the website or web page updated? (14)
 - Can teachers at this school have individual web pages located on the school’s website or web page? (15)
- ADMISSIONS AND PROGRAMS
 - Is this magnet program intended to encourage students of different racial or ethnic backgrounds to enroll in this school for the purpose of creating racial balance or reducing racial isolation? (18c)
 - Where were these [academic assistance] activities provided for students enrolled in this school? (21b)
 - Where were these [academic advancement or enrichment] activities provided for students enrolled in this school? (22b)
- STUDENTS AND CLASS ORGANIZATION
 - What percentage [of students enrolled in 12th grade] graduated with a diploma? (27b)
- STAFFING
 - Of the full-time and part-time TEACHERS in this school around the first of October, how many were—Total Teachers (29f)
 - On the most recent school day, how many SHORT-TERM substitute teachers of any grades K–12 were teaching at this school? (32)
- CHARTER SCHOOL INFORMATION
 - Approximately what percentage of students enrolled in this school are homeschooled students? (48b)
 - At which location(s) are homeschooled students instructed? (48c)

School Questionnaire—Questions Added to the 2011–12 SASS

- GENERAL INFORMATION ABOUT THIS SCHOOL
 - Does this school offer the following grades? Prekindergarten (1)
 - Around the first of October, how many students enrolled in grades K–12 and comparable ungraded levels were—(e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (5e, 5g)
- ADMISSIONS AND PROGRAMS
 - Does this school use the following requirements when deciding whether to admit students? Signed school-parent compact (This is an agreement between school community members [e.g., parents, principals, teachers, and students] that acknowledges the shared responsibility for student learning and/or the school’s policies.) (14b[8])
 - This school year, did any students enroll in this school as a result of a lottery draw? (15)
 - Are the following programs or services currently available AT THIS SCHOOL for students in any of grades K–12 or comparable ungraded levels, regardless of funding source? Before-school or after-school program providing instruction beyond the normal school day for students who seek academic advancement or enrichment (18b)
- STUDENTS AND CLASS ORGANIZATION

- Are the following opportunities available for students in grades 9–12 in this school? Dual or concurrent enrollment that offers both high school and college credit—Is this funded by the school or district? (24a[1])
- How many students were enrolled in 12th grade around October 1, 2010? (25b)
- LAST school year (2010–11), how many students graduated from the 12th grade with a diploma? (26a)
- STAFFING
 - Around the first of October, how many TEACHERS held full-time or part-time positions or assignments in this school? TOTAL number of full- and part-time teachers (27c)
 - Of the full-time and part-time TEACHERS in this school around the first of October, how many were—(e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (28e, 28g)
 - Do any of the teachers or staff have the following coaching assignments in this school? (A coach works with teachers. Coaching includes observing lessons, providing feedback, and demonstrating teaching strategies.)—General instructional/Not subject-specific coach (30b[4])
 - How easy or difficult was it to fill the vacancies for this school year in each of the following fields? Other (31b[13])
- SPECIAL PROGRAMS AND SERVICES
 - Does this school have instruction specifically designed to address the needs of students with limited-English proficiency, also known as English-language learners (ELLs)? (36)
 - How are English-language learners taught English? Are any of them taught—(a) Using ESL, bilingual, or immersion techniques? (b) In regular English-speaking classrooms? (37a–37b)
 - How are English-language learners taught subject-matter courses such as mathematics, science, and social studies? Are any of them taught—(a) In their native language? (b) Using ESL, bilingual, or immersion techniques? (c) In regular English-speaking classrooms? (38a–38c)
- CHARTER SCHOOL INFORMATION
 - Which of the following best describes the origin of this public charter school? (49);
 - Who granted the current charter? (50)
 - Which of the following best describes the governance structure of this public charter school? (51)

Private School Questionnaire

Private School Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS

- GENERAL INFORMATION AND SCHOOL AFFILIATION
 - Does this school have its own website? (11)
 - How often is the website updated? (12)
 - Can teachers at this school have individual web pages located on the school’s website? (13)
 - Is this ENTIRE SCHOOL specifically for students who have been suspended or expelled, who have dropped out, or who have been referred for behavioral or adjustment problems? (18)
 - To which of the following associations or organizations does this school belong? SPECIAL EMPHASIS—Bilingual School Association (BSA); Council of Bilingual Education (CBE); Council for Exceptional Children (CEC); National Association of Bilingual Education (NABE) (22)
- TUITION AND ADMISSIONS

- Does this school currently have one or more students supported through a publicly-funded tuition voucher program? If so, how many students participate at this school? If not, is this school approved to receive students under a publicly-funded tuition voucher program? (27)
- **STUDENTS AND CLASS ORGANIZATION**
 - Does this school have students in one or more of grades 9–12? (31)
 - Are the following opportunities available for students in grades 9–12 in this school? (a) Dual or concurrent enrollment that offers both high school and college credit funded by the school; (b) Career and technical education courses; (c) Work-based learning or internships outside of school, in which students earn COURSE CREDITS for supervised learning activities that occur in paid or unpaid workplace assignments; (d) Specialized career academy (32a–32d)
 - LAST summer (2007) or LAST school year (2006–07), were summer school activities or academic intersessions provided AT THIS SCHOOL for students who sought ACADEMIC ASSISTANCE? (35)
 - LAST summer (2007) or LAST school year (2006–07), were summer school activities or academic intersessions provided AT THIS SCHOOL for students who sought ACADEMIC ADVANCEMENT OR ENRICHMENT? (36)
- **STAFFING**
 - Of the full-time and part-time TEACHERS in this school around the first of October, how many were—Total Teachers (45f)
 - On the most recent school day, how many SHORT-TERM substitute teachers of any grades K–12 were teaching at this school? (48)
- **RECRUITMENT AND HIRING OF TEACHERS**
 - LAST SCHOOL YEAR (2006–07), how many teachers of the following types were DISMISSED or did not have their contracts renewed as a result of poor performance? (a) Nontenured teachers; (b) Tenured teachers (62a–62b)

Private School Questionnaire—Questions Added to the 2011–12 SASS

- **GENERAL INFORMATION AND SCHOOL AFFILIATION**
 - Around the first of October, how many students in grades K–12 and comparable ungraded levels were enrolled in this school? (3)
 - Around the first of October, how many students enrolled in grades K–12 and comparable ungraded levels were—(e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (6e, 6g)
- **ADMISSIONS, PROGRAMS, AND TUITION**
 - Does this school use the following requirements when deciding whether to admit students? Signed school-parent compact (This is an agreement between school community members [e.g., parents, principals, teachers, and students] that acknowledges the shared responsibility for student learning and/or the school’s policies.) (24b[8])
 - This school year, did any students enroll in this school as a result of a lottery draw? (25)
 - Are the following programs or services currently available AT THIS SCHOOL for students in any of grades K–12 or comparable ungraded levels, regardless of funding source? Before-school or after-school program providing instruction beyond the normal school day for students who seek academic advancement or enrichment (27b)
- **STAFFING**
 - Of the full-time and part-time TEACHERS in this school around the first of October, how many were—(e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (38e, 38g)
 - Does this school have a policy to encourage teacher attendance or prevent teachers from using an excessive amount of unplanned leave? (40)

- Do any of the teachers or staff have the following coaching assignments in this school? (A coach works with teachers. Coaching includes observing lessons, providing feedback, and demonstrating teaching strategies.)—General instructional/Not subject-specific coach (41b[4])
- SPECIAL PROGRAMS AND SERVICES
 - Does this school have instruction specifically designed to address the needs of students with limited-English proficiency, also known as English-language learners (ELLs)? (45)
 - How are English-language learners taught English? Are any of them taught—(a) Using ESL, bilingual, or immersion techniques? (b) In regular English-speaking classrooms? (46a-46b)
 - How are English-language learners taught subject-matter courses such as mathematics, science, and social studies? Are any of them taught—(a) In their native language? (b) Using ESL, bilingual, or immersion techniques? (c) In regular English-speaking classrooms? (47a–47c)
 - Does this school have any prekindergarten students? (51a)
 - Around the first of October, how many prekindergarten students were enrolled in this school? (51b)
 - In head counts, how many designated Title I teachers were teaching AT THIS SCHOOL around the first of October? (56)
- RECRUITMENT AND HIRING OF STAFF
 - How easy or difficult was it to fill the vacancies for this school year in each of the following fields? Other (57b[13])
 - For this school year, was the principal newly hired by this school? (60)
 - Did this school use any incentives to recruit its last newly hired principal? (61)
 - LAST SCHOOL YEAR (2010–11), how many total teachers were DISMISSED or did not have their contracts renewed? (62)
 - From the reasons listed above, what was the most common reason that teachers were dismissed or did not have their contracts renewed last school year? (63a)
 - From the reasons listed above, what was the SECOND most common reason that teachers were dismissed or did not have their contracts renewed last school year? (63b)
 - From the reasons listed above, what was the THIRD most common reason that teachers were dismissed or did not have their contracts renewed last school year? (63c)
- PRINCIPAL/SCHOOL HEAD AND TEACHER COMPENSATION
 - According to the salary schedule, what is the normal yearly base salary for—A teacher with a master’s degree and 15 years of teaching experience? (66e)
 - How many days is the normal contract year for a principal in this school? (71)
 - Is there a tenure system for principals in this school? (72)

Public School Questionnaire (With District Items)

Public School Questionnaire (With District Items)—2007–08 SASS Questions Not Included in the 2011–12 SASS

- GENERAL INFORMATION ABOUT THIS SCHOOL
 - Does this school have its own website OR a web page that is located on the district’s website? (13)
 - How often is the website or web page updated? (14)
 - Can teachers at this school have individual web pages located on the school’s website or web page? (15)
- ADMISSIONS AND PROGRAMS

- Is this magnet program intended to encourage students of different racial or ethnic backgrounds to enroll in this school for the purpose of creating racial balance or reducing racial isolation? (18c)
- Where were these [academic assistance] activities provided for students enrolled in this school? (21b)
- Where were these [academic advancement or enrichment] activities provided for students enrolled in this school? (22b)
- GRADUATION REQUIREMENTS
 - What percentage [of students enrolled in 12th grade] graduated with a diploma? (32b)
- STAFFING
 - Of the full-time and part-time TEACHERS in this school around the first of October, how many were—Total Teachers? (34f)
- CHARTER SCHOOLS AND HOMESCHOOLING
 - Approximately what percentage of students enrolled in this school are homeschooled students? (66b)
 - At which location(s) are homeschooled students instructed? (66c)
 - Does this school monitor the progress of homeschooled students? (67)

Public School Questionnaire (With District Items)—Questions Added to the 2011–12 SASS

- GENERAL INFORMATION ABOUT THIS SCHOOL
 - Does this school offer the following grades? Prekindergarten (1)
 - Around the first of October, how many students enrolled in grades K–12 and comparable ungraded levels were—(e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (5e, 5g)
- ADMISSIONS AND PROGRAMS
 - Does this school use the following requirements when deciding whether to admit students? Signed school-parent compact (This is an agreement between school community members [e.g., parents, principals, teachers, and students] that acknowledges the shared responsibility for student learning and/or the school’s policies.) (14b[8])
 - This school year, did any students enroll in this school as a result of a lottery draw? (15)
 - Are the following programs or services currently available AT THIS SCHOOL for students in any of grades K–12 or comparable ungraded levels, regardless of funding source? Before-school or after-school program providing instruction beyond the normal school day for students who seek academic advancement or enrichment (18b)
- STUDENTS AND CLASS ORGANIZATION
 - Are the following opportunities available for students in grades 9–12 in this school? Dual or concurrent enrollment that offers both high school and college credit—Is this funded by the school or district? (24a[1])
- STAFFING
 - Around the first of October, how many TEACHERS held full-time or part-time positions or assignments in this school? TOTAL number of full- and part-time teachers (25c)
 - Of the full-time and part-time TEACHERS in this school around the first of October, how many were—(e) Native Hawaiian or other Pacific Islander, not of Hispanic or Latino origin? (g) Two or more races, not of Hispanic or Latino origin? (26e, 26g)
 - Do any of the teachers or staff have the following coaching assignments in this school? (A coach works with teachers. Coaching includes observing lessons, providing feedback, and demonstrating teaching strategies.)—General instructional/Not subject-specific coach (28b[4])

- Does this school have a policy to encourage teacher attendance or prevent teachers from using an excessive amount of unplanned leave? (30)
- **RECRUITMENT AND HIRING OF STAFF**
 - How easy or difficult was it to fill the vacancies for this school year in each of the following fields? Other (31b[13])
 - LAST SCHOOL YEAR (2010–11), how many teachers of the following types were DISMISSED or did not have their contracts renewed? Total teachers who were DISMISSED or did not have their contracts renewed (34a)
 - LAST SCHOOL YEAR (2010–11), how many teachers of the following types were DISMISSED or did not have their contracts renewed? Total teachers who were dismissed or did not have their contracts renewed as a result of POOR PERFORMANCE (34b)
 - From the reasons listed above, what was the most common reason that teachers were dismissed or did not have their contracts renewed last school year? (35a)
 - From the reasons listed above, what was the SECOND most common reason that teachers were dismissed or did not have their contracts renewed last school year? (35b)
 - From the reasons listed above, what was the THIRD most common reason that teachers were dismissed or did not have their contracts renewed last school year? (35c)
 - For this school year, was the principal newly hired by this school? (36)
 - Did this school use any incentives to recruit its last newly hired principal? (37)
 - Does this school have a training or development program for aspiring school administrators? (38)
- **TEACHER COMPENSATION**
 - According to the salary schedule, what is the normal yearly base salary for—A teacher with a master’s degree and 15 years of teaching experience? (41e)
- **TEACHER AND PRINCIPAL CONTRACTS**
 - Does this school have an agreement with a principals’ association or union for the purpose of meet-and-confer discussions or collective bargaining? (“Meet-and-confer” discussions are for the purpose of reaching non-legally-binding agreements. Collective bargaining agreements are legally-binding agreements.) (48)
 - How many days is the normal contract year for a principal in this school? (49)
 - Is there a tenure system for principals in this school? (50)
- **GRADUATION REQUIREMENTS**
 - How many students were enrolled in 12th grade around October 1, 2010? (56b)
 - LAST school year (2010–11), how many students graduated from the 12th grade with a diploma? (57a)
- **SPECIAL PROGRAMS AND SERVICES**
 - Does this school have instruction specifically designed to address the needs of students with limited-English proficiency, also known as English-language learners (ELLs)? (61)
 - How are English-language learners taught English? Are any of them taught—(a) Using ESL, bilingual, or immersion techniques? (b) In regular English-speaking classrooms? (62a and 62b)
 - How are English-language learners taught subject-matter courses such as mathematics, science, and social studies? Are any of them taught—(a) In their native language? (b) Using ESL, bilingual, or immersion techniques? (c) In regular English-speaking classrooms? (63a–63c)
- **CHARTER SCHOOLS AND HOMESCHOOLING INFORMATION**
 - Which of the following best describes the origin of this public charter school? (74)
 - Who granted the current charter? (75)
 - Which of the following best describes the governance structure of this public charter school? (76)

- **SCHOOL PERFORMANCE**
 - At the end of the LAST SCHOOL YEAR (2010–11), did this SCHOOL make Adequate Yearly Progress (AYP)? (Adequate Yearly Progress is the state’s measure of yearly progress toward achieving state academic standards.) (78)
 - At the end of the LAST SCHOOL YEAR (2010–11), was this SCHOOL identified for improvement due to Adequate Yearly Progress (AYP) requirements? (For most states, a school is identified for improvement if it fails to make Adequate Yearly Progress for two consecutive years or more in the same content area.) (79)

Teacher Questionnaire

Teacher Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS

- **CERTIFICATION AND TRAINING**
 - Did you receive the following kinds of support during your FIRST year of teaching? Ongoing guidance or feedback from a master or mentor teacher (39f)
- **PROFESSIONAL DEVELOPMENT**
 - From the list of topics below, select the three that are your top priorities for YOUR OWN professional development—(1) Student discipline and classroom management; (2) Teaching students with special needs (e.g., disabilities, special education); (3) Teaching students with limited-English proficiency; (4) Use of technology in instruction; (5) The content of the subject(s) I primarily teach; (6) Content standards in the subject(s) I primarily teach; (7) Methods of teaching; (8) Student assessment; (9) Communicating with parents; (10) Other, please specify (40)
- **WORKING CONDITIONS**
 - Do you use the following to communicate with parents or students outside of the regular school day? (a) E-mail or list-serve to send out group updates or information; (b) E-mail to address individual questions or concerns; (c) Online bulletin board for class discussion; (d) Course or teacher web page; (e) Course or teacher blog; (f) Real-time, typed “conversations” through instant messaging (53a–53f)

Teacher Questionnaire—Questions Added to the 2011–12 SASS

- **GENERAL INFORMATION**
 - In how many schools have you taught at the elementary or secondary level? (10)
 - Excluding time spent on maternity/paternity leave or sabbatical, how many school years have you worked as an elementary- or secondary-level teacher in public, public charter or private schools? (11)
 - Of the school years you have worked as an elementary- or secondary-level teacher in public, public charter, or private schools, how many were—(a) In public and private schools during the SAME school year? (b) In public schools only? (12a, 12b)
- **CLASS ORGANIZATION**
 - Are you intentionally assigned to instruct the same group of students for more than one year (e.g., looping)? (17)
- **EDUCATION AND TRAINING**
 - Did you have a minor field of study? (25g)
 - What was your minor field of study? (25h)
 - Was at least a portion of the cost of your master’s degree paid for by a STATE, SCHOOL, or SCHOOL DISTRICT in which you taught? (27b)
 - Did you have any practice or student teaching? (31a)

- In your FIRST year of teaching, how well prepared were you to—(g) Use data from student assessments to inform instruction? (h) Meet state content standards? (33g,33h)
- In your FIRST year of teaching, did you work closely with a master or mentor teacher who was assigned by your school or district? (36a)
- How frequently did you work with your master or mentor teacher during your first year of teaching? (36b)
- Has your master or mentor teacher ever instructed students in the same subject area(s) as yours? (36c)
- Overall, to what extent did your assigned master or mentor teacher improve your teaching in your first year of teaching? (36d)
- CERTIFICATION
 - In what content area(s) do you hold a National Board for Professional Teaching Standards certificate? (39b)
 - Have you taken the following tests? The Praxis III: Teacher Performance Assessment in a specific content area (40[5])
- PROFESSIONAL DEVELOPMENT
 - In the past 12 months, did you participate in any of the following professional development activities? (a) University course(s) related to teaching? How many? (b) Observational visits to other schools? How many? (c) Workshops, conferences, or training sessions in which you were a presenter? How many? (d) Other workshops, conferences, or training sessions in which you were NOT a presenter? How many? (43a–43d)
 - As a result of completing these professional development activities, did you receive credits toward re-certification or advanced certification in your main teaching assignment or other teaching field(s)? (51)
 - For the professional development in which you participated in the past 12 months, did you receive the following types of support? (a) Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else); (b) Scheduled time in the contract year for professional development; (c) Stipend for professional development activities that took place outside of regular work hours; (d) Full or partial reimbursement of college tuition; (e) Reimbursement for conference or workshop fees; (f) Reimbursement for travel and/or daily expenses (52a–52f)
 - In the past 12 months, did you do any of the following? (a) Engage in individual or collaborative research on a topic of interest to you professionally; (b) Participate in regularly scheduled collaboration with other teachers on issues of instruction; (c) Observe, or be observed by, other teachers in your classroom (for at least 10 minutes) (53a–53c)
- WORKING CONDITIONS
 - During this school year, do you or will you—Serve as a formal mentor or mentor coordinator in your school or district? (57f)
 - How often are you INFORMALLY evaluated? (59a)
 - How often are you rated in a FORMAL evaluation? (59b)
 - Were you, or are you going to be, rated in a FORMAL evaluation this school year? (60a)
 - Are student test score outcomes or test score growth included as an evaluation criterion in your FORMAL evaluation this school year? (60b)
- SCHOOL CLIMATE AND TEACHER ATTITUDES
 - How much actual influence do you think teachers have over school policy AT THIS SCHOOL in each of the following areas? (a) Setting performance standards for students at this school; (b) Establishing curriculum; (c) Determining the content of in-service professional development programs; (d) Evaluating teachers; (e) Hiring new full-time teachers; (f) Setting discipline policy; (g) Deciding how the school budget will be spent (61a–61g)

- To what extent do you agree or disagree with each of the following statements? I make a conscious effort to coordinate the content of my courses with that of other teachers. (63r)
- **GENERAL EMPLOYMENT AND BACKGROUND INFORMATION**
 - DURING THE CURRENT SCHOOL YEAR, do you, or will you, earn any additional compensation from this school system based on your students' performance (e.g., through a merit pay or pay-for-performance agreement)? How much? (72)
 - During the CURRENT SCHOOL YEAR do you, or will you, receive a retirement pension check paid from a teacher retirement system? How much? (75)
 - Does your school, district, or school system offer tenure? (77a)
 - Are you tenured at your current school? (77b)
 - What is your current marital status? (79)

Private School Teacher Questionnaire

Private School Teacher Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS

- **CERTIFICATION AND TRAINING**
 - Did you receive the following kinds of support during your FIRST year of teaching? (39f)
- **PROFESSIONAL DEVELOPMENT**
 - From the list of topics below, select the three that are your top priorities for YOUR OWN professional development—(1) Student discipline and classroom management; (2) Teaching students with special needs (e.g., disabilities, special education); (3) Teaching students with limited-English proficiency; (4) Use of technology in instruction; (5) The content of the subject(s) I primarily teach; (6) Content standards in the subject(s) I primarily teach; (7) Methods of teaching; (8) Student assessment; (9) Communicating with parents; (10) Other, please specify (40)
- **WORKING CONDITIONS**
 - Do you use the following to communicate with parents or students outside of the regular school day? (a) E-mail or list-serve to send out group updates or information; (b) E-mail to address individual questions or concerns; (c) Online bulletin board for class discussion; (d) Course or teacher web page; (e) Course or teacher blog; (f) Real-time, typed “conversations” through instant messaging (53a–53f)
- **GENERAL EMPLOYMENT AND BACKGROUND INFORMATION**
 - Are you a member of a teachers' union or an employee association similar to a union? (67)
 - Are you enrolled in a state- or federally-recognized tribe? (70b)

Private School Teacher Questionnaire—Questions Added to the 2011–12 SASS

- **GENERAL INFORMATION**
 - In how many schools have you taught at the elementary or secondary level? (10)
 - Excluding time spent on maternity/paternity leave or sabbatical, how many school years have you worked as an elementary- or secondary-level teacher in public, public charter or private schools? (11)
 - Of the school years you have worked as an elementary- or secondary-level teacher in public, public charter, or private schools, how many were—(a) In public and private schools during the SAME school year? (c) In private schools only? (12a, 12c)
- **CLASS ORGANIZATION**
 - Are you intentionally assigned to instruct the same group of students for more than one year (e.g., looping)? (17)
- **EDUCATION AND TRAINING**

- Did you have a minor field of study? (25g)
- What was your minor field of study? (25h)
- Was at least a portion of the cost of your master’s degree paid for by a STATE, SCHOOL, or SCHOOL DISTRICT in which you taught? (27b)
- Did you have any practice or student teaching? (31a)
- In your first year of teaching, how well prepared were you to—Use data from student assessments to inform instruction? (33g)
- In your FIRST year of teaching, did you work closely with a master or mentor teacher who was assigned by your school or district? (36a)
- How frequently did you work with your master or mentor teacher during your first year of teaching? (36b)
- Has your master or mentor teacher ever instructed students in the same subject area(s) as yours? (36c)
- Overall, to what extent did your assigned master or mentor teacher improve your teaching in your first year of teaching? (36d)
- CERTIFICATION
 - In what content area(s) do you hold a National Board for Professional Teaching Standards certificate? (40b)
 - Have you taken the following tests? (5) The Praxis III: Teacher Performance Assessment in a specific content area (41[5])
- PROFESSIONAL DEVELOPMENT
 - In the past 12 months, did you participate in any of the following professional development activities? (a) University course(s) related to teaching? How many? (b) Observational visits to other schools? How many? (c) Workshops, conferences, or training sessions in which you were a presenter? How many? (d) Other workshops, conferences, or training sessions in which you were NOT a presenter? How many? (43a–43d)
 - As a result of completing these professional development activities, did you receive credits toward re-certification or advanced certification in your main teaching assignment or other teaching field(s)? (51)
 - For the professional development in which you participated in the past 12 months, did you receive the following types of support? (a) Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else); (b) Scheduled time in the contract year for professional development; (c) Stipend for professional development activities that took place outside regular work hours; (d) Full or partial reimbursement of college tuition; (e) Reimbursement for conference or workshop fees; (f) Reimbursement for travel and/or daily expenses (52a–52f)
 - In the past 12 months, did you do any of the following? (a) Engage in individual or collaborative research on a topic of interest to you professionally; (b) Participate in regularly scheduled collaboration with other teachers on issues of instruction; (c) Observe, or be observed by, other teachers in your classroom (for at least 10 minutes) (53a–53c)
- WORKING CONDITIONS
 - During this school year, do you or will you—(f) Serve as a formal mentor or mentor coordinator in your school? (57f)
 - How often are you INFORMALLY evaluated? (59a)
 - How often are you rated in a FORMAL evaluation? (59b)
 - Were you, or are you going to be, rated in a FORMAL evaluation this school year? (60a)
 - Are student test score outcomes or test score growth included as an evaluation criterion in your FORMAL evaluation this school year? (60b)
- SCHOOL CLIMATE AND TEACHER ATTITUDES

- How much actual influence do you think teachers have over school policy AT THIS SCHOOL in each of the following areas? (a) Setting performance standards for students at this school; (b) Establishing curriculum; (c) Determining the content of in-service professional development programs; (d) Evaluating teachers; (e) Hiring new full-time teachers; (f) Setting discipline policy; (g) Deciding how the school budget will be spent (61a–61g)
- To what extent do you agree or disagree with each of the following statements? (r) I make a conscious effort to coordinate the content of my courses with that of other teachers (63r)
- GENERAL EMPLOYMENT AND BACKGROUND INFORMATION
 - DURING THE SUMMER OF 2011, did you have any earnings from—(a) Teaching summer school in this or any other school? How much? (1) Did all of these earnings come from your current school? (69a[1])
 - DURING THE SUMMER OF 2011, did you have any earnings from—(b) Working in a non-teaching job in this or any other school? How much? (1) Did all of these earnings come from your current school? (69b[1])
 - DURING THE CURRENT SCHOOL YEAR, do you, or will you, earn any additional compensation from this school system based on your students' performance (e.g., through a merit pay or pay-for-performance agreement)? How much? (72)
 - During the CURRENT SCHOOL YEAR do you, or will you, receive a retirement pension check paid from a teacher retirement system? How much? (75)
 - Does your school offer tenure? (77a)
 - Are you tenured at your current school? (77b)
 - What is your current marital status? (79)

School Library Media Center Questionnaire

School Library Media Center Questionnaire—2007–08 SASS Questions Not Included in the 2011–12 SASS

- 2007–08 FACILITIES, SERVICES, AND POLICIES
 - Can this library media center accommodate a full class of students at one time? (2)
 - If a full class is working in the library media center, can other activities be accommodated concurrently, such as production activities, conferences, small group work, or individual browsing? (3)
 - During the most recent full week of school, was this library media center used as a classroom, due to a classroom shortage? (4)
 - How frequent are the scheduled periods? (6)
 - Does this library media center have a library policy and procedures manual? (12)
- 2007–08 INFORMATION LITERACY
 - Does this school have formal information literacy standards? (26)
 - Does this library media center receive formal feedback on students' information literacy skills? (29)
 - In the past TWELVE months, have any paid professional library staff in this school received formal training on information literacy instruction? (30)

School Library Media Center Questionnaire—Questions Added to the 2011–12 SASS

- FACILITIES, SERVICES, AND POLICIES
 - Is the library media center open to community members who do not attend this school and do not have children who attend this school? (4)

- May community members who do not attend this school and do not have children who attend this school use the library media center during the following times? (a) During regular school hours; (b) During the week, outside of regular school hours; (c) On weekends, outside of regular school hours (5a–5c)
- May community members who do not attend this school and do not have children who attend this school use library media center computer workstations to access the Internet? (6a)
- Which of the following reasons best describes why community members who do not attend this school and do not have children who attend this school cannot use library media center computer workstations to access the Internet? (6b)
- TECHNOLOGY & INFORMATION LITERACY
 - Does the school provide access to online, licensed databases to students from the following locations? (b) In the school library media center (20b)

Methodological and Procedural Changes

The 2011–12 SASS used a similar methodology as the 2007–08 SASS—a mail-based survey with telephone and field follow-up. During telephone follow-up, interviewers called schools with one or more outstanding questionnaires to remind staff to complete and return them. During field follow-up, local Census Bureau field representatives contacted schools via telephone or personal visits. Several changes were implemented to improve the efficiency of the data collection methodology. These changes included attempts to collect the Teacher Listing Form (TLF) from districts, using an internet-based Control Center to help facilitate communications with school staff about school-level questionnaires, using an internet-based instrument to collect data from public and private school teachers, mailing the School District Questionnaire to all school districts that had one of their charter schools in sample for SASS,⁶ and beginning data collection at a later date. These changes are discussed in-depth in the individual sections below.

Teacher Listing Form

The Teacher Listing Form (TLF) collects the name and selected information for every SASS-eligible teacher in SASS sampled schools. In the 2007–08 SASS, the TLF was mailed to all sampled schools at the beginning of the school year. For the 2011–12 SASS, school districts were asked in advance whether they would be able to provide an electronic file of teachers; if they indicated they would be able to, they were asked to do so at the start of data collection. If the school district indicated that they would not be able to do so, then the paper TLF was mailed to the individual schools at the start of data collection. Later during data collection, paper TLFs were mailed to schools if their school district did not provide a list of teachers. Although schools were not specifically asked to provide an electronic file of teachers, the option to upload a file of teachers was available in the Control Center (discussed below).

In addition to the methodological change regarding how the teacher lists were collected, two changes were made in the information requested on the TLF. In the 2007–08 SASS, an item was added that asked whether or not the teacher was expected to be teaching in the school the subsequent school year. This item was added in an attempt to increase the number of leavers and movers (i.e., teachers who left the teaching profession and teachers who began teaching in a different school from the prior school year) in

⁶ There were two regular districts that contained only charter schools. The schools within these districts were part of the school sample and received the Public School Questionnaire (With District Items); however, due to operational error, the associated districts themselves were not mailed a District Questionnaire. In addition, 40 regular school districts only had a single dependent charter school sampled. These schools received the Public School Questionnaire (With District Items) and due to operational error, the associated districts were not mailed a District Questionnaire. These 42 districts were classified as noninterviews on the Public School District data file.

the Teacher Follow-up Survey sample. However, the item was not effective,⁷ so the question was not included for the 2011–12 TLF. Additionally, the teacher experience categories were expanded to include a separate category for teachers who were in their first year of teaching. For more information on teacher sampling, see chapter 4.

Internet-Based Control Center

As was done with the 2007–08 SASS, a survey coordinator was established, if possible, at the school. Survey coordinators functioned as the main contact for all survey operations within the school. Having one point of contact expedited the process of following-up on outstanding questionnaires and was less burdensome to the school. During the 2011–12 SASS, survey coordinators were established in approximately 76.5 percent of sampled schools.

For the 2011–12 SASS, the survey coordinator was given access to a SASS “Control Center.” The Control Center was used to display which questionnaires were received and which had not been completed. When Census Bureau staff called survey coordinators to check on the status of questionnaires, both the Census Bureau staff and the school staff could access the Control Center to see which questionnaires had not been completed. The Control Center also enabled survey coordinators, as well as Census Bureau staff, to request a replacement questionnaire for any questionnaire that was lost or damaged.

Internet-Based Teacher Questionnaires

The Teacher and Private School Teacher Questionnaires were primarily internet-based for the 2011–12 SASS. The 2011–12 SASS was the first time that internet-based Teacher and Private School Teacher Questionnaires were offered. Once teachers were selected for the survey, they were mailed an invitation to complete the internet-based questionnaire. They were later mailed a reminder letter that provided instructions to complete the internet-based questionnaire and informed them that they could request a paper version of the questionnaire to complete. All sampled teachers who had not yet completed the survey were eventually mailed a paper questionnaire as a final attempt to collect their data. The date at which they were mailed a paper questionnaire was dependent on when they were selected for sample. Of the teachers sampled for the survey, 45.5 percent of public school teachers and 30.7 percent of private school teachers completed the survey via the internet-based questionnaire. The telephone center staff completed 0.6 percent of public school teacher and 0.6 percent of private school teacher interviews using the internet-based questionnaire. The paper questionnaire was completed by 24.5 percent of public school teachers and 27.5 percent of private school teachers.

Chapter 5 on data collection provides additional details on the methodology for the 2011–12 SASS, as well as a brief evaluation of the methodology.

Interviewing Districts With a Dependent Charter School in Sample

For the 2007–08 SASS, school districts governing sampled public charter schools were not intentionally sampled. Most of these districts were still sampled though because one of their traditional public schools was included in the school sample for SASS. For the 2011–12 SASS, all schools sampled as public charter schools received the Public School Questionnaire (With District Items), as they had in the 2007–

⁷ In 2007–08 SASS, teachers were stratified by the expecting to leaver variable. However, during TFS sampling, it was observed that a strong majority of movers and leavers did not come from the expected to leave teacher stratum. Therefore, the variable was determined to be ineffective in predicting which teachers would become movers or leavers in TFS.

08 SASS, and districts associated with these charter schools were also sampled and sent the School District Questionnaire.

Later Start to Data Collection Schedule

For the 2007–08 SASS, data collection began on August 28, 2007, with the mail-out of the initial school package. For the 2011–12 SASS, data collection for the school-level questionnaires was originally scheduled to start on September 12, 2011. Data collection was scheduled to begin later in 2011 than it did in 2007 to allow time for all schools to begin their school year prior to receiving the questionnaire package. The initial mail-out for the 2011–12 SASS was delayed until October 11, 2011, due to delays in receiving OMB clearance to conduct the data collection. The data collection follow-up activities for the school-level questionnaires were originally scheduled to end on March 30, 2012, but were extended until May 4, 2012. School-level questionnaires continued to be accepted and keyed until May 18, 2012. Data collection follow-up activities for teacher questionnaires were originally scheduled to end on May 11, 2012, but were extended until June 1, 2012. The internet instrument remained active and paper questionnaires were accepted until June 22, 2012. See chapter 5 for a detailed description of the data collection schedule and methodology.

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Chapter 3. Preparation for the 2011–12 SASS

The National Center for Education Statistics (NCES) and the U.S. Census Bureau continually work to improve the questionnaire content and procedures for the Schools and Staffing Survey (SASS). Prior to the administration of the 2011–12 SASS, the data collection methodology and survey content were examined, tested, and improved. Exhibit 2 presents a summary of the research conducted. The full reports are included as appendixes F through H.

Exhibit 2. Summary of research conducted for the 2011–12 SASS

Report Titles	Methodology	Study period	Respondent(s)	Key areas of focus
Summary of the 2009 Field Test Findings and Recommendations for the 2011–12 SASS Methodology	Field test	10/2009–3/2010	District and school	Methodology
Cognitive Testing of Schools and Staffing Survey Items, Summary of Findings and Recommendations	Cognitive interviews	Spring/summer 2010	District, principal, and teacher	Content; methodology
Cognitive Testing of Schools and Staffing Survey Items, Summary of Findings and Recommendations	Cognitive interviews	Spring 2011	Principal and teacher	Content

Research on New SASS Methodology

SASS Field Test

The Teacher Listing Form (TLF) collects the name, subject matter, full- or part-time status, and teaching experience for every eligible teacher in SASS sampled schools. For the 2007–08 SASS, the initial package of materials mailed to selected schools included the TLF as well as the School Questionnaire, Principal Questionnaire, and School Library Media Center Questionnaire (for public schools only). After the packages were mailed, a Census Bureau interviewer called the school to verify basic information and remind the appropriate school staff member to complete the TLF and return it as soon as possible. The Census Bureau continued to remind school staff to complete the TLF in subsequent reminder phone calls that occurred during the first three weeks of October 2007. A local Census Bureau field representative contacted schools that had not returned their completed TLF from mid-October through mid-November 2007. Schools that did not complete the TLF during or prior to the field follow-up operation were reminded to complete the TLF and other outstanding questionnaires during subsequent phone calls that took place from late November 2007 until early February 2008. Although this methodology was successful in obtaining a sufficient TLF response rate (86.7 percent for public schools and 83.3 percent for private schools, respectively), the Census Bureau sought to collect the TLF information more efficiently.

The Census Bureau proposed that many school districts could provide an electronic list of teachers at the beginning of the school year for all of the schools selected in their district, which would reduce the response burden for sampled schools, allow Teacher Questionnaires to be mailed out earlier in the school year, eliminate the need for a separate field follow-up operation for the TLF, and reduce the amount of data keying for the TLF. Therefore, the Census Bureau conducted a field test of the newly proposed collection methodology for the TLF. A complete report of the methodology and detailed findings is in “Appendix F. Summary of the 2009 Field Test Findings and Recommendations for the 2011–12 SASS.” The 2009 field test examined the feasibility of:

- Collecting the teacher data electronically; and
- Collecting teacher data from districts with sampled schools rather than from each individual school.

The following sections present a summary of this research.

Field Test Sampling Plan

The Census Bureau planned to sample 100 districts of varying sizes and approximately 500 associated schools for the field test. The sample was intended to mimic past SASS district samples in terms of geographic dispersion, district enrollment sizes, and grade levels offered. The resulting sample contained 100 public school districts from 37 states. The Census Bureau sampled medium and large districts (those with enrollment of more than 2,200 students) more heavily than smaller districts.

After the sample of 100 districts was drawn, the Census Bureau sampled approximately 500 schools from these districts. The number of schools selected from each district varied considerably depending on the total enrollment size of the district and the number of schools affiliated with the district. The variation in the number of schools selected in each district was determined based on the proportion of schools selected from districts of varying sizes from the 2007–08 SASS.

Among the schools sampled for the field test, the enrollment size varied considerably. The overall distribution of schools by enrollment size approximated that of the 2007–08 SASS school sample. In addition, the distribution of the sampled schools by school levels (elementary, secondary, combined) was similar to that of the 2007–08 school sample.

Field Test Methodology

The field test was designed to address the issues of feasibility (i.e., could and would the districts provide data), file format (the software containing the data), and data quality (accuracy of data from districts versus schools). To address the issues of feasibility and file format, the Census Bureau split the district sample into two distinct panels:

- Panel 1—Districts were asked to provide an electronic list of teachers in any format convenient for them. The Census Bureau provided an Excel template, but did not encourage its use.
- Panel 2—Districts were asked to provide an electronic list of teachers using the Excel template provided; however, any format was accepted.

To address the issue of data quality (accuracy of data), the Census Bureau collected teacher list information from the sampled schools in addition to teacher lists from the districts. Schools were divided into three treatment groups. Within each group, they were divided again by whether the school's district was in panel 1 or panel 2. The three groups are listed below.

- Group A—Schools were asked to provide an electronic teacher list. Within this group, half the schools were asked to provide an electronic list of teachers in any format convenient for them. The other half of the schools were asked to provide an electronic list of teachers using the Excel template provided.
- Group B—Schools were asked to verify and correct, as necessary, a traditional TLF that was pre-printed with the information the district had provided. Schools received the same treatment regardless of their district's panel (whether the district was asked to provide list in Excel format or any format convenient for them).

- Group C—Schools were asked to provide information on the traditional paper TLF. Schools received the same treatment regardless of their district’s panel (whether the district was asked to provide list in Excel format or any format convenient for them).

The field test utilized a mail-based survey approach with telephone follow-up. Prior to the initial mail-out, Census Bureau staff called the school districts in order to determine the best person to receive the initial letter. The district and school initial letters were mailed in late November 2009. Reminder letters were mailed two weeks later. Census Bureau interviewers contacted districts and schools by telephone to remind them to upload their electronic list during January 2010. As lists were received, a verification mail-out and telephone follow-up were conducted on a flow basis from December 2009 through March 2010 for schools selected to verify the data the district provided for their school. After the field test, the Census Bureau contacted some of the districts by telephone for additional feedback. Table 2 presents the response rates for each district and school group.

Table 2. Unweighted response rates (in percentages) for teacher lists, by district and school group: 2009 SASS field test

Respondent type and group	District group	
	Electronic list— any format	Electronic list— Excel template
Districts (all districts: response rate=72.0)	64.0	80.0
Schools (all schools: response rate=52.7)		
Electronic list	25.4	49.0
Schools asked to verify pre-populated TLF	51.5	46.1
Schools asked to complete a paper TLF	82.4	74.0

SOURCE: U.S. Department of Commerce, U.S. Census Bureau, Schools and Staffing Survey (SASS) Field Test, 2009 (previously unpublished tabulation).

Key Findings From the Field Test

There are two components to the evaluation of the field test data. For the first component, Census Bureau staff evaluated the district response rates to assess the feasibility of collecting an electronic list of teachers from school districts. Analysis of the response rates provides strong evidence that the districts are both willing and able to provide TLF information in an electronic format in a timely manner. The overall district response rate, including districts that were asked to provide an electronic list of teachers in any format and districts that were asked to provide the list in Excel, was 72 percent. Table 2 shows that the districts that were asked specifically to provide the lists in an Excel spreadsheet responded at a higher rate (80 percent) than the districts that were asked to provide the list in any electronic format (64 percent). This suggests that asking for a common and familiar file format results in greater participation than a more flexible, but perhaps more ambiguous, request. To further examine the feasibility of collecting an electronic list of teachers from school districts, Census Bureau staff contacted some of the respondents and nonrespondents after the end of data collection to ask debriefing questions, including questions about file format, missing information, and whether nonresponding districts were able to provide teacher information. Two districts provided a file in a format other than Excel. Census Bureau staff asked these districts whether they could provide an Excel file if requested. One of the districts said they would be able to provide a file in Excel in the future, while the other could only provide a .pdf file. Census Bureau staff asked three districts that provided a file that was missing some of the requested information why they did not provide the information and from whom the information could be obtained. Two of the districts simply forgot to include some of the requested information; however, the third district could not provide current information for subject taught, full- or part-time status, or expected teaching status for the following year. Census Bureau staff asked 12 districts that did not provide a file if they have the ability to

provide at least some of the information electronically. Eleven of the 12 districts indicated that they could provide an electronic list of teachers. The results of the debriefing telephone calls indicated that most districts could provide the information requested in an Excel file.

For the second component of the field test evaluation, Census Bureau staff evaluated the quality of the data by comparing the list pair, that is, the teacher list for each school provided by the district and the corresponding school. These responses were verified either through independent or dependent verification. Sixty pairs of independently-provided district and school lists were compared. Census Bureau staff contacted schools and districts to verify any discrepancies between the two lists. Among these, 32 percent of the school lists and 23 percent of the district lists were determined to be more accurate overall. The remaining 45 percent of the lists provided by schools and districts were determined to be equally accurate. An additional 128 lists were verified through dependent verification. Sampled schools in the dependent verification group received a paper TLF prepopulated with the information the district provided. The schools were asked to verify the information provided and correct it if necessary. In 40 percent of these lists, the district list and school list were determined to be equally accurate.

Teacher discrepancies mainly consisted of either the school or district not having an updated roster of current teachers (including name changes from marriage), teachers being included who do not meet the SASS definition of a teacher, or the district not including a teacher for the sample school because the teacher works at more than one school. These mistakes seemed to happen because either the school or district did not respond consistently with the directions provided. Overall, considering teacher coverage as well as other data needed for sampling, the test indicated that the school and district data were at the same level of quality.

The results of these two evaluation components provide evidence that the new methodology is likely to provide comparable data in a timelier manner at a lower cost in the 2011–12 administration of the SASS compared to the 2007–08 SASS.

Chapter 2 provides details on the changes in the methodology between the 2007–08 and the 2011–12 SASS implementations. Chapter 5 provides details on the methodology for the 2011–12 SASS as well as a brief evaluation of the methodology.

Research on SASS Content

New items were proposed for the School District Questionnaire, School Questionnaire, Principal Questionnaire, and Teacher Questionnaire. These items were tested with appropriate school or district personnel in order to gather feedback.

Cognitive Interviews—2010

The Census Bureau contracted with ICF Macro to conduct a series of cognitive interviews to test newly proposed questions as well as some of the 2007–08 SASS questions for the 2011–12 SASS. The purpose of these interviews was to gather feedback on proposed and current questions for the district, school, principal, and teacher questionnaires, report the findings, and make recommendations for revisions, if necessary, to the items. A complete report of the methodology and detailed findings is in “Appendix G. Cognitive Testing of Schools and Staffing Survey Items Summary of Findings and Recommendations, September 2010.”

Methods

In the spring and summer of 2010, ICF Macro conducted a series of cognitive interviews with school district personnel, principals, and teachers. ICF Macro obtained participants from three sources: (1) a list provided by NCES of schools and educators in the prior SASS sampling frame; (2) a list purchased from an outside vendor; and (3) an ICF Macro database of educators. ICF Macro sent an e-mail to potential participants describing the study and offering an incentive to those who agreed to participate. Interested personnel who contacted ICF Macro by e-mail or telephone were screened and scheduled for an interview. ICF Macro conducted the interviews by telephone. The length of the interview averaged 45 to 60 minutes for each questionnaire. Before each interview, ICF Macro e-mailed a copy of the proposed items to the participant. Respondents for the teacher, principal, and school questionnaires were asked to print the materials, but not to review the items before the interview. Respondents for the district questionnaire were asked to review the items before the interview to make sure they had the information they would need to respond.

ICF Macro interviewed 12 school district representatives from 11 states to obtain their feedback on 15 items from the district questionnaire. Three representatives were from small districts (1,000 or fewer students), seven were from medium districts (1,001–3,500 students), and two were from large districts (3,500 or more students). District personnel answered questions that related to the following topics: teacher attendance, teacher hiring and dismissal, teacher compensation, high school diploma requirements, prekindergarten students, and participation in the National School Lunch Program. District personnel then responded to questions about their ability and willingness to provide information about the selected schools, including the grade range, operating status, principal's name and e-mail address, and a list of teachers. Nine of the questions were newly proposed questions while the remaining six were existing questions from the 2007–08 SASS. Four of the newly proposed questions were included on the 2011–12 School District Questionnaire, which contained 57 questions.

ICF Macro interviewed 12 principals to obtain their feedback on seven items in the school questionnaire and one item in the library media center questionnaire. Principals represented four elementary schools, four middle schools, and four high schools in eight states and the District of Columbia. Six of the principals worked in charter schools, five worked in public schools, and one worked in a private school. Principals answered questions that related to the following topics: admission requirements, programs and services offered, teaching vacancies, and the availability of the school library or library media center to community members. The charter school principals also answered questions about their school's origin and governance structure. Three of the questions were newly proposed questions for the school questionnaire, one of the questions was a newly proposed question for the library media center questionnaire, and the remaining four questions were existing questions from the 2007–08 SASS. All of the tested questions were included on the applicable questionnaire. The 2011–12 School Questionnaire contained 58 questions; the School Library Media Center Questionnaire contained 27 questions.

ICF Macro interviewed 12 additional principals to obtain their feedback on 14 items in the principal questionnaire. Principals represented four elementary schools, four middle schools, and four high schools in eight states and the District of Columbia. Principals answered questions that related to the following topics: licensure, educational goals, school accomplishments, school programs, parent participation, time use, and teacher evaluations. Thirteen of the questions were newly proposed questions or included new subitems, the remaining question was an existing question from the 2007–08 SASS. Thirteen of the newly proposed questions were included on the questionnaire, which contained 58 questions.

ICF Macro interviewed 16 teachers, including at least one teacher from every grade level in K–12, to obtain their feedback on 22 items in the teacher questionnaires. Teachers were selected from traditional public schools, public charter schools, and private schools in 10 states. The teachers interviewed had a

wide range of experience; however, all teachers interviewed had earned a bachelor's degree and most also had a master's degree. Teachers answered questions that related to the following topics: teaching experience, class organization, teacher preparation, certification, evaluations, and compensation. Ten of the questions were newly proposed questions or included new subitems, the remaining questions were existing questions from the 2007–08 SASS. Nine of the newly proposed questions were included on the questionnaire, which included 87 questions.

Key Findings From Testing Questionnaire Items

School District Questionnaire

ICF Macro recommended wording modifications for about half of the items tested. The main findings included the following:

- While about half of the participants were able to provide a count of short-term substitute teachers eligible to teach in their district, one participant did not have access to the number of available substitutes and two participants misinterpreted the item.
- Participants had some difficulties answering items regarding the criteria used in considering applicants for teaching positions in their district. In some cases, participants were unsure how to respond regarding criteria that are required for state certification but are not specifically considered by the district. Other difficulties stemmed from criteria that they consider for some, but not all, applicants.
- In general, participants were able to respond to the items regarding teacher dismissals.
- Most participants were able to respond to the items regarding the salary schedule for teachers; however, some were not sure whether to include stipends that teachers receive for education or special certifications.
- Most participants were able to answer the items regarding pay incentives for teachers; however, some were unsure how to respond regarding incentives that the state provides and whether to include incentives given to other school staff members.
- Most participants indicated that they did not have an “alternative compensation system” for employees; however, when answering the subsequent item, many indicated that they did offer permanent increases to base salary or a cash bonus for performance, certification, professional development, or hard-to-staff subjects.
- When answering the item regarding the number of years of science instruction required for a standard diploma, most participants could not distinguish between “Science” and “Physical or biological sciences.”
- The majority of participants were able to respond to the items regarding the National School Lunch Program; however, it was noted that the list of students approved for free or reduced-price lunches is constantly being updated.

School Questionnaire

ICF Macro recommended wording modifications for about half of the school questionnaire items tested. The main findings included the following:

- Participants were unsure how to respond to some of the items regarding admission requirements (e.g., schools that requested students' academic record or standardized test results responded ‘yes’ even though these are used to determine academic level rather than deciding whether to admit students).

- Participants had different interpretations of the two items on extended day programs for academic assistance or enrichment. Some participants could not distinguish between these items.
- Participants had different interpretations of how to answer the item on teacher vacancies when considering if, when, and how the position was filled.
- Two thirds of participants did not accurately distinguish between the answer categories of “No positions in this school” and “No vacancy in this field” when responding to the item on the difficulty in filling teacher vacancies. Other participants had trouble distinguishing between the different classifications of science courses (biology or life sciences, physical sciences, and other natural sciences).
- Participants were able to answer the items regarding charter schools correctly.
- Several participants thought the wording of the question asking whether the library media center is open to community members was confusing.

Principal Questionnaire

ICF Macro recommended wording modifications for many of the principal questionnaire items tested. The main findings included the following:

- Participants were able to answer the item asking if they hold a license in “school administration” without any problems.
- Participants felt that there was significant overlap between the educational goals presented in the questionnaire.
- Participants interpreted the school accomplishment items differently, and many did not know when it was appropriate to answer, “not applicable.”
- While many of the items regarding parent or guardian participation were clear, participants had different interpretations of a written contract between school and parent.
- Participants often considered observations when responding to the items that ask about the frequency of formal evaluations, even when the observations were not part of a formal evaluation.
- Participants were unsure whether to include informal observations when providing the number of observations that are typically conducted prior to completing a teacher evaluation. Some participants provided the average number of observations, while others provided the maximum.
- For some participants, the number of informal or formal teacher evaluations may vary due to other circumstances, such as if the teacher is struggling.

Teacher Questionnaire

ICF Macro recommended wording modifications for many of the teacher questionnaire items tested. The main findings included the following:

- Many teachers had trouble responding correctly to the item asking what year they began teaching in their current school. For some teachers, this stemmed from not reading the instruction on how to answer if they had a break in service of one year or more. For another teacher, it was due to her teaching in multiple schools at the same time.
- Several participants thought the item asking about the number of years they have been teaching in public or private schools and the item asking how many of those years they worked full-time and how many they worked part-time could be combined.
- About half of the participants misunderstood the term “looping.”
- Participants were unsure whether to consider courses that included content on a particular teaching method or only courses where that teaching method was the main focus when answering items regarding the courses they’ve taken.

- Several participants had problems when answering the items regarding their teaching certificate. Difficulties arose from entering multiple content areas and not knowing which grade range box to mark when they only taught a subset of the grades listed.
- One participant included informal evaluations when responding to the item asking how often she is formally evaluated.

Key Findings From Questions Concerning Data Collection

In addition to testing district questionnaire items, ICF Macro asked school district representatives questions about collecting data on principals, teachers, and schools and about improving participation. A summary of the findings is below.

Principal Contact Information

- Most participants indicated that they would be willing to provide the names and e-mail addresses of the principals in their district.
- Most participants also indicated that their district had a public website with principal e-mail addresses.
- Depending on the district, the final list of schools and principals would be available between May and August 1.
- Participants would be willing to provide principals' names and e-mail addresses over the phone for up to about 10 schools.
- Participants would also be willing to provide principals' names and e-mail addresses via e-mail, fax, or by uploading a file to a secure website.

Teacher Contact Information

- Most participants would be willing to provide a list of all teachers working at their schools and would be able to identify those teachers who were in their first year of teaching.

Grade Range and Closing Information for Schools

- All participants would be willing and able to provide the grade range of schools in their district and be able to identify whether any of the schools had closed.

Ideas for Increasing Participation

- To increase survey participation, participants suggested providing a specific due date for when districts should respond, including a "press release" with more information about the survey, or providing more information about how participants' privacy would be ensured.

Cognitive Interviews—2011

The Census Bureau contracted with ICF Macro to conduct a second series of cognitive interviews for the 2011–12 SASS. The purpose of these interviews was to gather feedback on proposed questions for the principal and teacher questionnaires, report the findings, and make recommendations for revisions, if necessary, to the items. A complete report of the methodology and detailed findings is in "Appendix H. Cognitive Testing of Schools and Staffing Survey Items Summary of Findings and Recommendations, May 2011."

Methods

In the spring of 2011, ICF Macro conducted a second series of cognitive interviews with principals and teachers. ICF Macro obtained participants from a list purchased from an outside vendor. ICF Macro sent an e-mail to potential participants describing the study and offering an incentive to those who agreed to participate. Interested personnel who contacted ICF Macro by e-mail or telephone were screened and scheduled for an interview. Recruitment focused on school districts with experience using student test score outcomes or growth as a criterion in principal and teacher evaluations. ICF Macro conducted the interviews by telephone. The length of the interviews averaged 15 to 20 minutes for the principal questionnaire and 25 to 30 minutes for the teacher questionnaire. Before each interview, ICF Macro e-mailed a copy of the proposed items to the participant. Respondents were asked to print the materials, but not to review the items before the interview.

ICF Macro interviewed nine principals to obtain their feedback on 1 question with 3 subitems in the principal questionnaire. Principals represented two elementary schools, four middle schools, and three high schools in seven states. Principals answered questions regarding their performance evaluations.

ICF Macro interviewed nine teachers, including four elementary school teachers, three middle school teachers, and two high school teachers, to obtain their feedback on four questions in the teacher questionnaire. The teachers were recruited from four different states. Teachers answered questions relating to their performance evaluations and certifications.

Key Findings From Testing Questionnaire Items

Principal Questionnaire

ICF Macro recommended wording modifications for one of the three items tested and one of the answer options. The main findings included the following:

- Principals were able to answer the item asking whether they were or would be rated in a formal evaluation. Participants generally had the same interpretation of a “formal evaluation.”
- Some participants for whom student test score outcomes or test score growth are not specifically included as an evaluation criterion in their formal evaluation responded that they were because these are measures of their school’s performance, which is used as an evaluation criterion.
- Most of the participants that reported being formally evaluated once a year indicated that their annual evaluation included several meetings.

Teacher Questionnaire

ICF Macro recommended wording modifications for one of the items tested and two of the answer options. They also recommended an additional instruction for two of the items. The main findings included the following:

- Participants had similar views regarding what was meant by an “informal” evaluation.
- One participant noted that the answer options for the item asking how often the teacher is informally evaluated were not mutually exclusive. This participant is informally evaluated multiple times a year, but no formal evaluations are required.
- Participants generally understood the item regarding the inclusion of student test score outcomes or test score growth as an evaluation criterion in their formal evaluations.

- Most participants did not have any difficulty in correctly answering the items regarding their certification(s).

The NCES used the feedback from the cognitive interviews to improve the SASS questionnaires. Chapter 2 discusses the changes made to the 2007–08 questionnaires for the 2011–12 SASS. The SASS questionnaires are available on the NCES website. “Appendix B. Questionnaire Availability” provides the website and instructions for accessing electronic files of the final 2011–12 SASS questionnaires.

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 2011–12 Schools and Staffing Survey (SASS). The first major section discusses the creation of the frame for public and public charter schools, including schools deleted, added, and otherwise edited. Next, the public and public charter school sampling procedure is described. This is followed by a description of the district sampling. The next major section covers the private school frame creation and sampling. The final major section discusses teacher sampling.

Public and Public Charter School Sampling Frame and Sample Selection

Public and Public Charter Frame Creation

The foundation for the 2011–12 SASS public and public charter school frame was the 2009–10 Common Core of Data (CCD) non-fiscal file. CCD is based on administrative data collected annually by the National Center for Education Statistics (NCES) from each state education agency and from the Department of Defense (DoD) and the Bureau of Indian Education (BIE). For the 2009–10 school year, state education agencies used their administrative record data to report information for 103,968 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 traditional public schools (special education, alternative, vocational, or technical), and public charter schools.

Due to an accelerated survey schedule, the preliminary 2009–10 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. A number of updates were made, primarily to contact information and enrollment and teacher counts.

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 of 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. If these schools had different administrations (i.e., principals), then they were treated as different schools.

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 in grades 1–12 or the equivalent ungraded levels. In some instances, school records on CCD were actually offices that oversee special types of programs that include classroom instruction or the school record on CCD may have provided funding and oversight only; these records were deleted from the sampling frame for SASS and the appropriate instruction-providing program was added. 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 Public Charter Frame Creation section under “School Collapsing.”) 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. In 2011–12, SASS also excluded Bureau of Indian Education-funded 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 (i.e., students confined to home due to a long-term illness or condition) 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 2,124 schools that were closed as of the 2009–10 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 1 additional year for completeness but are clearly designated as not operating.
- There were 1,788 schools located outside the 50 states and the District of Columbia that were deleted. These schools were identified as having a FIPS state code of 58 (overseas DoD), 60 (American Samoa), 66 (Guam), 69 (Northern Marianas), 72 (Puerto Rico), or 78 (U.S. Virgin Islands). Note that 173 BIE-funded schools (FIPS state code = 59) were also excluded from the sampling frame. Domestic DOD schools located within a state (FIPS state code = 61) were not deleted from CCD because they were eligible for SASS.
- There were 381 Homebound, Adult, or nonschool entities that were deleted. These schools and programs were clerically identified from a list of schools from the CCD that had “HOMEBOUND,” “TARGETED SERVICES,” “PSYCHOANALYTIC,” or “ADULT” in the name. Since they did not provide classroom instruction to K–12 students, they were not eligible for SASS.
- There were 1,633 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 2,468 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 caused substantial over-reporting 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 building. 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 the 2003–04 SASS and continuing through the 2011–12 SASS to collapse the CCD records whenever it was believed that this problem was likely to occur.

Census 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. Schools collapsing were required to match on a keyword in the name, as well as address and phone number, have contiguous grade ranges, and be of the same school type. Based on previous data collection experience, in a few states the rules were modified to require matching on only two of three of the contact information variables—name, address, and phone number. These states were Arkansas, Iowa, Missouri, Montana, Nebraska, North Dakota, Oklahoma, and South Dakota.

Frame Additions

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

- Ninety records that were listed on CCD as districts with no associated school records were determined to be newly-opened schools, based on the name (e.g., included 'school' or 'academy'), teacher, and enrollment counts, and were added.
- A total of 115 school records, primarily alternative, special education, and juvenile justice facilities, identified by contacting the deleted county or regional administrative units in California (20 schools), Pennsylvania (29 schools), New York (60 schools), and other states (6 schools), were also added.

After the adding, deleting, and collapsing of school records, the SASS school sampling frame consisted of 90,527 traditional public and 5,079 public charter schools. From this point on, this is considered the 2011–12 SASS sampling frame. Table 3 shows the totals by state during each step in the frame creation process.

Table 3. Total number of public and public charter school records during each step in the frame creation process, by school type and state: 2011–12

School type and state	Preliminary 2009–10 CCD ¹ file	After deletions (ineligible and duplicate school records)	After additions (nontraditional schools in certain states)	Final public school universe (after collapsing procedure)
Total	103,968	97,869	98,074	95,606
BIE-funded ² schools	173	0	0	0
Domestic DoD ³ schools	60	59	59	59
Charter schools (included in the state totals below)	5,356	5,105	5,105	5,079
Alabama	1,628	1,587	1,595	1,595
Alaska	516	516	516	516
Arizona	2,368	2,337	2,337	2,337
Arkansas	1,148	1,109	1,109	977
California	10,290	10,050	10,075	10,075
Colorado	1,818	1,752	1,756	1,671
Connecticut	1,178	1,120	1,120	1,120
Delaware	247	216	216	216
District of Columbia	241	221	222	222
Florida	4,255	3,906	3,913	3,913
Georgia	2,608	2,439	2,440	2,440
Hawaii	291	290	290	290
Idaho	755	734	734	721
Illinois	4,457	4,270	4,270	4,147
Indiana	1,990	1,943	1,944	1,944
Iowa	1,503	1,428	1,428	1,266
Kansas	1,466	1,411	1,412	1,373
Kentucky	1,565	1,500	1,500	1,500
Louisiana	1,678	1,464	1,464	1,464
Maine	670	647	647	643
Maryland	1,475	1,436	1,436	1,436
Massachusetts	1,887	1,834	1,834	1,834
Michigan	4,207	3,750	3,750	3,690
Minnesota	2,491	2,314	2,314	2,204
Mississippi	1,097	1,094	1,094	1,094
Missouri	2,458	2,370	2,370	2,123
Montana	840	832	838	570
Nebraska	1,145	1,069	1,069	909
Nevada	663	656	656	656
New Hampshire	494	473	473	452
New Jersey	2,632	2,582	2,584	2,584
New Mexico	866	834	834	762
New York	4,769	4,690	4,750	4,750
North Carolina	2,614	2,557	2,557	2,557
North Dakota	533	492	492	378

See notes at end of table.

Table 3. Total number of public and public charter school records during each step in the frame creation process, by school type and state: 2011–12—Continued

School type and state	Preliminary 2009–10 CCD ¹ file	After deletions (ineligible and duplicate school records)	After additions (nontraditional schools in certain states)	Final public school universe (after collapsing procedure)
Ohio	3,936	3,748	3,748	3,649
Oklahoma	1,815	1,766	1,782	1,494
Oregon	1,329	1,298	1,298	1,285
Pennsylvania	3,303	3,212	3,281	3,281
Rhode Island	332	313	313	313
South Carolina	1,230	1,191	1,191	1,191
South Dakota	731	708	709	482
Tennessee	1,791	1,716	1,716	1,716
Texas	9,252	8,919	8,919	8,919
Utah	1,066	1,019	1,019	1,000
Vermont	328	323	325	325
Virginia	2,186	2,141	2,141	2,141
Washington	2,368	2,241	2,241	2,209
West Virginia	771	761	761	756
Wisconsin	2,300	2,168	2,168	2,016
Wyoming	366	363	364	341
American Samoa, Guam, Northern Marianas, Puerto Rico, U.S. Virgin Islands	1,788	0	0	0

¹ CCD refers to the Common Core of Data.

² BIE refers to the Bureau of Indian Education.

³ DoD refers to the U.S. Department of Defense.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Frame Data File” before, during, and after frame creation activities, 2011–12.

Frame Corrections

As mentioned above, the preliminary version of the 2009–10 CCD file was used as the basis for the 2011–12 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, two methods were used to resolve the issue:

- taking data from earlier CCD files or SASS data; and
- assigning a generic grade range based on the school’s name;

The enrollment, teacher count, and enrollment by race were imputed for 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 2007–08 SASS for that particular school.

The school's grade range was edited so as to drop grades that had no enrollment or less than three students in a given grade. This procedure was not applied to schools with less than 50 students. Correction of the grade range was important for stratification.

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

As described in the sampling section later in this chapter, the district sample is primarily derived from their association with sample schools. However, a district frame was constructed for weighting and benchmark tables as described in Chapters 8 and 9. 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 2011–12 SASS school universe file. The 2009–10 CCD included 18,439 district records, of which 16,839 were presumed to be eligible for SASS according to these rules. The following types of records were deleted from the 2009–10 CCD district file:

- sixteen districts listed on the CCD file that operated outside of the United States;
- a total of 196 Bureau of Indian Education districts; and
- districts on the CCD file that were presumed not to operate schools. Comparing the district file to the school file identified 1,388 districts without at least one corresponding school. These district records appeared to be administrative units rather than schools, as described previously in the Frame Additions section.

Table 4 shows the 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) during the frame creation, by state: 2011–12

State	Preliminary 2009–10 CCD ¹ file	Final public district universe (ineligible districts deleted)
Total	18,439	16,839
BIE districts ²	196	0
Domestic DoD ³ districts	6	5
Charter districts (included in the state totals below)	2,300	2,283
Alabama	171	163
Alaska	54	54
Arizona	678	661
Arkansas	297	278
California	1,196	1,126
Colorado	262	187
Connecticut	201	197
Delaware	43	41
District of Columbia	63	57
Florida	77	75
Georgia	207	191
Hawaii	1	1
Idaho	142	141
Illinois	1,082	1,008
Indiana	387	366
Iowa	372	361
Kansas	332	303
Kentucky	194	176
Louisiana	123	123
Maine	324	189
Missouri	566	565
Montana	513	360
Nebraska	296	286
Nevada	18	18
New Hampshire	280	177
New Jersey	699	674
New Mexico	108	108
New York	914	908
North Carolina	233	213
North Dakota	234	196
Ohio	1,089	1,002
Oklahoma	586	554
Oregon	221	199
Pennsylvania	803	762
Rhode Island	56	51

See notes at end of table.

Table 4. Total number of public school districts (includes public charter and single school districts) during the frame creation, by state: 2011–12—Continued

State	Preliminary 2009–10 CCD ¹ file	Final public district universe (ineligible districts deleted)
South Carolina	103	103
South Dakota	171	162
Tennessee	140	140
Texas	1,284	1,258
Utah	123	117
Vermont	362	243
Virginia	207	202
Washington	310	305
West Virginia	57	57
Wisconsin	464	448
Wyoming	61	61
American Samoa, Guam, Northern Marianas, Puerto Rico, and U. S. Virgin Islands	16	0

¹ CCD refers to the Common Core of Data.

² BIE refers to the Bureau of Indian Education.

³ DoD refers to the U.S. Department of Defense.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District Frame Data File,” 2011–12.

Sample Allocation

As part of the 2011–12 SASS, extensive sample allocation research was undertaken to determine the school and teacher allocation that would best meet the goals of the sample design. For the most part, the goals of the sample design remained the same as they had been in the 2007–08 SASS, but with clarification about what coefficient of variation (a measure of the sampling variation, where the standard error is divided by the estimate) was desired for each grade level, state, or affiliation. A full description of the sample allocation research is located in “Appendix E. 2011–12 SASS Redesign—Precision Analysis.”

The general goals were:

- Use the 2009–10 CCD school file as the sample frame with exceptions noted in the previous “Public and Public Charter Frame Creation” section.
- Produce state estimates of public school characteristics.
- Produce state/primary school, state/middle school, and state/high school 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 designations (e.g., region and locale) and school characteristics for public schools.
- Produce national and regional estimates of public charter schools and selected school characteristics.

In addition, the sample allocation research had the following goals:

- Produce state/primary, state/middle, and state/high school estimates of the number of public schools and associated public school characteristics with CVs of 15 percent, 20 percent, and 10 percent, respectively.

- Produce national combined school estimates of the number of schools and associated public school characteristics with CVs of 30 percent or less.
- Produce estimates for overall public sector (including charter) schools by state with CVs at or below 10 percent.
- Optimize the allocation of remaining public schools, up to the maximum sample size of 11,000 using 2007–08 SASS data collection cost information.
- Allocate 750 charter schools optimally to the charter school strata with CVs at or below 15 percent.

The district sample was designed to produce state estimates. No specific precision requirements were imposed. However, in four states—Maryland, Florida, Nevada, and West Virginia—the CVs were observed to be quite high. In consideration of the high sampling rate of districts in those states (80 percent or more of districts were in sample), low CVs were expected. Consequently, it was decided that all districts in those states should be in sample.

Sampling Methodology

The SASS sample is not a simple random sample, but rather is a stratified probability proportionate to size (PPS) sample. The first level of stratification for public schools was to group schools into three domains as follows: (a) schools in Maryland, Florida, Nevada, and West Virginia, where at least one school from each school district in the state was selected as described in the following “Sample Selection” section about districts; (b) public charter schools; and (c) all other traditional public schools.

The second level of stratification varied within the three school domains identified above. Type A schools were stratified first by state and then school district. Type B schools were stratified by state (Alaska, Arizona, California, Colorado, Hawaii, Nevada, New Mexico, Oregon, Utah, the remaining Western states, Indiana, Minnesota, Michigan, Ohio, Wisconsin, the remaining Midwestern states, Delaware, District of Columbia, Florida, Georgia, Louisiana, North Carolina, Texas, the remaining Southern states, Massachusetts, New Jersey, New York, Pennsylvania, and the remaining Northeastern states). The type C schools were stratified by state (all remaining states including the District of Columbia).

Each of the school domain/state groups was then stratified by grade level. For charter schools, three levels (elementary, secondary, and combined) were defined as described 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 , or school is ungraded.⁸

For the other traditional public school types, four levels were defined as described below:

Primary: lowest grade ≤ 4 and highest grade ≤ 8 ;
 Middle: lowest grade ≥ 5 and highest grade ≤ 8 ;
 High: lowest grade ≥ 7 and highest grade ≥ 9 ; and
 Combined: lowest grade ≤ 6 and highest grade ≥ 9 , or school is ungraded.⁴

⁸ Ungraded schools refer to schools that serve students whose grade levels are not defined as grades 1 through 12, but serve students of an equivalent age range. For example, special education centers and alternative schools often classify their students as ungraded.

The 2011–12 SASS sample was allocated so that state-level estimates of primary, middle, and high traditional public schools 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 and public charter). A full description of the allocation procedure is located in “Appendix I. School and Teacher Sample Allocation Procedure.”

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, traditional public and public charter schools were sorted by the following variables:

1. school stratum code, combinations of A, B, and C, and level, as defined in the “Sampling Methodology” section above;
2. state;
3. locale code:
 - 11 = city, large: territory inside an urbanized area and inside a principal city with population of 250,000 or more;
 - 12 = city, mid-size: territory inside an urbanized area and inside a principal city with population less than 250,000 and greater than or equal to 100,000;
 - 13 = city, small: territory inside an urbanized area and inside a principal city with population less than 100,000;
 - 21 = suburb, large: territory inside an urbanized area and outside a principal city with population of 250,000 or more;
 - 22 = suburb, mid-size: territory inside an urbanized area and outside a principal city with population less than 250,000 and greater than or equal to 100,000;
 - 23 = suburb, small: territory inside an urbanized area and outside a principal city with population less than 100,000;
 - 31 = town, fringe: territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area;
 - 32 = town, distant: territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area;
 - 33 = town, remote: territory inside an urban cluster that is more than 35 miles from an urbanized area;
 - 41 = rural, fringe: Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster;
 - 42 = rural, distant: Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster;
 - 43 = rural, remote: Census-defined rural territory that is more than 25 miles from an urbanized area, as well as rural territory that is more than 10 miles from an urban cluster;
4. recoded ZIP Code (all schools in stratum/district had the same value for this variable);
5. district ID as defined on CCD;
6. recoded percent eligible for free or reduced price lunch and as defined as
 - 1 = less than or equal to 75 percent of enrollment;
 - 2 = more than 75 percent of enrollment;

7. school's highest grade offered (in descending order);
8. recoded percent of enrollment that has race and ethnicity other than white non-Hispanic (in descending order) and defined as
 - 1 = less than 5.5 percent non-white or Hispanic enrollment,
 - 2 = at least 5.5 percent but less than 20.5 percent non-white or Hispanic enrollment,
 - 3 = at least 20.5 percent but less than 50.5 percent non-white or Hispanic enrollment, and
 - 4 = at least 50.5 percent non-white or Hispanic enrollment;
9. total enrollment (in serpentine sort order, which was defined as enrollment being sorted first in ascending then descending order within the other sort variables); and
10. CCD school ID.

This sort order differed slightly from the sort used in previous SASS administrations. Percentage of students eligible for free or reduced-price lunch was added as the first sort below district ID in order to achieve a better representation of high poverty schools. All other sort variables remained the same as for the 2007–08 SASS.

The first four sort 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 controlled for the selection of high poverty schools. The seventh variable (school's highest grade) controlled for the sampling of schools with an unusual highest grade (for example primary schools with highest grade of 4). The eighth variable (recoded minority) allowed a balance with respect to race/ethnicity. The ninth variable (school enrollment) also encouraged a balance with respect to school size.

Sample Selection

Schools

Within each stratum, schools were systematically selected using a probability-proportionate-to-size (PPS) 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. This means that schools with an unusually high number of teachers relative to other schools in the same stratum were automatically included in the sample. In Florida, Maryland, Nevada, and West Virginia, the school probabilities of selection within each school district were analyzed. If the pattern of probabilities (i.e., the sum of the probabilities of schools within school district and grade level) did not guarantee that a school would be sampled from that school district, then the school with the highest probability of selection was included in the sample with certainty. This guaranteed that all school districts in these states would have at least one school in sample; the subsequent section on district sampling discusses the reason for this. This produced a public school sample of 11,000 (750 public charter schools and 10,250 traditional public schools).

Table 5 shows the selected sample sizes for traditional public schools. Table 6 shows the selected sample sizes for public charter schools. Each selected public and public charter school was also in sample for the principal and the school library media center surveys, so no additional sampling was needed.

Table 5. Selected sample sizes for traditional public schools, by school level, the total number of sampled schools, and the percentage of the frame in sample, by state: 2011–12

State	School level				Total sampled schools	Percent of state's frame in sample
	Primary	Middle	High	Combined		
Total	2,813	2,559	3,567	1,311	10,250	11.34
Alabama	50	67	69	34	220	13.77
Alaska	30	21	43	50	144	29.33
Arizona	50	48	94	23	215	12.17
Arkansas	35	42	52	14	143	15.08
California	135	105	304	50	594	6.43
Colorado	51	56	38	21	166	10.95
Connecticut	43	84	88	12	227	20.60
Delaware	25	23	20	15	83	42.56
District of Columbia	23	7	14	6	50	37.88
Florida	81	63	148	59	351	10.10
Georgia	75	69	29	29	202	8.46
Hawaii	26	22	21	5	74	28.57
Idaho	44	50	44	14	152	22.19
Illinois	88	80	62	20	250	6.09
Indiana	59	63	72	33	227	12.00
Iowa	51	45	53	10	159	12.65
Kansas	45	47	72	12	176	13.13
Kentucky	56	53	54	51	214	14.11
Louisiana	54	40	80	21	195	14.06
Maine	68	52	41	6	167	25.97
Maryland	48	37	93	23	201	14.41
Massachusetts	50	53	47	32	182	10.27
Michigan	93	73	125	50	341	10.39
Minnesota	56	51	180	57	344	16.98
Mississippi	32	35	50	12	129	11.80
Missouri	67	64	75	33	239	11.50
Montana	30	24	47	15	116	20.35
Nebraska	58	52	61	25	196	21.56
Nevada	30	29	64	18	141	22.74
New Hampshire	29	27	43	7	106	24.15
New Jersey	82	77	109	45	313	12.51
New Mexico	32	43	77	25	177	25.62
New York	102	84	104	37	327	7.09
North Carolina	77	71	27	11	186	7.51
North Dakota	34	15	46	40	135	35.71
Ohio	90	72	90	27	279	8.42
Oklahoma	43	31	39	19	132	8.94
Oregon	50	56	75	21	202	17.06
Pennsylvania	68	70	58	37	233	7.40
Rhode Island	40	30	38	4	112	37.09

See notes at end of table.

Table 5. Selected sample sizes for traditional public schools, by school level, the total number of sampled schools, and the percentage of the frame in sample, by state: 2011–12—Continued

State	School level				Total sampled schools	Percent of state's frame in sample
	Primary	Middle	High	Combined		
South Carolina	47	39	41	10	137	11.86
South Dakota	38	26	43	20	127	26.35
Tennessee	50	64	48	13	175	10.32
Texas	126	140	108	66	440	5.26
Utah	34	29	99	24	186	20.13
Vermont	72	15	28	20	135	41.54
Virginia	55	43	89	42	229	10.69
Washington	64	57	121	51	293	13.26
West Virginia	33	34	37	15	119	15.74
Wisconsin	64	58	61	11	194	10.67
Wyoming	30	23	46	16	115	34.02

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Sample Data File," 2011–12.

Table 6. Selected sample sizes for public charter schools by school level, the total number of sampled schools, and the percentage of the frame in sample, by state: 2011–12

State	School level			Total sampled schools	Percent of state's frame in sample
	Elementary	Secondary	Combined		
Total	229	402	119	750	14.77
Alaska	3	2	2	7	28.00
Arizona	20	39	9	68	11.91
California	31	82	19	132	15.68
Colorado	8	10	3	21	13.55
Hawaii	3	1	2	6	19.35
Nevada	2	7	2	11	30.56
New Mexico	2	13	2	17	23.94
Oregon	3	12	4	19	18.81
Utah	3	12	3	18	23.68
Remaining western states	3	2	2	7	17.95
Indiana	2	6	2	10	18.87
Michigan	15	13	6	34	11.68
Minnesota	5	20	2	27	15.17
Ohio	16	26	9	51	15.18
Wisconsin	8	18	2	28	14.14
Remaining midwestern states	6	11	3	20	16.00
Delaware	2	2	2	6	28.57
District of Columbia	6	7	2	15	16.67
Florida	24	30	4	58	13.27
Georgia	5	9	2	16	25.40
Louisiana	5	7	2	14	18.18
North Carolina	6	4	3	13	13.54
Texas	15	25	16	56	10.07
Remaining southern states	7	10	4	21	13.73
Massachusetts	5	7	2	14	22.58
New Jersey	5	6	2	13	16.05
New York	8	6	2	16	11.43
Pennsylvania	8	13	4	25	18.80
Remaining Northeastern states	3	2	2	7	16.67

SOURCE: U. S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Sample Data File," 2011–12.

Districts

Two methods were used for sampling districts within specific states. Districts in four 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. In addition, public charter schools that operate independently of the local school districts are included as school districts as well as schools. Charter schools that do not operate independently are referred to as dependent and are not included as school districts since they are considered to be part of their governing school districts.

Districts Outside 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 improve the 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 associated with the SASS public school sample. This provides the linkage between the district and the school. Table 7 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. 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 there was evidence indicating that the Supervisory Union, rather than the school districts, handled the day-to-day administration of the schools.

Districts inside Florida, Maryland, Nevada, and West Virginia

In 2010, a study was done for each state to assess the reliability of SASS school district estimates. The study showed that standard errors from Florida, Maryland, Nevada, and West Virginia were high relative to the sampling rate. To reduce the standard errors, all school districts in these states were defined as school sampling strata. This placed all districts in each of these four states in the school district sample, thus reducing the standard error to zero, if all districts respond. Delaware was dropped from this list because all charter schools in Delaware are operated independently of the school districts, necessitating the sampling of all charter schools if a zero variance were to be achieved. It was decided this was impractical and too burdensome.

Table 7. Number of sampled public school districts (includes charter school districts), by state: 2011–12

State	Districts	State	Districts
Total	5,714		
Independent charter schools (included in the state totals)	301		
Alabama	104	Missouri	161
Alaska	43	Montana	77
Arizona	168	Nebraska	99
Arkansas	96	Nevada	20
California	375	New Hampshire	59
Colorado	70	New Jersey	230
Connecticut	121	New Mexico	69
Delaware	26	New York	199
District of Columbia	18	North Carolina	93
Florida	74	North Dakota	82
Georgia	96	Ohio	264
Hawaii	1	Oklahoma	99
Idaho	75	Oregon	116
Illinois	181	Pennsylvania	207
Indiana	153	Rhode Island	38
Iowa	115	South Carolina	57
Kansas	106	South Dakota	66
Kentucky	112	Tennessee	74
Louisiana	69	Texas	309
Maine	94	Utah	54
Maryland	25	Vermont	54
Massachusetts	137	Virginia	88
Michigan	261	Washington	143
Minnesota	213	West Virginia	54
Mississippi	81	Wisconsin	147
		Wyoming	41

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District Sample Data File," 2011–12.

Private School Frame Creation and Sample Selection

Private List and Area Frame Creation

The 2011–12 SASS private school sample consisted of schools selected from a list frame and an area frame. The SASS private school sample size was 3,000 of which 2,748 schools were from the list frame and 252 were from the area frame. The area frame serves as coverage improvement since the list frame is believed to contain some undercoverage of private schools.

List Frame

Most of the SASS private school sample comes from a list frame, which is a frame constructed from matching various sources of private school lists. The starting point for the 2011–12 SASS list frame was the 2009–10 Private School Survey (PSS) list frame. In order to provide coverage of private schools founded since 2010 and to improve coverage of private schools existing in 2010, the Census Bureau collected membership lists in the summer of 2010 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 2009–10 PSS list frame. Any school that did not match a school on the 2009–10 PSS list frame was added to the existing list frame as a list frame birth. Schools found to be out-of-scope in 2009–10 PSS (usually because they had closed) were deleted from the frame. This is the usual method that is followed to create a revised PSS list frame every two years.

This updating process was conducted specifically for the development of the 2011–12 PSS list frame, 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 more expansive PSS definition but not the SASS definition, were deleted.

Area Frame

Due to time constraints, the Census Bureau did not have time to wait for the 2011–12 PSS area frame schools to be identified. The PSS area frame operation was conducted several weeks after data collection began for the 2011–12 SASS. Consequently, the 2009–10 PSS area frame was used as the area frame for the 2011–12 SASS.

To create the 2009–10 PSS area frame, the United States was divided into 2,062 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.

A total of 124 distinct PSUs were in the 2009–10 PSS area sample. The eight largest PSUs were selected with certainty, and 116 PSUs were selected to represent the remainder of the country. These 116 PSUs are termed noncertainty since they were not selected with certainty.

Area frame schools in the 2009–10 PSS in certainty PSUs were removed from the SASS area frame and moved to the list frame. In addition, the updated 2011–12 PSS list frame picked up some of the area frame schools. These two frames were then unduplicated, with the duplicate schools being 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 area frame.

The strata for selecting the PSUs were defined the same as for the 2007–08 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 percentage of students enrolled in private schools within metro/nonmetro status (i.e., above or below the median enrollment 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 as part of the PSS area frame operation. 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.

Private School Frames

The list and area frames were modified to fit the SASS definition of a school and to meet the needs of the sampling procedure. Specifically, certain records that were expected to be ineligible for SASS deleted. Variables needed for sampling were imputed.

Frame Deletions

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

From the list frame:

- schools added from the 2011–12 early childhood center (ECC) frame (a PSS operation whereby states are specifically asked for schools with kindergarten as the highest grade);
- schools from the 2009–10 PSS list frame with kindergarten as the highest grade level; and
- schools that were determined to be out-of-scope for the 2009–10 PSS list frame (i.e., closed, pre-kindergarten only, not providing classroom instruction).

From the area frame:

- schools from noncertainty PSUs of the 2009–10 PSS area frame that were added to the 2011–12 PSS list frame;
- schools with kindergarten as the highest grade level; and
- schools that were determined to be out-of-scope for the 2009–10 PSS area frame (i.e., closed, pre-kindergarten only, not providing classroom instruction).

Frame Variable Imputation

Some 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 variables if the data were missing in the manner discussed below.

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

- taking information from earlier PSS data;
- using the school's name to assign a generic 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 association membership; and
- assigning the rest to the “Nonsectarian-regular” category.

The school’s student and teacher counts were imputed in one of the following ways:

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

Sample Allocation

The goals for the 2011–12 SASS private school sample size allocation for the most part remained the same as the 2007–08 goals:

- Produce detailed private school affiliation group estimates for each of the 11 affiliations.
- Produce national private sector school-level estimates (i.e. elementary, secondary, and combined).
- Produce estimates for national and regional public versus private sector comparisons.

As part of the sample allocation for 2011–12 SASS, research was undertaken on the private school allocation. The sample was allocated to affiliation and grade level optimally using 2007–08 SASS data collection cost information and variances on selected key reporting variables.

The goal of the sample allocation was to produce CVs at the affiliation level of 8 percent or less. Exceptions were made for affiliations where this standard was believed to produce an excessive burden on the schools in the affiliation due to unusually high sampling rates. No specific CV requirements were imposed for region or grade level.

List Frame Methodology

The list frame was partitioned into an initial set of cells using affiliation (11 groups), grade level (three groups), and Census region (four groups). These cells were defined using the 2009–10 PSS data. For any records with missing values for variables used in the assignment, the data were imputed.

The first level of stratification was school affiliation (11 groups):

- Catholic—parochial;
- Catholic—diocesan;
- Catholic—private;
- Baptist;
- Jewish;
- Lutheran;
- Seventh-Day Adventist;
- Other religious;
- Nonsectarian—regular;
- Nonsectarian—special emphasis; and
- Nonsectarian—special education.

Within each affiliation, 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 ungraded⁹ schools.

Within affiliation/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 2,748 schools. Table 8 shows the allocated sample sizes by selected characteristics.

⁹ Ungraded school refers to schools that serve students whose grade levels are not defined as grades 1 through 12, but serve students of an equivalent age range. For example, special education centers and alternative schools often classify their students as ungraded.

Table 8. Allocated private school list frame stratum sample sizes, by region, school level, and affiliation stratum: 2011–12

Affiliation stratum	Northeast				Midwest			
	Total	Elementary	Secondary	Combined	Total	Elementary	Secondary	Combined
Total	631	258	128	245	621	341	108	172
Catholic—parochial	74	45	12	17	80	58	12	10
Catholic—diocesan	64	37	15	12	87	57	16	14
Catholic—private	58	19	25	14	45	15	19	11
Baptist	32	8	3	21	42	7	4	31
Jewish	51	20	13	18	9	5	2	2
Lutheran	12	7	1	4	139	99	26	14
Seventh-Day Adventist	22	13	4	5	30	16	6	8
Other religious	93	44	11	38	97	45	12	40
Nonsectarian— regular	107	30	24	53	38	13	6	19
Nonsectarian— special emphasis	53	28	9	16	40	24	3	13
Nonsectarian— special education	65	7	11	47	14	2	2	10
Affiliation stratum	South				West			
	Total	Elementary	Secondary	Combined	Total	Elementary	Secondary	Combined
Total	923	371	102	450	573	277	100	196
Catholic—parochial	46	32	7	7	27	21	4	2
Catholic—diocesan	61	35	14	12	42	26	9	7
Catholic—private	43	15	14	14	33	11	13	9
Baptist	175	48	12	115	48	13	9	26
Jewish	12	7	2	3	9	5	2	2
Lutheran	42	26	3	13	44	31	8	5
Seventh-Day Adventist	66	35	12	19	64	30	12	22
Other religious	229	80	14	135	108	45	11	52
Nonsectarian— regular	136	41	14	81	100	47	17	36
Nonsectarian— special emphasis	77	45	7	25	75	45	10	20
Nonsectarian— special education	36	7	3	26	23	3	5	15

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Sample Data File,” 2011–12.

List Frame Sample Sort

Sorting serves to improve the efficiency of the sample design. Within each stratum, sorting took place on the following variables:

1. state (one for each state and the District of Columbia);
2. highest grade in the school;
3. locale code (based on 2000 Census geography):

- 11 = city, large: territory inside an urbanized area and inside a principal city with population of 250,000 or more;
- 12 = city, mid-size: territory inside an urbanized area and inside a principal city with population less than 250,000 and greater than or equal to 100,000;
- 13 = city, small: territory inside an urbanized area and inside a principal city with population less than 100,000;
- 21 = suburb, large: territory inside an urbanized area and outside a principal city with population of 250,000 or more;
- 22 = suburb, mid-size: territory inside an urbanized area and outside a principal city with population less than 250,000 and greater than or equal to 100,000;
- 23 = suburb, small: territory inside an urbanized area and outside a principal city with population less than 100,000;
- 31 = town, fringe: territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area;
- 32 = town, distant: territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area;
- 33 = town, remote: territory inside an urban cluster that is more than 35 miles from an urbanized area;
- 41 = rural, fringe: Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster;
- 42 = rural, distant: Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster;
- 43 = rural, remote: Census-defined rural territory that is more than 25 miles from an urbanized area, as well as rural territory that is more than 10 miles from an urban cluster;
- 4. ZIP Code;
- 5. enrollment as reported in the 2009–10 PSS (or imputed); and
- 6. PIN number (the PIN number is a unique number assigned to identify the school on PSS).

Area Frame

There were 252 area frame schools identified as being in-scope in the 2009–10 PSS area frame within noncertainty PSUs that had not already been added as part of the 2011–12 PSS list frame updating operation. All of the 252 area frame cases (in the noncertainty PSUs) remained in the area frame and were in sample. All area frame schools were included in the sample due to the high variance associated with the area frame cases. Results of the sample optimization determined that all area frame cases should be included in order to minimize the private school CVs in SASS.

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 2009–10 PSS number of teachers (in full-time equivalent counts) 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.

Table 9 shows the number of private schools that were sampled from the list frame and the percentage of the frame that was sampled for each affiliation stratum. Table 10 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.

Table 9. Number and percentage of private schools selected from the list frame, by affiliation stratum: 2011–12

Affiliation stratum	Number of sampled schools	Percent of list frame in sample
Total	2,748	10.1
Catholic—parochial	227	7.4
Catholic—diocesan	254	8.2
Catholic—private	179	19.3
Baptist	297	15.8
Jewish	81	9.9
Lutheran	237	16.1
Seventh-Day Adventist	182	21.7
Other religious	527	6.8
Nonsectarian—regular	381	10.3
Nonsectarian—special emphasis	245	11.0
Nonsectarian—special education	138	10.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Sample Data File,” 2011–12.

Table 10. Number and percentage of private schools selected from the list frame, by school level and Census region: 2011–12

School level and region	Number of sampled schools	Percent of list frame in sample
Total	2,748	10.1
School level		
Elementary	1,247	8.7
Secondary	438	15.8
Combined	1,063	10.9
Region		
Northeast	631	10.0
Midwest	621	9.8
South	923	10.6
West	573	10.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Sample Data File,” 2011–12.

Area Frame

All area frame private schools were selected for the sample.

SASS Teacher Frame and Sample Selection

Frame Creation

In the 2011–12 administration of SASS, lists of teachers for public schools were collected from school districts rather than schools if the public school districts were willing and able to provide a list using an internet survey instrument. These lists were transmitted electronically rather than collected on the paper Teacher Listing Form (TLF). Lists that could not be collected from public school districts electronically

were collected directly from the schools on paper TLFs, primarily by mail. Lists of teachers for private schools were collected directly from schools, primarily on paper TLFs. The paper TLFs were keyed by staff at the National Processing Center (NPC). Both the electronic lists and the lists keyed from paper were sampled on a weekly basis throughout the data collection period.

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

1. teacher experience: teachers in their first year of teaching were classified as beginning; those in their 2nd or 3rd year of teaching were classified as early career; teachers with 4–19 years of experience were classified as mid-career; and teachers with 20 or more years of teaching were classified as highly experienced;
2. teaching status: part-time or full-time; and
3. 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 sampled school, teachers were stratified by experience. The strata include beginning teachers, early year teachers, mid-career teachers, and highly experienced teachers and are defined above.

Sample Allocation

The goals of the teacher sampling were as follows:

- Oversample beginning and early career teachers to ensure that there would be enough teachers in both the 2011–12 SASS and the 2012–13 Teacher Follow-up Survey. These 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; that is, attempts were made to equalize the teacher weights within stratum. This constraint was relaxed to accommodate the other goals of teacher sampling.
- Select an average of three to nine teachers per school depending upon grade range, state, 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 as discussed further in this section.

Prior to the 2011–12 SASS, research was conducted to determine if the average cluster sizes met certain goals for reliability:

- For traditional public schools, set the cluster sizes so as to produce state estimates for primary, middle, and high schools with coefficients of variation (CVs) of 15 percent, 20 percent, and 15 percent, respectively.
- For charter schools, set the cluster sizes so as to achieve national estimates for elementary, secondary, and combined schools with CVs of 20 percent or lower.
- For private schools, set the cluster sizes so as to produce CVs of 10 percent or lower by affiliation stratum.

A full description of the sample allocation research is located in “Appendix E. 2011–12 SASS Redesign—Precision Analysis.”

Before teachers were allocated to 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 (i.e., state/level for public schools, association stratum/level/region for private schools). Teacher weights within stratum were not always equalized, however, due to the minimum and maximum constraints.

Tables 11 and 12 provide the average number of teachers to be selected within each public and private school. Table 11 lists the averages for private schools and public charter schools, broken by their three grade levels (elementary, secondary, and combined). Table 12 lists the averages for traditional public schools, which are broken by the four grade levels (primary, middle, high, and combined) and state.

Table 11. Average expected number of teachers selected per school, by school level and sector (private or public charter): 2011–12

School sector	Average number of teachers selected by school level		
	Elementary	Secondary	Combined
Public charter schools	3.77	7.54	7.54
Private schools	3.76	4.69	2.82

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

Table 12. Average expected number of teachers selected per school, by school level and state (traditional public): 2011–12

State	Average number of teachers selected by school level			
	Primary	Middle	High	Combined
US Average	3.41	6.63	7.60	5.66
Alabama	4.82	5.66	7.54	5.66
Alaska	5.89	7.54	7.54	5.66
Arizona	3.77	5.66	9.05	5.66
Arkansas	3.00	5.66	6.25	5.66
California	3.00	7.54	7.54	5.66
Colorado	3.00	5.66	9.05	5.66
Connecticut	5.89	6.25	9.05	5.66
Delaware	3.77	6.25	9.05	5.66
District of Columbia	3.77	8.15	9.05	5.66
Florida	3.00	7.54	7.54	5.66
Georgia	3.00	7.54	7.54	5.66
Hawaii	3.77	8.15	8.15	5.66
Idaho	5.89	6.25	6.25	5.66
Illinois	3.00	6.25	6.25	5.66
Indiana	3.00	6.25	6.25	5.66
Iowa	3.00	6.25	7.54	5.66
Kansas	3.00	8.15	8.15	5.66
Kentucky	3.00	5.66	7.54	5.66
Louisiana	3.00	7.54	7.54	5.66
Maine	3.00	5.66	6.25	5.66

See notes at end of table.

Table 12. Average expected number of teachers selected per school, by school level and state (traditional public): 2011–12—Continued

State	Average number of teachers selected by school level			
	Primary	Middle	High	Combined
Maryland	3.77	8.15	8.15	5.66
Massachusetts	3.00	5.66	6.25	5.66
Michigan	3.00	7.54	7.54	5.66
Minnesota	4.82	7.54	7.54	5.66
Mississippi	3.77	6.25	7.54	5.66
Missouri	3.00	6.25	9.05	5.66
Montana	4.82	7.54	7.54	5.66
Nebraska	3.77	7.54	7.54	5.66
Nevada	3.00	6.25	6.25	5.66
New Hampshire	3.00	5.66	6.25	5.66
New Jersey	3.00	7.54	9.05	5.66
New Mexico	4.82	6.25	6.25	5.66
New York	3.00	7.54	7.54	5.66
North Carolina	3.00	5.66	7.54	5.66
North Dakota	3.00	7.54	7.54	5.66
Ohio	3.00	7.54	9.05	5.66
Oklahoma	4.82	7.54	9.05	5.66
Oregon	3.00	5.66	9.05	5.66
Pennsylvania	4.82	7.54	7.54	5.66
Rhode Island	3.00	5.66	6.25	5.66
South Carolina	3.00	5.66	6.25	5.66
South Dakota	3.00	5.66	6.25	5.66
Tennessee	3.77	5.66	7.54	5.66
Texas	3.00	7.54	7.54	5.66
Utah	3.00	5.66	7.54	5.66
Vermont	3.77	8.15	9.05	5.66
Virginia	3.00	5.66	7.54	5.66
Washington	3.00	5.66	7.54	5.66
West Virginia	3.00	5.66	6.25	5.66
Wisconsin	3.00	5.66	7.54	5.66
Wyoming	3.00	5.66	6.25	5.66

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

For a given school, the 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 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 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 tables 11 and 12).
- Y is the simple average of the school's base-weighted number of teachers over all schools in the school stratum.

Given the number of teachers selected in each school, t_i , teachers were allocated to the teacher stratum, j , where j indicates the level of experience, in the following manner.

$$t_{ij} = \frac{t_i * T_{ij} * K_j}{\sum_{j=A}^E T_{ij} * K_j}$$

where:

- K_j is the oversampling factor for the particular teacher stratum, j
- T_{ij} is the number of teachers from stratum j in school i
- t_{ij} is the number of sample teachers selected from school i and stratum j

The values of K that were applied to the teacher sampling were fixed for first year and second or third year teacher strata (1.5 for public and private schools). The values for experienced teacher strata were fixed at 1.0. To make sure a school was not overburdened the maximum number of teachers per school was set at 20. When the number of sampled teachers exceeded 20 in a school, the sample size, t_i , was reduced proportionally in all strata to achieve a final sample size of 20.

Sample Selection

Teacher records within a school and teacher stratum code were sorted by 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 keyed teachers. Within each teacher stratum in each school, teachers were selected systematically with equal probability. Table 13 shows the number of teachers selected as described above.

Table 13. Number of selected public and private school teachers in the SASS sample, by sector and teacher stratum: 2011–12

Teacher stratum	Total	Public	Private
Total	58,128	51,062	7,066
First year	4,172	3,515	657
Other new	7,184	6,020	1,164
Mid-career	35,919	32,118	3,801
Highly experienced	10,853	9,409	1,444

NOTE: Teachers with 4–19 years of experience were classified as mid-career, and teachers with 20 or more years of teaching were classified as highly experienced.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

The selected sample may differ from the planned sample. The planned sample was computed 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 lower than expected, changing the number of schools from which to select sampled teachers. About 30 percent of the in-scope private schools and 23 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 from 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., have 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 in some schools 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), this goal was not fully achieved in all schools.

Field Sampling Activities

Once a sampled school or district was contacted in the screener or the District Call Operation, 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 and the school reported fewer grades than expected, the sampled school was considered to have split into two or more schools. In this instance, the responding school was asked to provide a list of all of the schools that covered the sampled grade range. Consequently, one school was randomly subsampled from the list of schools covering the expected grade range. The school base weight was adjusted upward accordingly as described in chapter 8. If the school reported having more grades than expected, the respondent was interviewed, and 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.

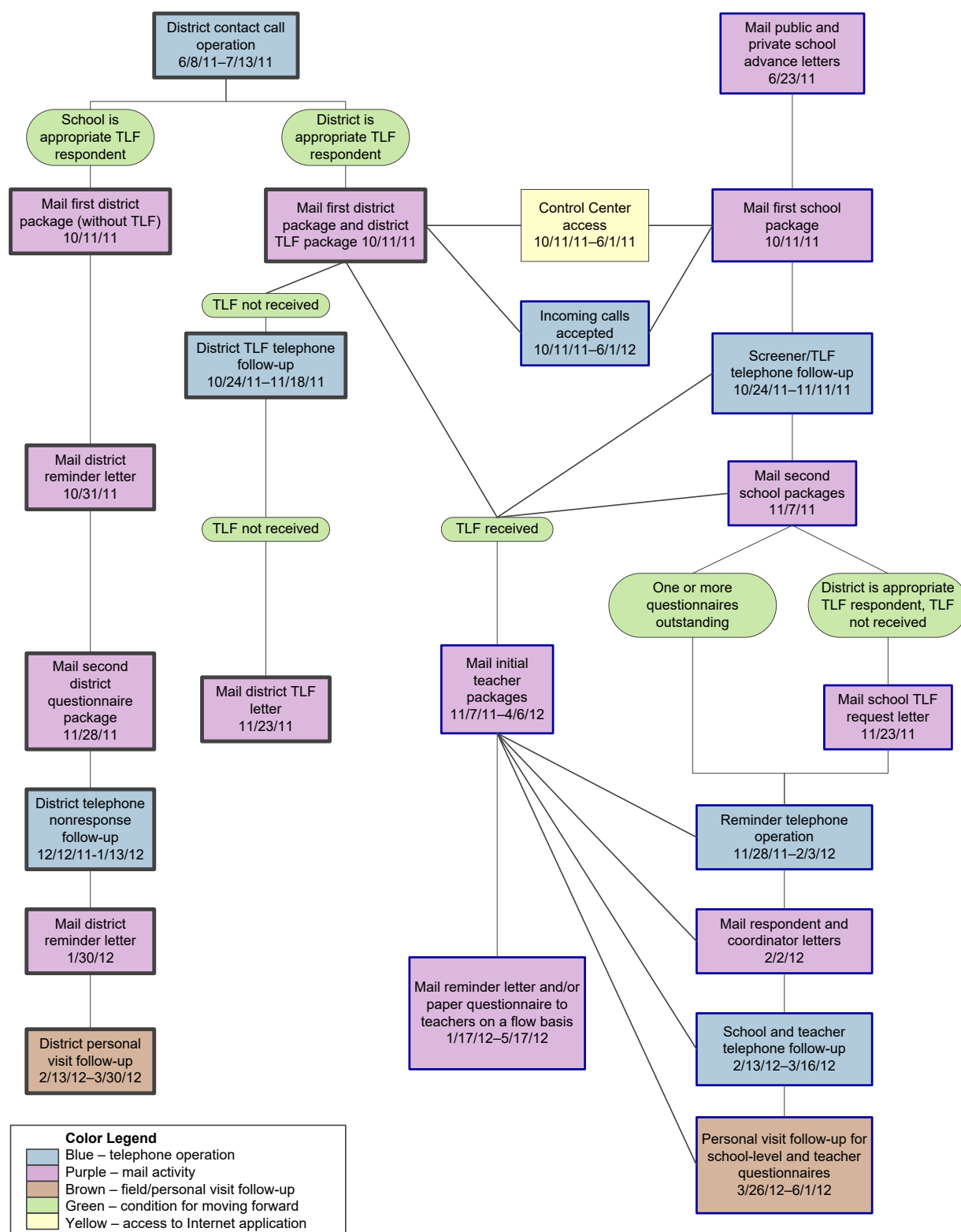
Chapter 5. Data Collection

The 2011–12 Schools and Staffing Survey (SASS) utilized a combination of mail-based methodology and internet reporting for questionnaires, with telephone and in person field follow-up. The majority of data collection operations for school districts were conducted independently from the collection of school-level data; however, some school districts, as determined by the district contact calling operation, were asked to provide a list of teachers for their schools in sample. School data collection included: the Teacher Listing Form (unless the district was responsible for providing the teacher list); Principal Questionnaire or Private School Principal Questionnaire; School Questionnaire, Private School Questionnaire, or Public School Questionnaire (With District Items); School Library Media Center Questionnaire (for public schools only); and Teacher Questionnaire or Private School Teacher Questionnaire. At the beginning of data collection, the Census Bureau mailed both districts and schools a package containing the appropriate questionnaire(s) and letter(s) that introduced the survey and provided them with usernames, passwords, and the URL for the Control Center. Once logged in to the Control Center, districts were asked to upload electronic teacher list(s), if applicable. Schools were asked to complete the screener interview to verify their address, grade range, and school type (e.g., traditional public, private, public charter, etc.), and to establish a survey coordinator.¹⁰ The Control Center also gave schools the option to upload an electronic teacher list. Telephone interviewers and field representatives contacted nonrespondents as necessary.

An overview of the purpose and content of each questionnaire is discussed in chapter 1. The changes in methodology from the 2007–08 SASS are described in chapter 2. This chapter describes the data collection activities in detail. Exhibit 3 on the following page shows how cases flowed from one data collection activity to the next. Each rectangle contains the name of the data collection activity and the date(s) it occurred. The ovals contain the conditions that determined whether a school or individual respondent was included in the following data collection activity. If all appropriate questionnaires were complete or resolved (i.e., the respondent refused or was out-of-scope), data collection activities for the school or district ended. A brief evaluation of the methodology is included at the end of this chapter.

¹⁰ The role of the survey coordinator was to be the main contact person at the school. A survey coordinator's duties included facilitating data collection by passing out questionnaires to the appropriate staff, reminding the staff to complete them, and collecting the questionnaires to return to the U.S. Census Bureau.

Exhibit 3. Data collection operations: 2011–12 SASS



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

Overview of School District Data Collection

Advance Work With School Districts

Census Bureau staff contacted school districts prior to the beginning of data collection for two reasons. First, staff contacted districts regarding the SASS because some districts require researchers to submit a research application to conduct research in their schools. There were 210 school districts with three or more schools sampled for the SASS that were known to have a formal approval process. School districts with two or less schools selected to participate were not contacted prior to data collection. These efforts began in February 2011 and continued through September 2011. Application packages generally included a cover letter, a standard proposal for research, a consent form, an IRB Exemption form, and copies of the SASS questionnaires. District-specific application forms, as well as other required forms, were included for some districts. Once data collection began, Census Bureau staff continued to follow-up with the school districts regarding the application's status and submitted applications to five additional districts that reported that they required approval. The background, methods, findings, and recommendations of this operation are reported in "Appendix J. Report on Results of Special Contact Districts."

All school districts were contacted during a district contact calling operation. This was a multifaceted five-week operation that began in mid-June 2011. During this operation, telephone interviewers called public school districts to introduce the survey and verify the district's name, address, phone number, and number of schools (if it was suspected to be a one-school district). Then they attempted to establish a contact person for the School District Questionnaire and determine whether the district was willing and able to provide an electronic list of teachers for their selected school(s) in the fall. If the district agreed to provide an electronic list, the interviewer determined the appropriate contact person to receive the request. The interviewer verified the selected schools' names, grade ranges, and operational statuses. Finally, the interviewer attempted to collect the names of the selected schools' principals and their e-mail addresses.

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: 2011–12

Activity	Month of activity
Advance work with some school districts to inquire about and submit research applications	Feb.–Sept. 2011
Telephone operation to public school districts to verify and obtain district and school information	Jun.–July 2011
Initial package(s) mailed to school districts requesting that they complete the School District Questionnaire and, if appropriate, provide a teacher list for their sampled schools	Oct. 2011
Continuation of work with some school districts to inquire about and submit research applications	Oct.–Dec. 2011
Completed questionnaires accepted by mail	Oct. 2011–Jun. 2012
Telephone follow-up for nonresponding districts that were the contact for the teacher list	Oct.–Nov. 2011
Reminder letter mailed to school districts for the School District Questionnaire	Oct. 2011
Second School District Questionnaire mailed to nonresponding school districts	Nov. 2011
Telephone follow-up for districts that had not completed the School District Questionnaire	Dec. 2011–Jan. 2012
Second reminder letter mailed to nonresponding school districts	Jan. 2012
Field follow-up with remaining nonresponding school districts	Feb.–Mar. 2012

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

Details of School District Data Collection

District Contact Calling Operation

The district contact calling operation was conducted from June 8 to July 13, 2011. The purpose of the district contact calling operation was to verify the district's name and address; determine whether the sample school was the only school in the district; collect the contact information for the person to whom the district questionnaire should be mailed; determine if the district would provide an electronic teacher list for each sampled school and, if so, collect the contact information for the person to whom the request should be mailed; verify the grade range for each school in sample; and collect the principal names and e-mail addresses for each school in sample.

Census Bureau interviewers at the Jeffersonville Telephone Center called sampled school districts using a Computer Assisted Personal Interview (CAPI) instrument. Upon reaching a school district staff member, the interviewer verified the district's name and address. Next, some traditional public schools were verified as being "one-school districts," that is, the only school in the district. During the district contact operation, 1,349 schools were identified as being a "one-school district" status, a public charter school, or a Career and Technical Center school. These schools received the SASS Public School Questionnaire (With District Items), which contains the 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). After verifying the district name, address, and "one-school districts," interviewers obtained the contact information for the best person to receive the School District Questionnaire.

Interviewers asked the district staff member whether their district would be willing to provide an electronic teacher list for the sampled school(s) within their district. This feature of data collection was implemented in an attempt to reduce the burden on sampled schools and receive teacher lists earlier in data collection. If the district agreed to provide the teacher lists, the interviewer obtained the name and contact information for the person most appropriate to receive the request.

Interviewers then verified each sampled school's grade range. If the grade range differed entirely (i.e., the actual grade range did not overlap with the expected grade range) or if the grade range differed significantly from the expected grade range, then more information was obtained. In situations where the school served significantly fewer grade levels than expected, the interviewer asked questions to determine if the anticipated grade range was covered by more than one school in the local community. These situations could arise due to an error in the source file or because the original sampled school split into two or more schools. Once the information for these additional schools was recorded, the CAPI instrument randomly selected one of the schools to participate in the survey. In those cases, the CAPI instrument was updated with the sampled school's information, and the interviewer proceeded to collect the principal name and email for the newly selected school. In situations where the reported grade range was significantly more than expected, the interviewer probed for a reason. For example, the source file may have been incorrect or the sample school may have merged with another school. In either instance, the school remained in sample for the SASS. If the grade range differed by no more than one grade at either end of the range (e.g., a school with grades 3-5 was reported as having grades 2–5), then the interviewer recorded the new grade range of the school.

In previous SASS administrations, respondents reported that questionnaires or packages that are addressed to an individual rather than a title (e.g., School Principal) are more likely to reach the correct respondent, and therefore receive attention in a timely manner. As a final step, the interviewers obtained the principal's name and e-mail address for each school in sample.

Questionnaire Mailings and Reminder Letters

On October 11, 2011, the Census Bureau's National Processing Center (NPC) mailed an introductory letter and the School District Questionnaire to 4,686 sampled school districts.¹¹ Schools in one-school districts received the Public School Questionnaire (With District Items) in lieu of the School District Questionnaire and School Questionnaire. The letter introduced the survey, informed the district that one or more schools in the district were selected to participate, and asked the district to complete and return the questionnaire within two weeks. The reverse side of the letter contained frequently asked questions, such as the purpose of SASS, the time estimate for participating, and the confidentiality and collection authority information. The packages were addressed to the contact person whose name had been provided in the district contact calling operation, or, if no name had been provided, to the "District Administrator." Eligible respondents for the School District Questionnaire included any knowledgeable school district employee. In some school districts, several staff members provided the data.

Districts who indicated that they were willing and able to provide electronic list(s) of teachers for their selected school(s) also received a letter that introduced the survey, explained the purpose of the teacher list, and provided instructions for uploading the file. A total of 4,102 districts were asked to provide an electronic list of teachers. In the majority (86 percent) of the districts, the contact person was the same for the School District Questionnaire and the teacher list. These individuals received one package containing a letter that provided the information for both the School District Questionnaire and the teacher list. The Evaluation of Methodology, Methods of Collecting Teacher Lists section provides more information on districts' response to the request for the electronic lists of teachers.

The NPC mailed reminder letters to contact persons who were responsible for the School District Questionnaire on October 31, 2011. On November 23, 2011, districts that had agreed to provide a teacher list for their selected school(s) but had not provided it were sent a letter thanking them for their assistance and informing them that the Census Bureau would be requesting the information from the selected school(s). On November 28, 2011, the NPC mailed a second copy of the School District Questionnaire to each school district that had not returned the original form. Another reminder letter was mailed on January 30, 2012.

Telephone Nonresponse Follow-up of School Districts

The Census Bureau's Jeffersonville Telephone Center (JTC) conducted two telephone nonresponse follow-up operations for school districts. The first was primarily to follow-up with districts that agreed to provide an electronic list of teachers but had not yet responded. This follow-up operation occurred from October 24 to November 18, 2011. During this operation, telephone interviewers called the contact person whose name had been provided during the district contact calling operation, or, if that person was not available, they attempted to reach another district staff member who was able to provide a list of teachers. If the contact person for the electronic list of teachers was also responsible for completing the School District Questionnaire, the telephone interviewer reminded him or her to complete and return the questionnaire as well.

¹¹ Four dependent charter schools within two regular districts that contained only charter schools were included in the school sample. Due to operational error, the associated districts themselves were not sampled or mailed a District Questionnaire. In addition, there were 40 dependent charter schools sampled that were the only school sampled from their associated regular school district. Due to operational error, the associated districts were not mailed a District Questionnaire. These 42 districts were consequently classified as noninterviews on the Public School District data file.

Telephone nonresponse follow-up for school districts that had not returned the School District Questionnaire occurred from December 12, 2011 to January 13, 2012. During this operation, telephone interviewers called the contact person whose name had been provided during the district contact calling operation, or, if no name had been provided, they attempted to reach another knowledgeable respondent. A knowledgeable respondent was someone in the district office who was familiar with issues such as student enrollment, staff professional development, and teacher hiring. The purpose of the telephone nonresponse follow-up operation was to find out the status of School District Questionnaires that the Census Bureau had not received and to encourage district staff to participate. Interviewers were equipped with School District Questionnaires to use if the respondent indicated that he or she was willing to complete the questionnaire over the phone.

Field Nonresponse Follow-up for School Districts

Field nonresponse follow-up for school districts occurred from February 13 to March 30, 2012. During this operation, field representatives contacted the district contact person or a knowledgeable respondent by telephone or personal visit in order to determine the status of School District Questionnaires that the Census Bureau had not received and to encourage district staff to participate. Field representatives were given a labeled School District Questionnaire for each district they were assigned so that they could provide a replacement questionnaire if necessary. Field representatives encouraged district respondents to return their questionnaire by mail or made an appointment to pick up the completed questionnaire.

After field nonresponse follow-up, the Census Bureau continued to accept complete questionnaires by mail through May 15, 2012.

Overview of School Data Collection

The NPC sent sampled schools an advance letter in June 2011 to identify cases with invalid addresses prior to the beginning of data collection. Data collection activities began in October 2011. These included:

- mailing the initial package of school-level questionnaires¹² and a letter with information for accessing the Control Center, instructions for completing the screener interview, and instructions for distributing the questionnaires to the appropriate school staff members;
- telephoning the school and completing the screener interview to verify school information and establish a survey coordinator;
- mailing a second package of outstanding school-level questionnaires to the survey coordinator, if one was established, or to the school principal;
- sampling teachers from the Teacher Listing Form or electronic teacher list and mailing invitations to complete the Teacher Questionnaire or Private School Teacher Questionnaire online;
- mailing a letter to the survey coordinator asking them to remind teachers to complete their questionnaire;
- telephoning the survey coordinators or individual respondents to remind them to complete and return the questionnaires;
- mailing a reminder letter to teachers;
- mailing a paper Teacher Listing Form (TLF) to schools whose districts agreed to provide the teacher list, but did not provide an electronic list of teachers;
- mailing a letter to the survey coordinators thanking them for their assistance and informing them that the individual survey respondents would be contacted;
- mailing a reminder letter to principals who had not completed their Principal Questionnaire;
- mailing a paper Teacher Questionnaire or Private School Teacher Questionnaire to all teachers who were initially invited to complete the questionnaire online;
- telephoning the survey nonrespondents to attempt to complete the questionnaire over the telephone; and
- contacting nonrespondents by telephone calls or personal visits from field representatives.

Control Center

The SASS Control Center is an internet application that the Census Bureau designed to serve many functions for sampled schools, school districts, and telephone interviewers. Each school and district received an individual username and password. District respondents were able to view a list of schools sampled in their district and upload their teacher list(s) (if applicable). School respondents were able to complete the screener interview and could upload their teacher list (if applicable). School respondents, district respondents, and interviewers could use the Control Center to view the status of questionnaires and request replacement questionnaires.

¹² School-level questionnaires included: Principal Questionnaire or Private School Principal Questionnaire; School Questionnaire, Private School Questionnaire, or Public School Questionnaire (With District Items); and the School Library Media Center Questionnaire (for public schools only). The Teacher Listing Form was included for private schools and for public schools in districts that did not agree to provide an electronic list of teachers.

Overall Timing of School Data Collection

The 2011–12 SASS principal, school, school library media center, and teacher data were collected during the 2011–12 school year. Table 15 summarizes the specific data collection activities and the month(s) when each occurred. Details on the flow of cases into each follow-up operation and the response rates by questionnaire are presented later in this chapter.

Table 15. Data collection time schedule for schools: 2011–12

Activity	Month of activity
Advance letters mailed to schools to verify school name and address	Jun. 2011
Initial school package mailed to the school principal	Oct. 2011
Telephone screener follow-up operation to verify school information and establish a survey coordinator	Oct.–Nov. 2011
Completed questionnaires accepted by mail	Oct. 2011–Jun. 2012
Second school package mailed to the survey coordinator or the school principal	Nov. 2011
Teachers sampled and invitations to complete the internet-based Teacher Questionnaires or Private School Teacher Questionnaire mailed to survey coordinators or individual teachers	Nov. 2011–May 2012
Telephone reminder operation to remind survey coordinators or individual respondents to complete and return the questionnaires	Nov. 2011–Feb. 2012
TLF package mailed to schools in districts that did not provide the requested list	Nov. 2011
Reminder letters mailed to teachers	Feb.–May 2012
Letter mailed to survey coordinators alerting them that follow-up will continue directly with the individual respondents	Feb. 2012
Letter mailed to school principals reminding them to complete their questionnaire	Feb. 2012
Paper questionnaire mailed to all nonresponding teachers	Feb.–May 2012
Telephone nonresponse follow-up operation to attempt to complete interviews over the telephone with nonrespondents	Feb.–Mar. 2012
School-level or teacher questionnaire sent via FedEx to all schools with only one questionnaire outstanding	Mar.–Apr. 2012
Field nonresponse follow-up operation for school-level and teacher questionnaires	Mar.–Jun. 2012

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

Details of School Data Collection

Mailouts

The Census Bureau’s National Processing Center (NPC) mailed an advance letter to sampled schools on June 23, 2011. The letter briefly introduced the survey, alerted the principal that SASS would be conducted beginning in the fall, and asked the principal to contact the U.S. Census Bureau if their school’s name and address were not correct. Name and address corrections received by telephone were applied to the sample file prior to the initial mailout. In addition, staff researched addresses and telephone numbers for schools that had their letters returned by the United States Postal Service (USPS) as undeliverable as addressed.

The NPC mailed the initial school packages to school principals on October 11, 2011 using USPS Priority Mail. The envelope’s label included the NCES and SASS logos on the left-hand side. The package contained the following:

- a letter to the principal that introduced the survey and requested that the principal designate a survey coordinator;
- a CD-ROM of the Statistical Abstract of the United States: 2011; and
- an envelope to give to the designated survey coordinator. This envelope contained:
 - a letter to the survey coordinator that introduced the survey and provided instructions;
 - the Teacher Listing Form (TLF) (for all private schools and for public schools whose district did not agree to provide the teacher list);
 - the School Questionnaire, Public School Questionnaire (With District Items), or Private School Questionnaire;
 - the Principal Questionnaire or Private School Principal Questionnaire;
 - the School Library Media Center Questionnaire (for public schools only); and
 - a pre-addressed, postage-paid return envelope for each questionnaire.

The NPC mailed a second package of school-level questionnaires to schools with one or more questionnaires outstanding on November 7, 2011. If a survey coordinator was established, the package was addressed to this person; otherwise, it was addressed to the school principal. These packages only contained questionnaires that the Census Bureau had not received. There were two versions of the cover letter that accompanied this package. The letter for the survey coordinator requested that the questionnaires be distributed to the appropriate staff, collected by the coordinator, and returned to the Census Bureau as soon as possible; the letter for the principal requested that the questionnaires be distributed to the appropriate staff to complete and return as soon as possible. Both the principal and coordinator letters provided the website, username, and password for the Control Center so that the recipient could check the status of their school's questionnaires. Amish and Mennonite schools received a third version of the letter that provided NCES' address in lieu of the Control Center information so that respondents could write with any questions about the survey.

The NPC mailed teacher invitations to complete the Teacher Questionnaire over the Internet on a weekly basis as teachers were sampled from the completed electronic teacher lists or paper Teacher Listing Forms. In schools where a survey coordinator was established, the Census Bureau conducted a test to determine the most effective distribution method for teacher invitations. For each weekly teacher sample, schools with a survey coordinator were split into two groups. In schools randomly assigned to treatment group 1, the survey coordinator received a letter that described the purpose of the Teacher Questionnaire and asked the coordinator to distribute the enclosed invitations to the selected teachers. In schools randomly assigned to treatment group 2, the survey coordinator received a letter that described the purpose of the Teacher Questionnaire and informed them that the invitations were sent directly to the selected teachers. In both groups, the letter asked the coordinator to follow-up with the teachers, whose names were listed on the back of the letter, to remind them to complete the internet questionnaire. In schools where a survey coordinator was not established, the NPC mailed the teacher invitations directly to the sampled teachers. In Amish and Mennonite schools, the NPC mailed a paper Private School Teacher Questionnaire directly to the selected teachers. The results of this test are discussed in the evaluation section of this chapter.

The NPC sent a letter and a paper Teacher Listing Form to schools in nonresponding districts that had been asked for an electronic teacher list on November 23, 2011. At the same time, their districts were sent a letter thanking them for their assistance with the survey and informing them that schools would be contacted directly for the teacher list.

During the telephone reminder and non-response follow-up operations (discussed in detail in the next section), coordinators and individual respondents were able to request a replacement questionnaire if their previous questionnaire(s) had been misplaced, damaged, or not received. Coordinators and teachers could request a paper Teacher Questionnaire or Private School Teacher Questionnaire for teachers who

preferred to complete a paper form instead of completing the internet questionnaire. The NPC mailed the replacement questionnaires within approximately 14 days of the request.

The NPC mailed a reminder letter to teachers who had not completed their internet questionnaire on January 17, 2012. The letter included instructions for completing the internet-based Teacher Questionnaire and told teachers that they could request a paper Teacher Questionnaire if they preferred. Teachers sampled for the Teacher Questionnaire after early January received the reminder letter approximately 10 days after their initial invitation. Teachers in Amish and Mennonite schools who had not completed their paper questionnaire were sent a letter reminding them to complete their questionnaire.

The NPC mailed a letter to survey coordinators in schools with one or more outstanding questionnaires on February 2, 2012. The letter thanked the survey coordinator for their help and alerted them that the U.S. Census Bureau would begin following-up with the individual survey respondents. At the same time, the NPC mailed a letter to principals who had not yet completed their Principal Questionnaire to remind them to complete and return their questionnaire. The NPC mailed a reminder letter and a paper Teacher Questionnaire or Private School Teacher Questionnaire to teachers who had not completed their questionnaire online.

On March 19, 2012, the NPC sent a reminder package to all nonresponding teachers who were not sent a paper questionnaire in February. The package contained a reminder letter and a paper Teacher Questionnaire or Private School Teacher Questionnaire. Teachers sampled after early March received a paper questionnaire approximately 10 days after they received the reminder letter. The initial package for teachers sampled after mid-April contained a letter with instructions to complete the internet-based questionnaire and a paper questionnaire, as the remaining time in the school year did not permit staggered mailings. The NPC sent these teacher packages via FedEx.

Schools with only one questionnaire outstanding, excluding the Teacher Listing Form, were sent a reminder letter with the outstanding questionnaire instead of being included in the field nonresponse follow-up operation. If the outstanding questionnaire was a school-level questionnaire (Principal Questionnaire, School Questionnaire, or School Library Media Center Questionnaire), the NPC sent it via FedEx on March 27, 2012. If the outstanding questionnaire was a Teacher Questionnaire, the NPC sent it via FedEx on April 17, 2012.

Telephone and Field Follow-up Operations

Trained telephone interviewers and/or field representatives contacted survey coordinators and individual respondents during the data collection process. There were three telephone follow-up operations: the screener follow-up operation, the reminder operation, and the nonresponse follow-up operation. After the telephone follow-up operations, local Census Bureau field representatives contacted nonrespondents. Each follow-up operation is described in detail in the following sections.

Telephone Screener Follow-up Operation

The screener interview served several purposes: it verified the school's name, address, school type, and grade range in order to determine if the school was in-scope for the SASS, verified that the respondent received the package of questionnaires, and established a survey coordinator. The letter included in the initial mailing requested that the principal or designated survey coordinator access the Control Center or call the Census Bureau to provide basic information about their school by completing the screener interview. The Census Bureau's Jeffersonville Telephone Center (JTC) in Jeffersonville, IN used the Control Center to conduct the screener operation. The JTC accepted incoming telephone calls in response to the letter, and then contacted schools from October 24 to November 11, 2011.

The interviewer first verified the school's name and address, then asked if the expected school type (i.e., public or private) was correct. If the school's type was not as expected, the interviewer provided the respondent with six categories from which to choose: public, private, public charter, Bureau of Indian Education (BIE), homeschool, or only web-based instruction.¹³ Public charter schools were considered public schools; BIE, homeschools, and schools with only web-based instruction were out-of-scope for SASS. If the "public" or "private" designation was incorrect, the school was out-of-scope for the SASS.

Next, the interviewer verified the school's grade range to confirm that the school in question was the correct school. Since interviewers verified the grade ranges of public schools during the district contact calling operation, there was no sampling during the screener interview. If the grade range differed entirely or significantly from the expected grade range, then the interviewer followed the same procedures as in the district contact calling operation to determine whether the school had split into multiple schools or if multiple schools had merged into one school. In either instance, the school remained in-scope.

If the school met the out-of-scope criteria, then all of the questionnaires associated with the school were out-of-scope. If, on the other hand, the school was determined to be eligible for the survey, then the interviewer continued the screener interview with a series of questions to verify that the school received the package and to establish a survey coordinator. In cases where interviewers were unable to establish a survey coordinator, they attempted to establish a TLF contact person if the school was responsible for the TLF. The interviewer stressed the importance of returning the TLF as soon as possible.

Telephone Reminder Operation

The JTC conducted the reminder operation from November 28, 2011, to February 3, 2012. Interviewers contacted all schools with one or more outstanding questionnaires. Interviewers spoke with the survey coordinator to determine the status of all outstanding questionnaires and to remind the coordinator to have the appropriate staff complete and return them as soon as possible. If a survey coordinator had not been established during the screener operation, interviewers contacted the principal. Interviewers began asking about the status of the Teacher Questionnaires approximately two weeks after the NPC mailed the initial letter inviting the teacher to complete the Teacher Questionnaire over the Internet. Interviewers used the Control Center to determine the status of the questionnaires and to submit paper questionnaire requests for teachers and re-mail requests for other respondents who needed replacement questionnaires. Interviewers recorded the status of questionnaires (e.g., respondent will mail, respondent has mailed, etc.) on paper call logs after each contact.

Telephone Nonresponse Follow-up Operation

The JTC conducted the telephone nonresponse follow-up operation from February 13 to March 16, 2012. Interviewers used the Control Center to determine which questionnaires had not been completed. Interviewers attempted to contact the individual survey respondents¹⁴ to complete the appropriate questionnaire over the telephone. Interviewers used the Internet Teacher Questionnaire to complete the Teacher Questionnaire or Private School Teacher Questionnaire; all other forms were completed on

¹³ 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.

¹⁴ Interviewers tried to speak with the library media specialist or librarian for the School Library Media Center Questionnaire; the principal for the Principal Questionnaire or Private School Principal Questionnaire; a knowledgeable respondent for the School Questionnaire, Private School Questionnaire, or Public School Questionnaire (With District Items); and the sampled teacher for the Teacher Questionnaire or Private School Teacher Questionnaire.

telephone versions of the paper questionnaires. Interviewers documented the outcome of each telephone call on paper call logs.

Field Nonresponse Follow-up Operations

The field nonresponse follow-up operation occurred from March 26 to June 1, 2012. Schools were included in this operation if the Teacher Listing Form (TLF) was outstanding or if there were two or more school-level or teacher questionnaires outstanding. During the first three and a half weeks of field follow-up, schools with outstanding TLFs were the highest priority for field representatives. Schools that had completed the TLF and had only one school-level or teacher questionnaire outstanding were sent the remaining questionnaire by FedEx in lieu of field follow-up.

During the field nonresponse follow-up operation, trained field representatives contacted survey coordinators and individual respondents via telephone calls and/or personal visits to determine the status of all outstanding questionnaires and to urge the respondents to participate. Field representatives received a package of labeled questionnaires for each school in their workload so that they could provide replacement questionnaires if respondents had not received, had misplaced, or had damaged their questionnaires. Field representatives made additional contacts via telephone calls and/or personal visits to obtain completed questionnaires or to verify that the respondent returned the questionnaire by mail. Each time field representatives contacted a respondent they updated the outcome code for the appropriate questionnaire(s) and entered any applicable notes in the case management system on their laptop computer.

There was a staggered closeout schedule for the different questionnaire types during the field nonresponse follow-up operation. The closeout for TLFs was originally scheduled for April 6, 2012; however, due to a low completion rate, follow-up was extended until April 18, 2012. Follow-up on the Private School Questionnaires concluded on April 27, 2012. Follow-up on all other school-level questionnaires concluded on May 4, 2012. Follow-up on the Teacher Questionnaires continued until June 1, 2012. Completed Teacher Questionnaires were accepted through June 22, 2012.

Accepting Refusals

Prior to the initial mail-out, the Census Bureau applied to some school districts to conduct SASS in their schools (as discussed earlier in this chapter). If the school district denied permission for their schools to participate, Census Bureau staff classified the schools as ‘District Refusals’ and those schools were not contacted. Other school districts refused on behalf of their school(s) during the course of data collection. These refusals were classified as ‘District Refusals’ and the Census Bureau ceased data collection activities for these schools.¹⁵

The Census Bureau contacted nonrespondents by mail, telephone, and personal visits. During these follow-up efforts, some school staff members expressed that they or their school did not wish to participate in the survey. Respondents who refused by mail were contacted by telephone or field staff to try to determine the reason they were reluctant to participate and respond to their concerns. Respondents who refused by telephone were removed from the telephone operation. Many respondents said that they are too busy or do not have the time to complete their questionnaire; therefore, telephone interviewers or field representatives contacted the respondents in later follow-up operations in case they were then able to complete the survey. Respondents from both schools and their districts were only classified as ‘Hard

¹⁵ If a school district refused during data collection, but some of the related school and/or teacher questionnaires had already been completed and returned by respondents, these interviews were not discarded due to district refusal.

Refusals' and not contacted again if they adamantly refused either by using a strong tone or words, contacted NCES directly, or sent a strong e-mail to Census Bureau headquarters staff.

Response Rates

Table 16 shows the unweighted response rates of each questionnaire by month. These rates differ from the unweighted final response rates as those were determined after the data were edited and completeness checks were performed.

Table 16. Cumulative unweighted response rates (in percent) during data collection, by date and questionnaire: 2011–12

Questionnaire	Response rates achieved by various dates								
	11/1/11	12/6/11	1/3/12	2/7/12	3/6/12	4/3/12	5/1/12	6/5/12	7/10/12
School District Questionnaire	15.6	52.2	67.5	72.3	77.7	86.0	86.8	86.9	86.9
Public School Principal Questionnaire	10.9	41.1	51.6	58.8	63.1	66.1	70.4	73.1	73.1
Private School Principal Questionnaire	9.9	29.6	40.1	46.1	49.8	53.8	61.9	64.8	64.8
Public School Questionnaire	9.3	40.0	51.9	58.6	62.5	65.4	70.1	72.5	72.5
Private School Questionnaire	9.8	30.6	40.7	47.3	50.5	54.4	63.3	65.1	65.1
Public School Questionnaire (With District Items) (all)	8.2	31.8	43.3	52.5	58.2	62.9	69.9	74.8	74.8
Public School Questionnaire (With District Items) (Charter only)	5.6	24.3	33.4	43.1	48.5	54.4	62.8	68.9	68.9
Public School Questionnaire (With District Items) (Noncharter schools)	11.6	42.0	57.0	65.7	71.6	74.6	79.8	83.0	83.0
Public School Library Media Center Questionnaire	8.7	38.0	50.6	57.7	61.8	65.1	70.2	73.2	73.2
Public School Teacher Listing Form	10.6	35.2	53.1	64.4	68.6	70.1	76.9	77.2	77.2
Private School Teacher Listing Form	11.0	32.3	40.1	47.5	51.3	56.4	70.0	70.3	70.3
Public School Teacher Questionnaire	0.0	0.0	7.3	25.0	51.0	60.6	64.3	75.5	76.4
Private School Teacher Questionnaire	0.0	0.0	17.0	33.0	48.7	55.8	54.4	67.3	68.2

NOTE: The response rates for the Public School Teacher Questionnaire and Private School Teacher Questionnaire were calculated based on the number of teachers who had been sampled by each date. The total teacher sample was drawn by 5/15/12; therefore, response rates beginning on 6/5/12 reflect the response rate for all sampled teachers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "School Control Database," 2011–12.

Evaluation of Methodology

As noted, the 2011–12 SASS utilized a primarily mail-based data collection strategy with telephone and field follow-up operations. There were elements of the data collection methodology that were successful as well as elements that had a few glitches that either need to be improved upon or completely rethought. The following sections discuss these elements.

Control Center

The 2011–12 SASS methodology incorporated the use of an internet application called the Control Center, which allowed both respondents and telephone interviewers to review the status of questionnaires, complete the screener interview, and request replacement questionnaires. The Control Center also allowed the appropriate respondent (school or district) to provide an electronic list of teachers securely. Overall, the Control Center worked well; however, some features need to be improved.

The Control Center permitted school principals, survey coordinators, and telephone interviewers to view the status of each questionnaire. In prior administrations of the SASS, reminder letters to the survey coordinator stated that one or more questionnaires were outstanding. The missing questionnaires were not listed due to the time that lapses between when letter preparations begin and when respondents receive the letters. For the 2011–12 SASS, reminder letters to the survey coordinator asked them to login to the Control Center to see the up-to-date status of their school's questionnaires. For the most part, this feature worked as intended and was helpful for respondents. One issue that staff should address for the next SASS is the amount of time between when teachers are sampled and when the Teacher Questionnaires are added to the list of questionnaires in the Control Center. Teachers were added as soon as they were sampled, which was approximately two weeks before their initial invitations were prepared and mailed. This caused some survey coordinators and interviewers to request paper questionnaires for teachers before the NPC mailed their initial invitation to complete the internet questionnaire. The Census Bureau recommends that the Control Center be used to provide the up-to-date status of questionnaires to school staff and telephone interviewers, but that teachers not be added to the Control Center until one week after their initial invitation is mailed.

The initial letter sent to school principals and survey coordinators asked them to provide basic information about their school by completing the screener interview through the Control Center. The screener interview is used to verify the school's address, ensure that the school is in-scope for the SASS, and establish a survey coordinator. By having a self-screening option through the Control Center, respondents could complete the interview at a time that was convenient for them. This feature also reduced the number of schools that the telephone interviewers needed to contact during the screener follow-up operation, therefore reducing data collection costs. Approximately 1,450 schools completed the screener interview through the Control Center before the screener follow-up operation began. The Census Bureau recommends that future iterations of SASS use the Control Center to allow school staff to complete the screener interview online.

The feature of the Control Center that allowed respondents to request replacement questionnaires worked well, but the turn-around time for mailing out the questionnaire(s) needs to be reduced. Census Bureau staff process replacement questionnaire requests weekly and the NPC mailed the questionnaires the following week. During this time, the telephone center interviewers were still making follow-up calls to respondents that had requested questionnaires but had not received their replacement yet. The Census Bureau recommends that the turnaround time be shortened with a suspension of follow-up calls to allow ample time for the respondent to receive the questionnaire before follow-up calls resume.

The Control Center included a feature that allowed the appropriate respondent (school or district) to provide an electronic list of teachers over a secure server. This feature worked as intended; however, early in the data collection, check-in staff encountered challenges with correctly checking in the electronic lists that districts provided. This caused significant delays in processing the teacher lists and getting the teacher questionnaires to the teachers in a timely manner. The Census Bureau recommends that electronic lists of teachers be requested primarily from schools; if electronic lists are requested from districts, a new procedure for checking in the lists needs to be developed and tested.

Methods of Collecting Teacher Lists

The Teacher Listing Form (TLF) response rate was a concern throughout the entire data collection period. The final unweighted response rate was 9.5 percentage points lower for public schools and 13.0 percentage points lower for private schools than it was in the 2007–08 SASS.

There are a couple of possible reasons that the response rate for the TLF was lower during the 2011–12 SASS than it was in the 2007–08 SASS. One possible reason is that the Census Bureau requested electronic teacher lists from school districts. This methodological change was introduced in an attempt to reduce the response burden on public schools and collect a higher percentage of teacher lists early in the school year. Collecting the majority of teacher lists early in data collection is important so that teacher invitations can be mailed, allowing teachers sufficient time to complete their questionnaire. A large percentage of districts indicated that they could provide an electronic list of teachers; however, less than half of these districts (approximately 46 percent) provided the list(s). The majority of the teacher lists received for public schools were provided by the school, either by completing the paper TLF or submitting an electronic list of teachers. Districts provided 39.6 percent of the total lists received whereas schools provided 60.4 percent. Schools in districts that agreed to provide a list of teachers but did not provide it by mid-November were asked to complete the paper TLF; however, these schools did not receive the request until late November, which reduced the amount of time available to collect the list from the school.

The lower response rates may also be the result of eliminating a separate field follow-up operation for the TLF. During the 2007–08 SASS, a TLF field follow-up operation was conducted in late fall. During this operation, the 2007–08 unweighted response rate for public school TLFs increased by 29.9 percentage points, resulting in an unweighted response rate of 83.0 percent, which was close to the final unweighted response rates of 86.7 percent. The unweighted response rate for private school TLFs increased by 26.9 percentage points, resulting in an unweighted response rate of 80.5 percent, which was close to the final unweighted response rate of 83.3 percent. The 2011–12 SASS omitted this TLF field follow-up operation under the assumption that the larger school districts would be providing the teacher lists for many schools, resulting in a sufficient response rate early on in data collection. Due to the continued low response rate, schools from which a teacher list had not been received were identified as the highest priority at the beginning of the Field Follow-up operation and the time-frame during which teacher lists were accepted was extended an additional one and a half weeks.

The Census Bureau recommends that the earlier TLF field follow-up operation be reinstated so that the majority of TLFs can be collected in the fall and invitations can be sent to teachers. The Census Bureau also recommends that electronic teacher lists should be requested only from schools rather than from districts in order to ensure accurate processing of lists received. Finally, the Census Bureau recommends the consideration of additional methods of collecting lists of teachers, such as accepting schools' websites as a source to create a teacher list. Late in the data collection, many schools reported that their website includes a list of their teachers. While the Census Bureau was aware that teachers were often listed on school websites, this information was not being used because it is unknown whether the teacher information is current and the school has not consented to the use of their website for obtaining a teacher list. Since the TLF response rate was still low when the field non-response follow-up began, the Census Bureau implemented a new procedure allowing school websites to be used as a source for obtaining the teacher list. The field representatives were instructed to collect the URL that contained the teacher names and the contact information of the person who gave permission to use the website as the source. Field representatives were successful in obtaining 179 websites.

Internet Teacher Questionnaires

Another innovation for the 2011–12 SASS was that the Teacher Questionnaire and the Private School Teacher Questionnaire were available online. Approximately 46 percent of sampled public school teachers and 31 percent of sampled private school teachers completed their survey online. Invitation letters were initially mailed asking sampled teachers to complete the survey online. Paper questionnaires were only initially sent to teachers in Amish or Mennonite schools. Paper questionnaires could be requested through the Control Center and were mailed to non-responding teachers later in the data collection process. It is recommended that use of the online questionnaire be continued for future rounds of SASS.

Guidelines for Accepting Refusals to Participate

In this and previous iterations of SASS, determining when to accept a case as a refusal has not been clear-cut. The entire data collection period lasts nine months, which often leads to some respondents feeling harassed. On numerous occasions, respondents have had to refuse multiple times in order to be removed from the survey. Census Bureau headquarters staff coded cases as refusals when the situation warranted. It is recommended that respondents be coded-out as a refusal if they still refuse after one conversion attempt. This will reduce incidents where respondents feel harassed and decrease follow-up costs; however, the noninterview rate may be higher earlier in the data collection process.

Teacher Invitation Packaging

While planning for the 2011–12 SASS, Census Bureau staff wondered whether asking the survey coordinator at the school to distribute the invitations for the Teacher Questionnaire or Private School Teacher Questionnaire to sampled teachers would result in a higher response rate than sending the invitations directly to the teachers. Two treatment groups were established:

- Treatment group 1—Teacher invitations to complete the survey over the Internet were mailed to the survey coordinator. The package included a letter to the coordinator asking the coordinator to deliver the invitations to the sampled teachers and remind the teachers to complete their survey.
- Treatment group 2—Teacher invitations to complete the survey over the Internet were mailed directly to the sampled teachers. The coordinator received a separate letter informing them that the Census Bureau sent the invitations to the teachers and asking them to remind the teachers to complete their survey.

Schools with survey coordinators were randomly assigned to a treatment group after teachers were sampled. Treatment group 1 included 24,781 teachers; treatment group 2 included 24,731 teachers. The response rate for teachers in treatment group 1 was slightly higher than the response rate for teachers in treatment group 2 (80.9 percent and 77.8 percent, respectively). It is recommended that teacher invitations be sent to the survey coordinator.

Chapter 6. Response Rates

This chapter presents the survey response rates for the 2011–12 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 (in-scope) sampled units, which include respondents plus nonrespondents but not ineligible (out-of-scope) units. The weighted response rates are the basic-weighted number of interviewed cases divided by the basic-weighted number of eligible cases. See chapter 8 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 17. The geographic variation in response rates can be examined by looking at each state's response rate. Table 18 provides public school response rates by state for districts, schools, principals, teachers, and school library media centers. Table 19 provides private school response rates by private school affiliation for schools, principals, and teachers. 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 17. Unweighted and basic weighted response rates and weighted overall response rates in percent, by survey population: 2011–12

Survey population	Unweighted response rate	Weighted response rate	Weighted overall response rate ¹
Public School Teacher Listing Form	82.4	79.6	†
Private School Teacher Listing Form	77.2	71.6	†
School district	82.6	80.6	†
Public school	72.2	72.5	†
Private school	64.8	65.7	†
Public school principal	72.7	72.7	†
Private school principal	64.4	64.7	†
Public school teacher	76.8	77.7	61.8
Private school teacher	67.6	69.9	50.0
Public school library media center	72.8	72.9	†

†Not applicable.

¹Weighted 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 Teacher Listing Form and Private School Teacher Listing Form Data Files, and Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

Table 18. Basic weighted response rates in percent for public school districts, schools, principals, teachers, and school library media centers, by state and selected characteristics: 2011–12

State and selected characteristic	Districts	Schools	Principals	Teachers		Overall teacher response rate ¹	School library media centers
				Teacher Listing Form (TLF)	Teacher questionnaire		
Total	80.6	72.5	72.7	79.6	77.7	61.8	72.9
State							
Alabama	92.0	89.6	88.5	88.5	84.6	74.9	85.7
Alaska	78.2	58.1	59.7	64.8	71.3	46.2	52.1
Arizona	74.4	80.3	82.3	87.9	82.7	72.6	80.0
Arkansas	96.2	88.3	88.2	94.5	84.9	80.2	88.2
California	74.3	65.0	64.3	73.6	70.9	52.2	63.1
Colorado	87.6	61.6	61.0	75.8	71.2	54.0	67.3
Connecticut	71.9	69.1	70.2	69.7	73.3	51.1	71.5
Delaware	76.9	89.3	90.5	90.9	79.2	71.9	85.8
District of Columbia	58.7	41.4	38.2	64.6	65.1	42.1	44.6
Florida	86.2	61.8	60.9	66.9	73.8	49.4	64.0
Georgia	81.8	71.7	71.1	81.2	81.8	66.4	75.3
Hawaii	0.0	62.5	59.8	73.5	40.2	29.5	61.8
Idaho	91.3	80.3	80.3	84.1	81.9	68.9	78.3
Illinois	69.9	76.1	79.2	84.3	78.2	66.0	80.1
Indiana	80.6	78.1	78.6	86.8	83.8	72.8	78.8
Iowa	87.6	86.0	83.5	89.1	81.7	72.8	86.9
Kansas	92.1	77.8	79.9	85.3	84.4	72.0	80.9
Kentucky	93.0	87.7	87.0	92.4	82.1	75.9	88.5
Louisiana	61.2	66.9	67.3	77.0	78.5	60.4	66.5
Maine	84.9	81.7	83.9	86.0	77.3	66.5	82.6
Maryland	64.0	31.6	32.8	37.1	76.2	28.3	32.5
Massachusetts	70.3	76.9	77.4	84.2	78.3	65.9	75.2
Michigan	83.5	78.4	77.3	86.5	79.2	68.5	76.3
Minnesota	81.5	79.8	78.2	83.2	79.9	66.5	76.8
Mississippi	91.3	90.1	91.1	96.6	78.9	76.2	88.3
Missouri	89.4	82.3	83.6	92.2	80.7	74.4	83.3
Montana	95.3	92.6	92.8	94.5	82.5	78.0	93.9
Nebraska	90.6	74.5	73.5	81.2	81.3	66.0	74.1
Nevada	80.6	72.0	70.9	86.1	71.2	61.3	74.1
New Hampshire	75.1	84.5	84.0	84.5	83.6	70.7	81.9

See notes at end of table.

Table 18. Basic weighted response rates in percent for public school districts, schools, principals, teachers, and school library media centers, by state and selected characteristics: 2011–12—Continued

State and selected characteristic	Districts	Schools	Principals	Teachers		Overall teacher response rate ¹	School library media centers
				Teacher Listing Form (TLF)	Teacher questionnaire		
New Jersey	75.1	71.2	74.4	77	72.6	55.9	75.7
New Mexico	82.7	64.1	64.8	67.8	76.7	52	65.6
New York	72.1	64.4	61.7	73.1	68.9	50.3	63.2
North Carolina	84.9	70	71.7	75.1	84	63.1	69.6
North Dakota	87.5	87.1	87.5	91.7	84.1	77.1	87.4
Ohio	80.3	79.2	78.2	87.4	79.7	69.6	78.8
Oklahoma	89	86	87.8	94.6	80.6	76.3	89.5
Oregon	72.2	66.7	65	72.8	77.6	56.5	67.7
Pennsylvania	82.9	75.4	77.7	85.9	75.6	64.9	77.6
Rhode Island	85.2	57.5	58.2	60.9	78.6	47.9	56.6
South Carolina	89.8	80.2	80.4	89.8	84.1	75.5	81.4
South Dakota	93.7	84.8	84.2	88.8	88.9	79	88.1
Tennessee	90.2	71.2	71	79.5	81	64.4	70.8
Texas	82.5	68.5	70.1	75.7	76.8	58.2	69.5
Utah	75.1	76.4	74.6	75.9	84.8	64.4	75.6
Vermont	64.1	81.2	81.9	83.9	83	69.6	78.9
Virginia	86.9	73.2	73.7	78	78.6	61.3	76
Washington	75.6	65.2	64.7	72	79.7	57.4	61.7
West Virginia	66.7	90.8	91.1	93.6	83	77.7	92.6
Wisconsin	82.1	70.9	71.5	77.8	83.5	64.9	69.5
Wyoming	88.4	76.4	78.7	83.3	78.2	65.1	79.1
School classification							
Traditional public	†	69.2	72.9	79.7	77.9	62.1	73.4
Charter school	†	72.7	69.7	77.9	70.4	54.8	57.0
Community type							
City	72.6	59.4	59.7	68.0	71.8	48.8	58.3
Suburban	73.6	68.9	68.7	76.6	76.3	58.4	69.6
Town	82.1	83.0	83.5	87.8	82.4	72.4	83.3
Rural	85.9	82.1	82.6	88.4	81.8	72.3	83.1
School level							
Primary	†	71.9	71.9	78.8	80.1	63.1	72.5
Middle	†	73.6	73.7	79.4	77.4	61.5	74.8
High	†	72.1	73.1	81.0	73.6	59.6	72.3
Combined	†	76.2	76.5	82.5	78.9	65.1	73.1

See notes at end of table.

Table 18. Basic weighted response rates in percent for public school districts, schools, principals, teachers, and school library media centers, by state and selected characteristics: 2011–12—Continued

State and selected characteristic	Districts	Schools	Principals	Teachers		Overall teacher response rate ¹	School library media centers
				Teacher Listing Form (TLF)	Teacher questionnaire		
Student enrollment							
Less than 100	†	74.1	72.8	81.6	76.3	62.2	63.0
100–199	†	75.9	76.6	83.6	82.1	68.7	74.6
200–499	†	75.6	76.0	81.7	80.0	65.3	76.2
500–749	†	70.3	71.0	77.9	78.9	61.5	71.7
750–999	†	68.2	67.9	75.6	76.1	57.6	70.1
1,000 or more	†	66.1	65.7	74.6	73.4	54.8	69.4
District size							
1 school	74.3	†	†	†	†	†	†
2–3 schools	84.8	†	†	†	†	†	†
4–5 schools	83.1	†	†	†	†	†	†
6–9 schools	85.8	†	†	†	†	†	†
10–19 schools	81.4	†	†	†	†	†	†
20 or more schools	80.8	†	†	†	†	†	†
District K–12 enrollment							
Less than 250	75.1	†	†	†	†	†	†
250–299	79.9	†	†	†	†	†	†
1,000–1,999	86.0	†	†	†	†	†	†
2,000–4,999	82.4	†	†	†	†	†	†
5,000–9,999	83.1	†	†	†	†	†	†
10,000 or more	80.9	†	†	†	†	†	†
Percent of K–12 students who were approved for free or reduced-price lunches							
0–34	78.9	75.0	75.6	80.1	78.6	63.0	75.0
35–49	82.1	75.4	75.8	82.0	80.0	65.6	75.6
50–74	84.7	75.3	75.6	82.8	78.2	64.7	76.4
75 or more	74.0	62.8	62.3	72.7	72.7	52.9	62.5

† Not applicable.

¹Weighted 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 Teacher Listing Form Data File, and Public School District, Public School, Public School Principal, Public School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

Table 19. Base-weighted response rates in percent for private schools, principals, and teachers, by affiliation and selected characteristics: 2011–12

Affiliation stratum and selected characteristic	Schools	Principals	Teachers		Overall teacher response rate ¹
			Teacher Listing Form (TLF)	Teacher questionnaire	
Total	65.7	64.7	71.6	69.9	50.1
Affiliation stratum					
Catholic					
Parochial	75.0	74.7	78.0	76.8	59.9
Diocesan	72.7	71.4	74.4	75.8	56.4
Private order	66.7	68.1	67.3	85.5	57.5
Baptist	66.3	63.8	68.8	64.8	44.6
Jewish	45.5	40.0	49.9	53.8	26.9
Lutheran	81.2	81.1	85.2	72.6	61.8
Seventh-Day Adventist	79.1	77.6	82.0	63.5	52.0
Other religious	60.6	57.8	68.1	64.9	44.2
Nonsectarian					
Regular program	57.5	56.9	66.1	66.5	44.0
Special emphasis	63.7	66.4	68.7	64.1	44.1
Special education	77.9	80.7	82.7	77.9	64.5
School classification					
Catholic	72.9	72.4	75.0	78.0	58.5
Other religious	64.2	61.7	70.1	64.5	45.2
Nonsectarian	63.6	64.7	70.3	68.0	47.9
Community type					
City	67.2	67.0	72.7	70.1	50.9
Suburban	64.2	64.2	69.5	69.8	48.5
Town	67.7	66.9	68.0	76.8	52.2
Rural	64.9	61.4	74.4	66.8	49.7
School level					
Elementary	70.0	68.4	75.6	70.6	53.4
Secondary	67.2	67.2	71.5	74.2	53.0
Combined	58.2	58.1	65.3	67.2	43.9
Student enrollment					
Less than 100	65.2	63.8	72.6	63.9	46.4
100–199	67.0	66.8	71.8	65.9	47.3
200–499	67.6	66.4	71.7	72.2	51.7
500–749	62.1	61.1	66.7	76.3	51.0
750 or more	53.4	55.0	60.1	73.6	44.2

¹Weighted 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 Teacher Listing Form Data File, and Private School, Private School Principal, and Private School Teacher Documentation Data Files,” 2011–12.

Item Response Rates

Item response rates indicate the percentage of respondents that answered a given survey question, or item. Weighted item response rates are produced by dividing the number of sampled cases responding to an item by the number of sampled cases eligible to answer the item and adjusted by either the basic or final weight. The final weight for each sampled unit is the base weight adjusted for unit nonresponse and then ratio adjusted to the frame total. See chapter 8 for further discussion of the weighting.

For most items, a counted response is any item that is not missing and the value of the associated imputation flag is 0. See chapter 7 for detailed information on imputations.

For the SASS, the basic weighted item response rates ranged from 57.4 percent to 100 percent, and the final-weighted item response rates ranged from 53.4 percent to 100 percent. For all eight SASS data files, between 93.8 and 100 percent of the items had a base-weighted response rate of 85 percent or higher, and between 92.4 and 98.9 percent of the items had a final-weighted response rate of 85 percent or higher.

Table 20 provides a brief summary of the basic weighted item response rates, and exhibit 4 provides information about the SASS items that have a base-weighted response rate below 70 percent. Similarly, Table 21 provides a brief summary of the final-weighted item response rates, and exhibit 5 provides information about the SASS items that have a final-weighted response rate below 70 percent.

Table 20. Summary of base-weighted item response rates, by survey population: 2011–12

Survey population	Range of item response rates	Percent of items with a response rate of 85.0 percent or more	Percent of items with a response rate of 70.0–84.9 percent	Percent of items with a response rate of less than 70.0 percent
School district	85.8–100	100.0	0.0	0.0
Public school	80.4–100	96.2	3.8	0.0
Private school ¹	73.6–100	93.9	5.7	0.0
Public school principal	84.8–100	99.5	0.5	0.0
Private school principal	82.6–100	98.3	1.7	0.0
Public school teacher	72.9–100	93.9	6.1	0.0
Private school teacher	57.4–100	93.8	5.9	0.3
Public school library media center	88.9–100	100.0	0.0	0.0

¹There was one item on the Private School Questionnaire that had 0 eligible respondents; thus, the response rate could not be calculated. For this reason, the percent break summaries for the Private School row do not sum to 100.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

Exhibit 4. Item with base-weighted response rate of less than 70 percent, by survey population: 2011–12

Survey population	Items
Teacher survey	
Private	Q39e(4)certificate

NOTE: Numbers in this table refer to questionnaire item numbers, while letters or parenthetical descriptions refer to sub-items. For example, item 39e(4) refers to sub-item e4 of item 39 on the Private School Teacher Questionnaire.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Documentation Data File,” 2011–12.

Table 21. Summary of final weighted item response rates, by survey population: 2011–12

Survey population	Range of item response rates	Percent of items with a response rate of 85.0 percent or more	Percent of items with a response rate of 70.0–84.9 percent	Percent of items with a response rate of less than 70.0 percent
School district	85.6–100	100.0	0	0
Public school	80.2–100	96.2	3.8	0
Private school ¹	73.2–100	93.5	6.1	0
Public school principal	84.2–100	98.9	1.1	0
Private school principal	81.8–100	98.3	1.7	0
Public school teacher	72.6–100	94.2	5.8	0
Private school teacher	53.4–100	92.5	6.9	0.7
Public school library				
Media center	83.9–100	100.0	0	0

¹ There was one item on the Private School Questionnaire that had 0 eligible respondents; thus, the response rate could not be calculated. For this reason, the percent break summaries for the Private School row do not sum to 100.

NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

Exhibit 5. Items with final weighted response rates of less than 70 percent, by survey population: 2011–12

Survey population	Items
Teacher survey	
Private	Q39e(4)Certificate, Q72Howmuch

NOTE: Numbers in this table refer to questionnaire item numbers, while letters or parenthetical descriptions refer to subitems. For example, item 39e(4) refers to sub-item e(4) of item 39 on the Private School Teacher Questionnaire.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Documentation Data File,” 2011–12.

Nonresponse Bias Analysis

A comprehensive nonresponse bias analysis was conducted for the 2011–12 SASS. The analysis evaluated the extent of potential bias introduced by nonresponse at both unit and item levels, and the extent to which noninterview weighting adjustments mitigated bias at the unit level.

Unit-Level Nonresponse

Overview of Methodology

Because NCES Statistical Standard 4-4 requires analysis of unit nonresponse bias for any survey stage with a base-weighted response rate of less than 85 percent, both 2011–12 SASS teacher data files were evaluated for potential bias. Comparisons between the frame and respondent populations were made before and after the noninterview weighting adjustments were applied in order to evaluate the extent to which the adjustments reduced or eliminated nonresponse bias. The following section explains the methodology and summarizes the conclusions.

As outlined in appendix B of the *NCES Statistical Standards* (U.S. Department of Education 2003), the degree of nonresponse bias is a function of two factors: the nonresponse rate and how much the respondents and nonrespondents differ on survey variables of interest. The mathematical formulation to estimate bias for a sample mean of variable y is as follows:

$$B(\bar{y}_R) = \bar{y}_R - \bar{y}_T = \left(\frac{n_M}{n_T} \right) (\bar{y}_R - \bar{y}_M)$$

where

\bar{y}_T = the estimated mean based on all eligible sample cases

\bar{y}_R = the estimated mean based only on respondent cases

\bar{y}_M = the estimated mean based only on nonrespondent cases

n_T = the estimated number of cases (i.e., $n_T = n_R + n_M$)

n_M = the estimated number of nonrespondents

n_R = the estimated number of respondents

A variable-free estimate of the bias, referred to as a relative bias, was used to compare biases across all variables included in the analysis. The relative bias for an estimated mean using only the respondent data, \bar{y}_R , is calculated using the following formula:

$$RelB(\bar{y}_R) = \frac{B(\bar{y}_R)}{\bar{y}_R}$$

Relative bias was estimated for variables known for respondents and nonrespondents. There are a number of variables available for each data file from the 2011–12 SASS sampling frames. The variables used are presented in exhibit 6.

Exhibit 6. Variables used in the SASS unit nonresponse bias analysis: 2011–12

School districts	Private schools, principals, and teacher listing form
<ul style="list-style-type: none"> • State • Locale • Enrollment • Agency type • State by locale • State by enrollment 	<ul style="list-style-type: none"> • Affiliation • Locale • Enrollment • Number of teachers • Grade level • Region • Affiliation by grade level • Affiliation by region
Regular public schools, principals, libraries, and teacher listing form	Charter public schools, principals, libraries, and teacher listing form
<ul style="list-style-type: none"> • Enrollment • Percent races other than White • Percent free lunch eligible • Locale • Pupil-teacher ratio • Grade level • Region • Number of teachers • Title 1 status • State • State by enrollment • State by locale • State by grade level 	<ul style="list-style-type: none"> • Enrollment • Percent races other than White • Percent free lunch eligible • Locale • Pupil-teacher ratio • Grade level • Region • Number of teachers • Title 1 status
Regular public school teachers	Public charter school teachers
<ul style="list-style-type: none"> • Enrollment • Percent races other than White • Percent free lunch eligible • Locale • Pupil-teacher ratio • Grade level • Region • Number of teachers • Title 1 status • Subject • Experience • State • State by subject • State by locale • State by grade level 	<ul style="list-style-type: none"> • Enrollment • Percent races other than White • Percent free lunch eligible • Locale • Pupil-teacher ratio • Grade level • Region • Number of teachers • Title 1 status • Subject • Experience
	Private school teachers
	<ul style="list-style-type: none"> • Affiliation • Locale • Enrollment • Number of teachers • Grade level • Region • Subject • Experience • Full- or part-time status • Affiliation by grade level • Affiliation by region

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

The following steps were followed to compute the relative bias. First, the nonresponse bias was estimated and tested to determine if the bias is significant at the 5 percent level. Second, noninterview adjustments were computed, and the variables listed above were included in the nonresponse models. The noninterview adjustments, which are included in the weights (see chapter 7 for more detail), were designed to significantly reduce or eliminate unit nonresponse bias for variables included in the models. Third, after the weights were computed, any remaining bias was estimated for the variables listed above and statistical tests were performed to check the remaining significant nonresponse bias. For this comparison, nonresponse bias was calculated as the difference between the base-weighted sample mean and the nonresponse-adjusted respondent mean, which evaluates the effectiveness of each noninterview adjustment in mitigating nonresponse bias. Sample units found to be ineligible for SASS were excluded from the analysis.

The tables included in this chapter outline the summary statistics of the bias analysis findings for each questionnaire by sector. For detailed information about the 2011–12 SASS nonresponse bias analyses results, please refer to the tables in “Appendix K. 2011–12 SASS Unit Nonresponse Bias Analysis.”

School Districts

Tables 22 through 24 contain summary statistics of the findings.

Table 22. Summary of SASS district (1A) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	10.09
Median estimated percent relative bias (absolute value)	6.92
Percent of variable categories significantly biased	55.68
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	6.45
Median estimated percent relative bias (absolute value)	3.18
Percent of variable categories significantly biased	32.95

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District Documentation Data File,” 2011–12.

Table 23. Summary of SASS district (1A) unit nonresponse bias—state summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	14.84
Median estimated percent relative bias (absolute value)	9.26
Percent of variable categories significantly biased	40.45
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	14.39
Median estimated percent relative bias (absolute value)	8.82
Percent of variable categories significantly biased	36.76

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District Documentation Data File,” 2011–12.

Table 24. Effects of nonresponse adjustment on bias reduction—SASS district (1A) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	State
Not significant	—	Significant	6	35
Significant	>50 percent reduction	Not significant	21	32
		Significant	10	7
	10–50 percent reduction	Not significant	5	15
		Significant	8	35
	<10 percent reduction	Not significant	0	1
		Significant	2	36
	Increase in difference	Not significant	0	5
		Significant	3	66

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 22 through 24, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 56 percent of the variable categories at the national level and 40 percent of state estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 33 percent of categories at the national level and 37 percent of state estimates were significantly biased. Table 24 reveals that for national estimates, bias was substantially reduced for most items while many state-level estimates remained biased.

Public Schools

Tables 25 through 27 contain summary statistics of the findings.

Table 25. Summary of SASS public school (3A) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	9.80
Median estimated percent relative bias (absolute value)	6.23
Percent of variable categories significantly biased	41.54
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	4.29
Median estimated percent relative bias (absolute value)	2.44
Percent of variable categories significantly biased	6.92

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Documentation Data File,” 2011–12.

Table 26. Summary of SASS public school (3A) unit nonresponse bias—state summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	14.55
Median estimated percent relative bias (absolute value)	8.38
Percent of variable categories significantly biased	20.51
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	12.32
Median estimated percent relative bias (absolute value)	6.34
Percent of variable categories significantly biased	12.22

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Documentation Data File,” 2011–12.

Table 27. Effects of nonresponse adjustment on bias reduction—SASS public school (3A) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	State
Not significant	—	Significant	4	8
Significant	>50 percent reduction	Not significant	46	42
		Significant	2	1
	10–50 percent reduction	Not significant	3	17
		Significant	1	18
	<10 percent reduction	Not significant	0	3
		Significant	1	25
	Increase in difference	Not significant	0	1
		Significant	1	29

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 25 through 27, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 42 percent of the variable categories at the national level and 21 percent of state estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 7 percent of categories at the national level and 12 percent of state estimates were significantly biased. Table 27 reveals that for national estimates, bias was substantially reduced for most items while many state-level estimates remained biased.

Private Schools

Tables 28 through 30 contain summary statistics of the findings.

Table 28. Summary of SASS private school (3B) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	8.20
Median estimated percent relative bias (absolute value)	5.58
Percent of variable categories significantly biased	41.18
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	3.08
Median estimated percent relative bias (absolute value)	2.64
Percent of variable categories significantly biased	0.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Documentation Data File,” 2011–12.

Table 29. Summary of SASS private school (3B) unit nonresponse bias—affiliation summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	12.11
Median estimated percent relative bias (absolute value)	8.12
Percent of variable categories significantly biased	11.90
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	10.90
Median estimated percent relative bias (absolute value)	6.60
Percent of variable categories significantly biased	4.76

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Documentation Data File,” 2011–12.

Table 30. Effects of nonresponse adjustment on bias reduction—SASS private school (3B) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	Affiliation
Not significant	—	Significant	0	0
Significant	>50 percent reduction	Not significant	13	3
		Significant	0	0
	10–50 percent reduction	Not significant	1	3
		Significant	0	1
	<10 percent reduction	Not significant	0	0
		Significant	0	1
	Increase in difference	Not significant	0	0
		Significant	0	2

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 28 through 30, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 41 percent of the variable categories at the national level and 12 percent of affiliation estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 0 percent of categories at the national level and 5 percent of affiliation estimates were significantly biased. Table 30 reveals that for national estimates, bias was substantially reduced for most items while some affiliation-level estimates remained biased.

Public Principals

Tables 31 through 33 contain summary statistics of the findings.

Table 31. Summary of SASS public school principal (2A) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	9.86
Median estimated percent relative bias (absolute value)	6.35
Percent of variable categories significantly biased	43.08
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	4.01
Median estimated percent relative bias (absolute value)	2.31
Percent of variable categories significantly biased	8.46

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Principal Documentation Data File,” 2011–12.

Table 32. Summary of SASS public school principal (2A) unit nonresponse bias—state summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	16.29
Median estimated percent relative bias (absolute value)	8.10
Percent of variable categories significantly biased	20.21
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	14.08
Median estimated percent relative bias (absolute value)	6.89
Percent of variable categories significantly biased	11.31

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Principal Documentation Data File,” 2011–12.

Table 33. Effects of nonresponse adjustment on bias reduction—SASS public school principal (2A) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	State
Not significant	—	Significant	3	9
Significant	>50 percent reduction	Not significant	45	41
		Significant	4	0
	10–50 percent reduction	Not significant	3	22
		Significant	1	27
	<10 percent reduction	Not significant	0	4
		Significant	2	18
	Increase in difference	Not significant	0	1
		Significant	1	21

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Principal Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 31 through 33, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 43 percent of the variable categories at the national level and 20 percent of state estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 8 percent of categories at the national level and 11 percent of state estimates were significantly biased. Table 33 reveals that for national estimates, bias was substantially reduced for most items while some state-level estimates remained biased.

Private Principals

Tables 34 through 36 contain summary statistics of the findings.

Table 34. Summary of SASS private principals (2B) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	9.16
Median estimated percent relative bias (absolute value)	6.20
Percent of variable categories significantly biased	47.06
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	3.05
Median estimated percent relative bias (absolute value)	1.66
Percent of variable categories significantly biased	5.88

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Principal Documentation Data File,” 2011–12.

Table 35. Summary of SASS private principals (2B) unit nonresponse bias—affiliation summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	11.87
Median estimated percent relative bias (absolute value)	6.99
Percent of variable categories significantly biased	9.52
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	9.99
Median estimated percent relative bias (absolute value)	5.83
Percent of variable categories significantly biased	5.95

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Principal Documentation Data File,” 2011–12.

Table 36. Effects of nonresponse adjustment on bias reduction—SASS private principals (2B) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	Affiliation
Not significant	—	Significant	0	1
Significant	>50 percent reduction	Not significant	14	2
		Significant	1	0
	10–50 percent reduction	Not significant	0	2
		Significant	1	0
	<10 percent reduction	Not significant	0	0
		Significant	0	0
	Increase in difference	Not significant	0	0
		Significant	0	4

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Principal Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 34 through 36, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 47 percent of the variable categories at the national level and 10 percent of affiliation estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 6 percent of categories at the national level and 6 percent of the affiliation estimates were significantly biased. Table 36 reveals that for national estimates, bias was substantially reduced for most items while some affiliation-level estimates remained biased.

Public School Libraries

Tables 37 through 39 contain summary statistics of the findings.

Table 37. Summary of SASS public school library (LS1A) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	8.51
Median estimated percent relative bias (absolute value)	6.02
Percent of variable categories significantly biased	40.77
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	3.97
Median estimated percent relative bias (absolute value)	2.25
Percent of variable categories significantly biased	9.23

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Library Media Center Documentation Data File,” 2011–12.

Table 38. Summary of SASS public school library (LS1A) unit nonresponse bias—state summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	14.26
Median estimated percent relative bias (absolute value)	7.70
Percent of variable categories significantly biased	20.97
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	12.83
Median estimated percent relative bias (absolute value)	6.55
Percent of variable categories significantly biased	14.93

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Library Media Center Documentation Data File,” 2011–12.

Table 39. Effects of nonresponse adjustment on bias reduction—SASS public school library (LS1A) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	State
Not significant	—	Significant	4	9
Significant	>50 percent reduction	Not significant	43	27
		Significant	4	1
	10–50 percent reduction	Not significant	2	21
		Significant	2	25
	<10 percent reduction	Not significant	0	1
		Significant	1	21
	Increase in difference	Not significant	0	0
		Significant	1	43

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Library Media Center Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 37 through 39, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 41 percent of the variable categories at the national level and 21 percent of state estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 9 percent of categories at the national level and 15 percent of state estimates were significantly biased. Table 39 reveals that for national estimates, bias was substantially reduced for most items while some state-level estimates remained biased.

Public School Teachers

Tables 40 through 45 contain summary statistics of the findings. Tables 40 through 42 apply to the Teacher Listing Form. Tables 43 through 45 apply to teachers from schools that provided Teacher Listing Forms.

Table 40. Summary of SASS public teacher (4A) Teacher Listing Form unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	7.47
Median estimated percent relative bias (absolute value)	4.75
Percent of variable categories significantly biased	43.08
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	3.60
Median estimated percent relative bias (absolute value)	1.93
Percent of variable categories significantly biased	13.85

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Listing Form Data File,” 2011–12.

Table 41. Summary of SASS public teacher (4A) Teacher Listing Form unit nonresponse bias—state summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	16.02
Median estimated percent relative bias (absolute value)	7.00
Percent of variable categories significantly biased	18.09
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	14.70
Median estimated percent relative bias (absolute value)	6.30
Percent of variable categories significantly biased	10.35

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Listing Form Data File,” 2011–12.

**Table 42. Effects of Nonresponse Adjustment on Bias Reduction—SASS Public Teacher (4A)
Teacher Listing Form Unit Nonresponse Bias: 2011–12**

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	State
Not significant	—	Significant	6	18
Significant	>50 percent reduction	Not significant	43	29
		Significant	1	2
	10–50 percent reduction	Not significant	1	35
		Significant	9	18
	<10 percent reduction	Not significant	0	4
		Significant	1	16
	Increase in difference	Not significant	0	9
		Significant	1	25

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Listing Form Data File,” 2011–12.

Summary of Conclusions

As shown in tables 40 through 42, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 43 percent of the variable categories at the national level and 18 percent of state estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 14 percent of categories at the national level and 10 percent of state estimates were significantly biased. Table 42 reveals that for national estimates, bias was substantially reduced for most items while some state-level estimates remained biased. In particular, estimates in Alaska, Hawaii, Maryland, Rhode Island, and the District of Columbia remained severely biased after weighting, with the mean relative bias remaining above 25 percent. Estimates from the states of Connecticut, Idaho, Kansas, Massachusetts, Nebraska, New Hampshire, New Mexico, Utah, Vermont, and Wyoming remained moderately biased after weighting, with the mean relative bias in the range of 10 to 25 percent. For additional information about these and all 2011–12 SASS nonresponse bias analyses results, please refer to the tables in “Appendix K. 2011–12 SASS Unit Nonresponse Bias Analysis.”

Table 43. Summary of SASS public teacher unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	6.51
Median estimated percent relative bias (absolute value)	4.32
Percent of variable categories significantly biased	35.26
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	2.72
Median estimated percent relative bias (absolute value)	1.22
Percent of variable categories significantly biased	5.13

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 44. Summary of SASS public teacher (4A) unit nonresponse bias—state summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	11.23
Median estimated percent relative bias (absolute value)	5.97
Percent of variable categories significantly biased	11.60
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	9.43
Median estimated percent relative bias (absolute value)	4.88
Percent of variable categories significantly biased	4.70

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 45. Effects of nonresponse adjustment on bias reduction—SASS public teacher (4A) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	State
Not significant	—	Significant	3	14
Significant	>50 percent reduction	Not significant	41	41
		Significant	2	1
	10–50 percent reduction	Not significant	9	31
		Significant	1	12
	<10 percent reduction	Not significant	0	5
		Significant	1	6
	Increase in difference	Not significant	0	3
		Significant	1	12

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 43 through 45, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 35 percent of the variable categories at the national level and 12 percent of state estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 5 percent of categories at the national level and 5 percent of state estimates were significantly biased. Table 45 reveals that for national estimates, bias was substantially reduced for most items while some state-level estimates remained biased. In particular, estimates from Hawaii remained severely biased after weighting, with the mean relative bias above 25 percent. Estimates from Alaska, the District of Columbia, Maine, Maryland, and Rhode Island remained moderately biased after weighting, with the mean relative bias in the range of 10 to 25 percent. For additional information about these and all 2011–12 SASS nonresponse bias analyses results, please refer to the tables in “Appendix K. 2011–12 SASS Unit Nonresponse Bias Analysis.”

Private School Teachers

Tables 46 through 51 contain summary statistics of the findings. Tables 46 through 48 apply to the Teacher Listing Form. Tables 49 through 51 apply to teachers from schools that provided Teacher Listing Forms.

Table 46. Summary of SASS private teachers (4B) Teacher Listing Form unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	6.79
Median estimated percent relative bias (absolute value)	4.99
Percent of variable categories significantly biased	32.35
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	2.00
Median estimated percent relative bias (absolute value)	1.65
Percent of variable categories significantly biased	0.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Listing Form Data File,” 2011–12.

Table 47. Summary of SASS private teachers (4B) Teacher Listing Form unit nonresponse bias—affiliation summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	9.98
Median estimated percent relative bias (absolute value)	7.02
Percent of variable categories significantly biased	4.76
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	9.34
Median estimated percent relative bias (absolute value)	6.57
Percent of variable categories significantly biased	0.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Listing Form Data File,” 2011–12.

**Table 48. Effects of nonresponse adjustment on bias reduction—SASS private teachers (4B)
Teacher Listing Form unit nonresponse bias: 2011–12**

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	Affiliation
Not significant	—	Significant	0	0
Significant	>50 percent reduction	Not significant	10	1
		Significant	0	0
	10–50 percent reduction	Not significant	1	2
		Significant	0	0
	<10 percent reduction	Not significant	0	1
		Significant	0	0
	Increase in difference	Not significant	0	0
		Significant	0	0

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Listing Form Data File,” 2011–12.

Summary of Conclusions

As shown in tables 46 through 48, the weighting adjustments eliminated all, significant bias. For all respondents, 32 percent of the variable categories at the national level and 5 percent of affiliation estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, none of the categories at the national level or of the affiliation estimates were significantly biased. Table 48 reveals that for national estimates, bias was substantially reduced for most items while some affiliation-level estimates showed some bias even as their significance was reduced. In particular, estimates of Jewish schools remained severely biased after weighting, with the mean relative bias above 25 percent. Estimates from the area frame remained moderately biased after weighting, with the mean relative bias in the range of 10 to 25 percent. For additional information about these and all 2011–12 SASS nonresponse bias analyses results, please refer to the tables in “Appendix K. 2011–12 SASS Unit Nonresponse Bias Analysis.”

Table 49. Summary of SASS private teachers (4B) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	8.02
Median estimated percent relative bias (absolute value)	5.31
Percent of variable categories significantly biased	26.00
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	2.81
Median estimated percent relative bias (absolute value)	1.69
Percent of variable categories significantly biased	2.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Documentation Data File,” 2011–12.

Table 50. Summary of SASS private teachers (4B) unit nonresponse bias—affiliation summary items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	8.97
Median estimated percent relative bias (absolute value)	5.43
Percent of variable categories significantly biased	4.76
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	8.84
Median estimated percent relative bias (absolute value)	6.32
Percent of variable categories significantly biased	2.38

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Documentation Data File,” 2011–12.

Table 51. Effects of nonresponse adjustment on bias reduction—SASS private teachers (4B) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National	Affiliation
Not significant	—	Significant	0	0
Significant	>50 percent reduction	Not significant	10	0
		Significant	0	0
	10–50 percent reduction	Not significant	2	1
		Significant	1	0
	<10 percent reduction	Not significant	0	1
		Significant	0	1
	Increase in difference	Not significant	0	0
		Significant	0	1

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 49 through 51, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 26 percent of the variable categories at the national level and 5 percent of affiliation estimates were significantly biased before nonresponse weighting adjustments. After the adjustments, 2 percent of categories at the national level and 2 percent of affiliation estimates were significantly biased. Table 51 reveals that for national estimates, bias was substantially reduced for most items while some affiliation-level estimates remained biased. In particular, estimates of Jewish, Lutheran, and area frame schools remained moderately biased after weighting, with the mean relative bias in the range of 10 to 25 percent. For additional information about these and all 2011–12 SASS nonresponse bias analyses results, please refer to the tables in “Appendix K. 2011–12 SASS Unit Nonresponse Bias Analysis.”

Additional Bias Analysis for Public School Teachers—Cities

Due to the low response rate for public school teachers located in cities, additional bias analysis was conducted for teachers with a locale code of city. Public school city teachers had a teacher listing form response rate of 68.0 percent and a teacher response rate of 71.8 percent, for an overall response rate of 48.8 percent. This low response rate prompted the need for additional bias analysis.

To conduct the additional unit nonresponse bias analysis, first the same comparison as had been conducted for all public school teachers was conducted for city public school teachers in isolation. Second, some key estimates were analyzed cross-tabulated by city size. Last, key estimates were cross-tabulated by grade level.

Tables 52 through 63 contain summary statistics of the findings. Tables 52 through 57 apply to the teacher listing form. Tables 58 through 63 apply to teachers from schools which provided teacher listing forms.

Table 52. Summary of SASS city public school TLF (4A) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	28.43
Median estimated percent relative bias (absolute value)	18.58
Percent of variable categories significantly biased	70
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	13.60
Median estimated percent relative bias (absolute value)	5.26
Percent of variable categories significantly biased	28

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Documentation Data File," 2011–12.

Table 53. Effects of nonresponse adjustment on bias reduction—SASS city public school TLF (4A) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National
Not significant	—	Significant	2
Significant	>50 percent reduction	Not significant	32
		Significant	9
	10–50 percent reduction	Not significant	4
		Significant	8
	<10 percent reduction	Not significant	0
		Significant	3
	Increase in difference	Not significant	2
		Significant	2

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Documentation Data File," 2011–12.

Table 54. Summary of SASS city public school TLF (4A) cross-tabbed unit nonresponse bias—city items by city size: 2011–12

Nonresponse bias statistics	Large city	Midsize city	Small city
Before noninterview adjustment			
Mean estimated percent relative bias (absolute value)	58.15	6.79	4.53
Median estimated percent relative bias (absolute value)	51.52	5.67	3.76
Percent of variable categories significantly biased	100	23.08	15.38
After noninterview adjustment			
Mean estimated percent relative bias (absolute value)	31.37	14.77	18.23
Median estimated percent relative bias (absolute value)	21.51	15.41	16.89
Percent of variable categories significantly biased	84.62	53.85	100

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 55. Effects of nonresponse adjustment on bias reduction—SASS city public school TLF (4A) cross-tabbed unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	Large city	Midsize city	Small city
Not significant	—	Significant	0	6	10
Significant	>50 percent reduction	Not significant	1	0	0
		Significant	2	0	0
	10–50 percent reduction	Not significant	1	1	0
		Significant	8	0	0
	<10 percent reduction	Not significant	0	1	0
		Significant	1	0	0
	Increase in difference	Not significant	0	0	0
		Significant	0	1	2

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 56. Summary of SASS city public school TLF (4A) cross-tabbed unit nonresponse bias—city items by grade level: 2011–12

Nonresponse bias statistics	Primary	Middle	High school	Combined
Before noninterview adjustment				
Mean estimated percent relative bias (absolute value)	18.52	22.70	24.48	25.05
Median estimated percent relative bias (absolute value)	18.62	23.84	18.21	24.71
Percent of variable categories significantly biased	66.67	77.78	77.78	11.11
After noninterview adjustment				
Mean estimated percent relative bias (absolute value)	8.31	6.08	7.16	14.52
Median estimated percent relative bias (absolute value)	7.37	5.92	4.84	13.43
Percent of variable categories significantly biased	0	0	11.11	11.11

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 57. Effects of nonresponse adjustment on bias reduction—SASS city public school TLF (4A) cross-tabbed unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	Primary	Middle	High school	Combined
Not significant	—	Significant	0	0	0	1
Significant	>50 percent reduction	Not significant	4	6	6	1
		Significant	0	0	0	0
	10–50 percent reduction	Not significant	1	1	0	0
		Significant	0	0	1	0
	<10 percent reduction	Not significant	0	0	0	0
		Significant	0	0	0	0
	Increase in difference	Not significant	1	0	0	0
		Significant	0	0	0	0

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in Tables 52 through 57, the weighting adjustments eliminated some, but not all, significant bias. For city teacher national items, 70 percent of variable categories were significantly biased before nonresponse weighting adjustments, and 28 percent after adjustments. For cross-tabulated items by city size, 100 percent of large city categories, 23 percent of midsize city categories, and 15 percent of small city categories were significantly biased before nonresponse weighting adjustments. After adjustment, 85, 54, and 100 percent of variable categories were significantly biased. For cross-tabulated items by grade level, 67 percent of primary school, 78 percent of middle and high school categories, and 11 percent of combined school categories were significantly biased before nonresponse weighting adjustments. After adjustment, 11 percent of combined and high school and no primary and middle school categories were

significantly biased. The overall conclusion is that weighting adjustments substantially reduced nonresponse bias for national city item categories as well as for categories by grade level. With regard to city size, bias was reduced slightly, but not eliminated, for large cities, and increased substantially for midsized and small cities. For this reason, data users should avoid analyzing city public school teachers by city size.

Table 58. Summary of SASS city public school teacher (4A) unit nonresponse bias—national items: 2011–12

Nonresponse bias statistics	Total
Before noninterview adjustment	
Mean estimated percent relative bias (absolute value)	10.05
Median estimated percent relative bias (absolute value)	7.19
Percent of variable categories significantly biased	43.43
After noninterview adjustment	
Mean estimated percent relative bias (absolute value)	6.47
Median estimated percent relative bias (absolute value)	2.84
Percent of variable categories significantly biased	5.05

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 59. Effects of nonresponse adjustment on bias reduction—SASS city public school teacher (4A) unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	National
Not significant	—	Significant	1
Significant	>50 percent reduction	Not significant Significant	31 3
	10–50 percent reduction	Not significant Significant	8 0
	<10 percent reduction	Not significant Significant	1 0
	Increase in difference	Not significant Significant	0 0

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 60. Summary of SASS city public school teacher (4A) cross-tabbed unit nonresponse bias—city items, by city size: 2011–12

Nonresponse bias statistics	Large city	Midsize city	Small city
Before noninterview adjustment			
Mean estimated percent relative bias (absolute value)	17.85	6.62	3.79
Median estimated percent relative bias (absolute value)	20.64	4.52	2.74
Percent of variable categories significantly biased	76.47	5.88	17.65
After noninterview adjustment			
Mean estimated percent relative bias (absolute value)	7.62	7.27	2.95
Median estimated percent relative bias (absolute value)	6.13	5.96	1.92
Percent of variable categories significantly biased	23.53	11.76	5.88

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 61. Effects of nonresponse adjustment on bias reduction—SASS city public school teacher (4A) cross-tabbed unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	Large city	Midsize city	Small city
Not significant	—	Significant	0	2	1
Significant	>50 percent reduction	Not significant	7	1	3
		Significant	1	0	0
	10–50 percent reduction	Not significant	2	0	0
		Significant	3	0	0
	<10 percent reduction	Not significant	0	0	0
		Significant	0	0	0
	Increase in difference	Not significant	0	0	0
		Significant	0	0	0

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 62. Summary of SASS city public school teacher (4A) cross-tabbed unit nonresponse bias—city items, by grade level: 2011–12

Nonresponse bias statistics	Primary	Middle	High school	Combined
Before noninterview adjustment				
Mean estimated percent relative bias (absolute value)	7.60	4.99	12.69	9.52
Median estimated percent relative bias (absolute value)	7.57	4.91	9.91	7.94
Percent of variable categories significantly biased	25	25	50	37.5
After noninterview adjustment				
Mean estimated percent relative bias (absolute value)	3.30	2.87	4.24	7.76
Median estimated percent relative bias (absolute value)	2.85	1.86	3.8	7.13
Percent of variable categories significantly biased	12.5	0	12.5	0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Table 63. Effects of nonresponse adjustment on bias reduction—SASS city public school teacher (4A) cross-tabbed unit nonresponse bias: 2011–12

Before nonresponse adjustment	Change in absolute difference	After nonresponse adjustment	Primary	Middle	High School	Combined
Not significant	—	Significant	0	0	0	0
Significant	>50 percent reduction	Not significant	1	2	2	1
		Significant	0	0	1	0
	10–50 percent reduction	Not significant	0	0	1	2
		Significant	1	0	0	0
	<10 percent reduction	Not significant	0	0	0	0
		Significant	0	0	0	0
	Increase in difference	Not significant	0	0	0	0
		Significant	0	0	0	0

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2011–12.

Summary of Conclusions

As shown in tables 58 through 63, the weighting adjustments eliminated some, but not all, significant bias. For city teacher national items, 43 percent of variable categories were significantly biased before nonresponse weighting adjustments, and 5 percent after adjustments. For cross-tabulated items by city size, 76 percent of large city categories, 6 percent of midsize city categories, and 18 percent of small city categories were significantly biased before nonresponse weighting adjustments. After adjustment, 24, 12, and 6 percent of variable categories were significantly biased. For cross-tabulated items by grade level, 25 percent of primary and middle school categories, 50 percent of high school categories, and 38 percent of combined school categories were significantly biased before nonresponse weighting adjustments. After adjustment, 13 percent of primary and high school and no middle school and combined school categories

were significantly biased. The overall conclusion is that weighting adjustments substantially reduced nonresponse bias for national city item categories as well as for categories by grade level. With regard to city size, bias was reduced but not eliminated for large cities, increased for midsized cities, and was substantially reduced for small cities. For this reason, data users should avoid analyzing city public school teachers by city size.

Item-Level Nonresponse

Overview of Methodology

The item bias analysis examined the overall response rate for each item on all SASS data files. The analysis included examining the item response rates by the characteristics listed in exhibit 7 below, 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 NCES publications with “Item response rate fell 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 characteristic where the item response rate was less than 85 percent, a more detailed analysis was done by the characteristics listed in exhibit 7. 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 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 cell had at least 30 interviews.

Exhibit 7. Variables used in the SASS item nonresponse bias analysis: 2011–12

School districts	Private schools and principals
<ul style="list-style-type: none"> • State • Locale • Enrollment • Agency type 	<ul style="list-style-type: none"> • Affiliation • Locale • Enrollment • Number of teachers • Grade level • Region
Public schools, principals, and libraries	Private school teachers
<ul style="list-style-type: none"> • Enrollment • Percent races other than White • Percent free lunch eligible • Locale • Pupil-teacher ratio • Grade level • Region • Number of teachers • Title 1 status • State 	<ul style="list-style-type: none"> • Affiliation • Locale • Enrollment • Number of teachers • Grade level • Region • Subject • Experience • Full or part-time status
Public school teachers	
<ul style="list-style-type: none"> • Enrollment • Percent races other than White • Percent free lunch eligible • Locale • Pupil-teacher ratio • Grade level • Region • Number of teachers • Title 1 status • Subject • Experience • State 	

Table 64 presents the number of items by response rate for each file. Note that two private teacher items were below 70 percent, necessitating a footnote. These two items were Q.39e, (4) “Using Table 3 on page 23, please record all additional content areas and grade ranges in which this certificate allows you to teach and Q.72 “During the current school year, do you, or will you, earn any additional compensation from this school system based on your students’ performance (e.g., through a merit pay or pay-for-performance agreement)?—How much?”

Table 64. SASS number of items, by response rate for each file: 2011–12

File	Total items	Number of items 95 percent or above	Number of items 85.0 to 94.9 percent	Number of items 70.0 to 84.9 percent	Number of items below 70 percent
School districts	117	92	25	0	0
Public schools	184	126	51	7	0
Private schools	261	178	67	16	0
Public school principals	183	176	5	2	0
Private school principals	178	158	17	3	0
Public school libraries	54	44	10	0	0
Public school teachers	295	236	42	17	0
Private school teachers	305	216	66	21	2

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

Summary of Conclusions

School Districts

No items had a response rate below 85 percent, so there was no need for a closer examination.

Public Schools

Seven items had a response rate below 85 percent, requiring a closer examination. A closer examination of these items revealed no substantial evidence of a bias.

Private Schools

Sixteen items had a response rate below 85 percent, requiring a closer examination. A closer examination of these items revealed no substantial evidence of a bias.

Public School Principals

Two items had a response rate below 85 percent, requiring a closer examination. A closer examination of these items revealed no substantial evidence of a bias.

Private School Principals

Three items had a response rate below 85 percent, requiring a closer examination. A closer examination of these items revealed no substantial evidence of a bias.

Public School Libraries

No items had a response rate below 85 percent.

Public School Teachers

Seventeen items had a response rate below 85 percent, requiring a closer examination. A closer examination of these items revealed no substantial evidence of a bias.

Private School Teachers

Twenty-one items had a response rate below 85 percent, requiring a closer examination. A closer examination of these items revealed no substantial evidence of a bias.

Chapter 7. Data Processing

Data processing includes all activities related to the management of the sampled cases and their outcomes and those activities involved in capturing, transmitting, and editing the data provided by the respondents. As a result, the very first data processing step is to assign an appropriate outcome code for each case. Given the various ways respondents could have provided the survey information (e.g., paper questionnaire, telephone, internet questionnaire, in-person interview), the Census Bureau also had to use a variety of methods to assign the appropriate outcome code for each questionnaire.

All paper questionnaires that were received in Jeffersonville, Indiana were transmitted to the Census Bureau clerical processing staff who assigned a check-in code using the Automatic Tracking and Control (ATAC) system. The data from completed paper questionnaires were captured (converted from paper to electronic format) and sent to Census Bureau analysts in weekly waves of reformatted SAS datasets, by questionnaire type. The data from the SASS teacher questionnaires completed on the Internet were retrieved daily from the instrument by Census Bureau programming staff and assigned a check-in code (“net code”) based on the items completed by the respondent. These data were combined with the reformatted paper questionnaire data into SAS datasets for data review, and a status code was assigned to each record based upon its ATAC code or net code. Field Representatives (FRs) used the Census Bureau’s Case Management system to track cases in their workload as well as assign an outcome code indicating the status (e.g., unable to contact, refusal, out of scope, etc.) of each questionnaire.

Data processing procedures were created specifically for each type of questionnaire: public school, private school, school district, public school principal, private school principal, public school teacher, private school teacher, and library media center. Data were not mixed across these types, with one exception. The Public School Questionnaire (With District Items) (SASS-3Y) included questions for the school district and the school. Therefore, during processing, the data from the SASS-3Y were split from each other and combined with the School Questionnaire (SASS-3A) or the School District Questionnaire (SASS-1A) as appropriate. This change was made early in the data reformatting stage of data processing so that data from the SASS-3Y were not processed independently.

Aside from the exception noted above, each file contained data from a single questionnaire type. Although the files had different details, the editing and imputation processes followed the same structure. Once the data from all the different collection mechanisms were combined into SAS data sets with their status codes, Census Bureau analysts began the data editing/review process by assigning a preliminary interview status code. Once the preliminary interview status code was assigned, the analysts ran the data file through a series of computer edits to identify inconsistencies, assign a final interview status to each case, and impute items that were still “not-answered” after taking into account item responses that were blank due to a questionnaire skip pattern. Once all of the “not-answered” items were imputed during the imputation stage and analysts had reviewed all data, the final data release files were prepared. These data files are the source files for the documentation files and restricted-use files.

Questionnaire Check-in

Check-in of Paper Questionnaires

Respondents were encouraged to complete and mail back all forms sent to the school or school district. Questionnaires received by the National Processing Center (NPC) were immediately checked into the ATAC system by clerical staff. At this stage, questionnaires received an outcome code of complete if any items on the questionnaire were answered. Additional outcome codes that were set included refusals,

blanks, duplicates, Undeliverable as Addressed (UAA), and various out-of-scope codes.¹⁶ The questionnaires were then grouped into batches by questionnaire type and interview status (i.e., completes, noninterviews, and out-of-scope for the survey), and those classified as “complete” were sent on for data capture. These outcome codes assigned during check-in were later used to determine the status code of each case.

For cases that did not mail in the paper questionnaire during the initial phase of data collection, the Census Bureau had two follow-up operations. One was a telephone call operation and the other was an in-person visit by a field representative (FR). The aim of both of these operations was to encourage the respondent to complete the paper questionnaire. All paper questionnaires received by NPC during these operations were checked-in as described above.

Some of the cases that went through the telephone follow-up data collection process completed the questionnaire over the phone with the Telephone Center (TC) interviewers. In these later phases, the telephone centers used a modified ATAC system, along with an internal paper system, to track the telephone interview questionnaires.

If a questionnaire was still outstanding following telephone follow-up, the case was sent to Field. FRs had discretion over the method by which respondents returned their forms. The FR 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 NPC. If the FR picked up the completed questionnaires at the school, he or she would then send the forms to NPC.

Questionnaires completed over the phone or picked up by an FR were grouped into batches of 100 by questionnaire type and shipped to the clerical processing staff at the NPC for ATAC check-in and data keying.

The Regional Office Survey Control (ROSCO) system was not used for the school district questionnaires (SASS-1A). These questionnaires were tracked by the Jeffersonville TC (JTC) and the various regional offices (ROs) manually, using a specially designed series of spreadsheets. When the school district questionnaires were mailed to the NPC, they were checked in using the ATAC system.

Check-in of Internet Questionnaires

Approximately 66 percent of teachers who completed a SASS public or private school teacher questionnaire completed the internet version of the questionnaire. Data from the SASS teacher questionnaires completed on the Internet were retrieved daily from the instrument by Census Bureau programming staff and assigned a check-in code (“net code”) based on the items completed by the respondent; this net code, along with the ATAC outcome code discussed above, was later used to determine the status code of each teacher record.

¹⁶ The following out-of-scope codes apply to all SASS questionnaire types: school/district closed, not a school/district, closed and may open later, temporarily without students, and duplicate school in sample. The following out-of-scope codes apply to all SASS questionnaire types except the District Questionnaire: wrong grade range, and school wrongly classified. The following out-of-scope codes apply only to the SASS teacher questionnaires: teacher never worked at this school, teacher no longer works at this school, not a teacher/does not teach a regularly scheduled class, teacher deceased, and teacher moved outside of the United States. The following out-of-scope code applies only to the SASS principal questionnaires: no principal/headmaster/school director. The following out-of-scope code applies only to the SASS Library Media Center Questionnaire: no library media center.

The internet instrument was programmed so that internet respondents could not skip over critical items (those items that must be answered in order for a questionnaire to be considered complete). On the last screen of the internet questionnaire, the respondent was given the option to submit the completed questionnaire. The internet questionnaires were assigned a check-in code of complete as long as the respondent completed all of the critical items plus ten percent of the remaining items and successfully submitted the completed survey. All other situations where the respondent accessed the instrument but did not complete the questionnaire were considered to be partially complete and were assigned an interview status code during the preliminary and final interview status recode (ISR) stages of data processing that was dependent upon which items the respondent did or did not answer. For further information about the preliminary and final ISR classification, refer to the Data Review section of this chapter.

Data Capture and Imaging

Data Capture of Paper Questionnaires

The 2011–12 SASS paper questionnaire data were captured using a combination of manual data keying and imaging technology, both of which were facilitated by the Integrated Computer Assisted Data Entry (iCADE) system. The first step in the iCADE system is imaging. The images are then used as the source for electronic data capture, manual keying, and analyst data review.

When the SASS paper questionnaires were received and checked-in by the Census Bureau clerical processing staff as “complete” (i.e., any items on the questionnaire were answered), they were entered into the iCADE system for control purposes and grouped into batches by questionnaire type for data capture and imaging. The batches of questionnaires were disassembled using a guillotine, and each duplex page was scanned. At the conclusion of the scanning process, the iCADE system matched the number of imaged pages with the number of pages expected for each questionnaire type. If there was a discrepancy between the images scanned and the number of pages expected, a series of screens was presented to clerical staff, enabling a clerk or supervisor either to accept the batch as it was or to pull it from processing until the issue was resolved.

The batches that were accepted after the scanning process were sent to the next stages of data capture: auto registration, Optical Mark Recognition (OMR), and manual registration. During auto registration, all of the scanned images were read into the server by their barcodes, which then identified each page in the batch. Once the pages were identified, the OMR server could then read and recognize the presence of answer marks in the boxes next to pre-coded, categorical items. The OMR server was programmed with the locations of the answer boxes for pre-coded items prior to data capture. The program automatically entered the appropriate data into the OMR script file for that questionnaire.

The automated processes (registration and OMR) were not able to complete every paper questionnaire. Certain circumstances could cause them to fail. For example, an unreadable barcode or a checkbox ambiguity would be flagged by the program for intervention. Batches that could not be completed in the automated processes were directed to a manual registration phase of data capture. This process included showing the images to clerical staff, enabling a clerk or supervisor to resolve the issue by manual repair.

The next stage of data capture was a data quality check of the OMR responses, referred to as the Optical Mark Analysis (OMA) Sample Verification. During this check, a percentage of blank OMR fields and nonblank OMR fields were sampled so that clerks could verify the output from OMR and all sampled fields were added to an OMA data file. This OMA data file was then sent to a verification clerk who

verified the validity of the OMA output. The verification clerk was presented with an image of the sample fields and was instructed to enter the response (if any) that he or she found in each field.

The OMA process included the computation of error rates for both the blank and nonblank fields. An error occurred when the clerk's field verification differed from the OMR recognition. When differences were found, the batch sample was forwarded to a second clerk, an Adjudicator, who was then required to provide an interpretation of the marks with differences. When the Adjudicator had made a decision and the data had been adjusted if necessary, the batch was marked as finished and was then checked for batch completeness.

Once all of the OMR data were captured correctly and verified as necessary, all write-in fields (e.g., open-ended, numeric, and character fields) were captured by a process called Key from Image (KFI). First, the server was programmed with the location of expected answer marks for items that were not precoded. Then, clerical staff, called keyers, viewed the write-in fields and manually typed (keyed) the data present in the field or entered a code to indicate the field was blank.

The next stage of data capture was a data quality check of the KFI responses, referred to as Analyze KFI. During this check, a percentage of non-blank KFI fields were sampled so that clerks could verify the output. A random number was generated at the starting point for non-blank fields within a batch. Then, the system began at the randomly generated number and took every X'th field for the non-blank fields and all sampled fields were added to a KFI data file. This KFI data file was then sent to a verification clerk who would verify the validity of the KFI output. The verification clerk was presented with an image of the sample fields and was instructed to enter the response, if any, that he or she found in each field. This clerk was not provided with the data entered by the original keyer.

The system compared the KFI entry from the first entry and the verification entry. The fields with differences were flagged in the KFI script file. In addition, the system computed error rates for the non-blank fields. An error occurred when the clerk's field verification differed from the original KFI entry. Errors were classified into a number of categories, based upon the keying error situation.

For these cases where there was a difference, the batch KFI script file was forwarded to a third clerk, an Adjudicator, who was required to provide an interpretation of the marks with differences. The Adjudicator could 1) agree with the keyer, 2) agree with the verifier, or 3) provide his or her own interpretation of the respondent's answer. The Adjudicator then classified the error into a number of categories based on the keying error situation; this classification served as the final classification. Once the Adjudicator had made a decision and the data had been adjusted if necessary, the batch was marked as finished and released to Census Bureau analysts.

Data Capture of the Teacher Internet Questionnaires

Data collected in the teacher internet instrument did not go through a separate data capture operation. Internet response data were saved by the system in electronic format, so they did not require a data capture process.

Reformatting

After SASS questionnaire data were captured and transmitted (or just transmitted in the case of the internet questionnaire), the resulting output files of raw data were reformatted into SAS datasets in order to facilitate the remaining data processing. Once the waves of output files were reformatted, they were sent to Census Bureau analysts weekly for data review.

Once the reformatted SAS datasets for the data collected on the Public School Questionnaire (With District Items) (SASS-3Y) were created, some additional reformatting steps were required. The SASS-3Y was distributed to the following types of schools:

- school district institutions with only one school;
- public charter schools operating within regular public school districts;
- public charter schools operating within school districts only containing charter schools;
- independent charter schools that are not affiliated with regular school districts; and
- state-run schools.

The SASS-3Y included items from both the School Questionnaire and the School District Questionnaire. This questionnaire was specifically designed for schools with no known school district or schools which function as the district.¹⁷ Therefore, district-level data were collected on either the SASS-3Y or the School District Questionnaire (SASS-1A).¹⁸ Likewise, public school-level data were collected on either the SASS-3Y or the Public School Questionnaire (SASS-3A).

Following the reformat of the 1A, 3A, and 3Y data, the school district items that appeared on the 3Y questionnaire were split out from the 3Y data file and included with data from the School District Questionnaire. The school items that appeared on the 3Y questionnaire were split out from the 3Y data file and were included with data from the Public School Questionnaire. Data remained on these files throughout all stages of data processing, until the final files were created.

Data Review

The overall goal of the data review process was to make sure that the final datasets contained clean, accurate data and that there were no “not answered” (.n) items on any questionnaire records in the final data files. Each phase of processing had an associated review of the data where analysts looked at the frequencies data, source code by source code (or groups of source codes, as necessary) in order to observe the changes that occurred in the data throughout the different stages of data processing. These data processing steps, which are outlined and discussed further in this document, include: a preliminary interview status classification; a series of computer edits that check that the data are in range, consistent throughout a questionnaire record, follow the correct skip pattern, and logically follow from responses on

¹⁷ All of the SASS-3A items appeared on the SASS-3Y questionnaire, while not all of the SASS-1A items appeared on the SASS-3Y questionnaire. Items that pertain only to school districts were not included on the SASS-3Y. Specifically, these items include those concerning: district-wide staff members; principal salary schedules; school choice within districts; and migrant education. In addition, there was one item that appeared on the SASS-3Y but did not appear on either the SASS-1A or SASS-3A. A table containing the specific district items that were not included on the SASS-3Y can be found in appendix M.

¹⁸ Charter schools operating within regular public school districts were administered a SASS-3Y questionnaire, and their dependent districts were administered a SASS-1A questionnaire. Therefore, district level data were collected twice for these schools. Their district’s SASS-1A district data were processed with the SASS-1A district data and published on the Public School District data files. The district data collected on the SASS-3Y were processed independently and are published on the forthcoming Charter School Analysis File. There were a few exceptions to this, however. Four dependent charter schools within two regular districts that contained only charter schools were included in the school sample. Due to operational error, the associated districts themselves were not sampled or mailed a District Questionnaire. In addition, there were 40 dependent charter schools sampled that were the only school sampled from their associated regular school district. Due to operational error, the associated districts were not mailed a District Questionnaire. As a result, these 42 districts were classified as noninterviews on the Public School District data file.

related SASS questionnaires; a final interview status classification; and an imputation stage, during which any remaining “not answered” survey items were imputed. At every step in which data were changed by a computer edit, an edit flag was set to indicate the nature of the change. Similarly, imputation flags were set when data were added to indicate that data were imputed. As part of data review, analysts examined those changes.

The primary objectives of the data review were to validate that the processing programs were working as intended and identify suspicious values. By reviewing the frequency counts of data items at each stage of data processing, analysts were able to make sure that the edit and imputation programs were working correctly; that is, that they were doing what analysts intended for them to do. The data review also helped to ensure that the imputed values were consistent with the other data on the questionnaire record.

Analysts used the frequencies of each data item at each stage of data processing to identify 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). In the early stages of processing, analysts investigated anomalies by visually examining the image of the paper questionnaire page. Analysts verified that the data were keyed correctly and looked for additional information the respondent may have written on the questionnaires outside of the answer spaces provided. Analysts updated the files with corrected information as appropriate.

The 2011–12 school year was a survey year for both the SASS and the Private School Survey (PSS). In order to minimize the burden for private schools selected for the SASS sample, the SASS Private School Questionnaire included all of the PSS questions, in addition to the necessary SASS school data. PSS items are defined as any item collected for the PSS that also remain on the SASS private school record. Items 1, 2, 4, 5, 6, 8, 10–19, 34–37, 73–74, and 76–79 were all PSS items and were processed (edited and imputed) with the PSS data files then copied back to the SASS private school data file. The edit and imputation flag values that reside on the SASS private school documentation file are the same for the PSS items as for the SASS items. The edit flags are not included on the restricted-use file.

Preliminary ISR Classification

The preliminary Interview Status Recode (ISR) was a preliminary determination of whether each case was an interview, a non-interview, or was out-of-scope for SASS. In general, cases with an “out-of-scope” outcome code that had been assigned during data collection 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 and cases where the district or school had refused were classified as noninterviews (ISR=2). A more detailed discussion of interview status can be found in Chapter 6.

Computer Edits

After the preliminary ISR classification, all files were submitted to a series of computer edits.¹⁹ These edits consisted of a range check, a consistency edit, a blanking edit, and a logic edit.

¹⁹ The “computer edits” referenced through out this chapter refer to the range checks, consistency edits, blanking edits, and logic edits that took place after the data were collected and reformatted into SAS datasets. They do not include the edits that were embedded into the teacher internet instrument, which included range checks and consistency edits that would prompt the respondent if a response they entered was out of range or inconsistent with other entries. The teacher questionnaires completed in the internet instrument still underwent the computer edit stage of processing as described throughout this chapter. However, their data went through a more stringent filter before data processing began at the time of respondent questionnaire completion.

Creating Edit Flags

Because the consistency edits and logic edits made actual changes to the existing SASS data, a series of computer edit flags were created to indicate such changes. These flags enabled analysts to keep track of how much editing was occurring overall, along with what kinds of changes and at which stage of processing these changes were made. The definitions for each flag used during the consistency and logic edits are described in exhibit 8 below.

Exhibit 8. Edit flags created in processing: 2011–12 SASS questionnaires

Processing step	Flag variables	Flag values and definitions
Computer edit	ef_[source code] =	<p>0 Item was not edited during the consistency or logic edits.</p> <p>1 Item was edited during only the consistency edits.</p> <p>2 Original value was ratio adjusted during the logic edit.</p> <p>3 Data were added using data from other variables in same questionnaire.</p> <p>4 Data were added using data from another associated questionnaire (principal record, district record, school record or TLF).</p> <p>5 Data were added using data from the sample frame file (CCD for public nonteachers, PSS for private nonteachers, or TLF).</p> <p>12 Item was edited during the consistency edits, and item was ratio adjusted during the logic edit.</p> <p>13 Item was edited during the consistency edits, and data were added using data from other variables in same questionnaire.</p> <p>14 Item was edited during the consistency edits and data were added using data from another associated questionnaire (principal record, district record, school record or TLF).</p> <p>15 Item was edited during the consistency edits and data were added using data from the sample file (CCD for public nonteachers, PSS for private nonteachers, or TLF).</p>

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

The edit flags created in data processing are not included on the restricted-use data files.

Range Check

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. Entries that were deleted as a result of range checks had data added during the logic edit and imputation stages of data processing. The edit flags described above do not reflect the deletion of entries due to range checks.

Consistency Edit

The consistency edits identified inconsistent entries within each case and, whenever possible, corrected them. If the inconsistencies could not be corrected, the inconsistent values entries were deleted. These inconsistencies were:

1. within items (e.g., if the response to the “Yes/No” part of School Questionnaire item 25—whether or not any students were enrolled in the 12th grade during last school year (2010–11)—was “No,” but the number of students enrolled in the 12th grade on October 1, 2010 was greater than zero for the second part of the item); or
2. between items (e.g., if School District Questionnaire item 16 indicated that there were fewer days in the normal contract year for a principal in the school district than days in the school year for most students in the district in item 7).

In addition, the consistency edits 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 enrollment 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.

Blanking 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. Entries that were assigned the “not answered” (.n) code had data added during the logic edit and imputation stages of data processing. The edit flags do not reflect the deletion or assignment of the “not answered” (.n) due to blanking edits.

Logic Edit

Data were added to questionnaire records during the logic edits, which filled in some items where data were missing or incomplete using other information on the same questionnaire or from other related data sources. The four main types of edits that occurred during the logic edits are described in further detail below.

- *Editing data by ratio adjusting the original value.* 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 School Questionnaire item 5 did not sum to the reported total enrollment in item 2, then 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.
- *Editing data using other items on the same SASS questionnaire record.* Based on entries from related items on the same SASS questionnaire record, assumptions were made about how the respondent might have answered items. For example, item 4 on the Teacher Questionnaire asks how much the respondent works as a teacher in any of grades K–12 or comparable ungraded levels at this school. If this item was left blank by the respondent, and the respondent indicated that he or she is required to work at least 35 hours during a typical full week to receive base pay in item 55, then item 4 was marked “full time” by the logic edit.
- *Editing data using related items from an associated SASS questionnaire.* Information from an associated SASS questionnaire record was sometimes used to add data to the applicable record during the logic edits. For example, item 28 on the Principal Questionnaire asks if the school has students enrolled in the third grade. If this item was left blank on the Principal Questionnaire, then the response from the associated School Questionnaire item 1, which asks which grades are offered at the school, was used to add data to the principal record.

- *Editing data using information from the sample file.* Information from the sample file was sometimes used to add data to the applicable record during the logic edit. For example, item 5a on the School District Questionnaire asks whether the district enrolls any prekindergarten students. If the respondent left this item blank and the sample file indicated that the lowest grade offered by the district was not prekindergarten, then item 5a was marked “no” by the logic edit.

Values filled in by the logic edits were valid responses because they were within the range of acceptable values that was set prior to the administration of SASS and were consistent with the respondent’s answers to related items.

The only records that were put through the series of computer edits were those classified as interviews in the preliminary ISR. The tables in appendix N show the number of edit changes made to entries for each of the variables within each data file. These changes are summarized in table 65 below.

Table 65. Summary of changes made to variables in the consistency and logic computer edits, by data file: 2011–12

Data file	Total number of complete interviews (ISR = 1)	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	4,641	132	44	77	11	0
Public School Principal	7,512	188	47	131	1	9
Private School Principal	1,723	183	46	122	6	9
Public School	7,481	197	36	129	31	1
Private School	1,758	308	72	189	16	31
Public School Teacher	37,497	378	194	163	10	11
Private School Teacher	4,523	403	225	156	16	6
Public School Library Media Center	7,003	54	4	46	4	0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

Final Interview Status Edit

After the range checks, consistency edits, blanking edits, and logic 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 Survey (SASS-1A)

A case was classified as **out-of-scope** (ISR=3) if:

- the agency named on the questionnaire label was not a school district or other local education agency; or
- the district or local education agency 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.

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 (D0418); and
- the total number of FTE teachers employed by the district was reported (D0440); and
- there were data in at least 10 percent of the remaining items (13 items for the School District Questionnaire, 10 items for the Public School Questionnaire [With District 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. School Principal Surveys (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 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 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 two of these five items:
 - licensure or certificate (A0038);
 - gender (A0320);
 - Hispanic origin (A0321);
 - race (A0322—A0326);
 - year of birth (A0330); and
- there were valid entries in at least one of these three items:
 - bachelor's degree (A0055);
 - master's degree (A0055);
 - highest degree earned (A0058); and
- there were data in at least 10 percent of the remaining items (18 items for both the Principal Questionnaire and the Private School Principal Questionnaire).

A case was classified as a **noninterview** (ISR=2) if an eligible case did not meet the requirements to be an interview case.

3. Public School Survey (Forms SASS-3A and -3Y)

A case was classified as **out-of-scope** (ISR=3) if:

- the school named on the questionnaire was not in operation during the 2011–12 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 K–12 student enrollment was reported (S0039); and
- the type of school was reported (S0055); and
- the number of teachers working at the school was reported (full- and/or part-time teachers was reported in S0150 and/or S0151, or total teachers was reported in S0152); and
- there were data in at least 10 percent of the remaining items (19 items on both the School Questionnaire and the Public School Questionnaire (with District 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 Survey (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 2011–12 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 total student enrollment was reported (S0734); and
- the number of teachers working at the school was reported (full- and/or part-time teachers was reported in S0150, S0820–S0823, or total teachers was reported in S0152); and
- there were data in at least 10 percent of the remaining items (29 items).

A case was classified as a **non-interview** (ISR=2) if an eligible case did not meet the requirements to be an interview case.

5. Teacher Surveys (Forms SASS-4A and -4B)

A case was classified as **out-of-scope** (ISR=3) if:

- the school from which the teacher was sampled was classified as out-of-scope by the Screener instrument; or
- 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; or
- 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 U.S.

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 his/her position at the school (T0025) or his/her full- or part-time teaching status in the school (T0028); and
- at least one grade level of students taught by the respondent was reported (T0070-T0084); and
- the respondent reported his/her main teaching assignment field (T0090 or T5090); and
- the respondent reported either the year that he/she began teaching full- or part-time teaching at the elementary or secondary level (T0040) or the total number of years he/she worked as a full- or part-time teacher at the elementary or secondary level (T0042); and
- the respondent reported whether he/she had a college degree (T0160 or T0170 or T0180-T0201); and
- there were valid entries in at least four of the following eight items:
 - gender (T0525);
 - Hispanic or Latino origin (T0527);
 - race (T0528-T0532);
 - year of birth (T0534); and
- there were data in at least 10 percent of the remaining items (32 items for the Teacher Questionnaire, 34 items for the Private School Teacher Questionnaire).

A case was classified as a **noninterview** (ISR=2) if an eligible case did not meet the requirements to be an interview case.

6. School Library Media Center Survey (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
- information about library staff was reported as a valid entry in at least one of these seven items:
 - paid state-certified library specialists (M0051 or M0052);
 - paid professional staff (M0055 or M0056);
 - aides or clerical staff (M0059 or M0060);
 - no paid staff (M0062); and
- There were data in at least 10 percent of the remaining items (five 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 66.

Table 66. Preliminary and final interview status recode (ISR) counts and percent change, by data file: 2011–12

Data file	Sample size	Preliminary ISR			Final ISR			Percent change in ISR		
		Inter-views	Non-inter-views	Out of scope	Inter-views	Non-inter-views	Out of scope	Inter-views	Non-inter-views	Out of scope
Public School District	5,798	4,720	897	181	4,641	976	181	-0.0167	0.0881	0.0000
Public School Principal	11,000	7,539	2,808	653	7,512	2,822	666	-0.0036	0.0050	0.0199
Private School Principal	3,000	1,733	945	322	1,723	953	324	-0.0058	0.0085	0.0062
Public School	11,000	7,506	2,849	645	7,481	2,874	645	-0.0033	0.0088	0.0000
Private School	3,000	1,763	952	285	1,758	957	285	-0.0028	0.0053	0.0000
Public School Teacher	51,062	37,909	10,958	2,195	37,497	11,332	2,233	-0.0109	0.0341	0.0173
Private School Teacher	7,066	4,599	2,089	378	4,523	2,163	380	-0.0165	0.0354	0.0053
Public School Library Media Center	11,000	7,009	2,615	1,376	7,003	2,613	1,384	-0.0009	-0.0008	0.0058

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Documentation Data Files,” 2011–12.

After the final ISR edits, there were still several cases with “not-answered” values on the data files for some variables. Values were created for these items in the next step of the processing—imputation.

Imputation Procedures

During the computer edit stage of data processing, extraneous entries were deleted in situations where skip patterns were not followed correctly and the “not answered” (.n) code was assigned to the items that should have been answered but were not. In addition, some data were added or modified based on other items on the same or an associated SASS questionnaire record. The remaining “not answered” items were eligible for imputation after the computer edit stage of processing was complete. SASS is a fully-imputed survey, meaning that all “not answered” items that remained after the computer edits were filled with data during imputation.

In order to fill “not answered” items with data, questionnaires were put through an imputation stage of processing during which two main approaches were used. In one approach, “hot deck” imputation, data were imputed from items found on questionnaires of the same type that had certain characteristics in common. These records are called “donor records.”

If the donor, or “hot deck,” imputation was unsuccessful in finding an appropriate donor, the second method of imputation was applied. The second method is known as mean or mode imputation, during which data are imputed from the mean or mode of data found on questionnaires of the same type among respondents who have certain characteristics in common (“donor groups”). This mean and mode imputation was implemented only as a final method of imputation and on an as-needed basis.

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 not imputed. In addition, none of the write-in items (e.g., open-ended items) were imputed from donor records. Many of the write-in items ask for information that is very specific to each respondent. For instance, items 8b and 8c on the Teacher Questionnaire are open-ended write in items that ask information about the respondent’s occupation during the previous school year, such as what was the specific occupation and what were the usual activities or duties at that job. Items such as these were not imputed and were left unanswered on the final data files (i.e., given a value of -9 for missing data).

Once the imputation stage was complete, there were no more unanswered items other than the write-in items (e.g., open-ended items) that are not imputed. At this point, Census Bureau analysts performed checks on the imputed data to make sure that they were consistent with other data on the same record. For a small number of cases where imputed data were either inconsistent with other data on the same record or appeared to be outlier data, analysts made adjustments to the imputed data during a postimputation data review process.

Creating Imputation Flags

Flags that were used in the imputation stage of processing were different from those used for the computer edits in that they were in the format of `f_[sourcecode]` = (value of 0, 7, 8, or 9). The definitions for each imputation flag used in the 2011–12 SASS are described in exhibit 9.

Exhibit 9. Imputation flags created in processing: 2011–12 SASS questionnaires

Processing step	Flag variables	Flag values and definitions
Imputation specs	f_[source code] =	0 Data reported. Not imputed.
		7 Item was imputed by using data from the record for a similar case (donor).
		8 Item was imputed by using the mean or mode of data for groups of similar cases.
		9 Data value was adjusted during analysts' postimputation review of data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Restricted-Use Data Files," 2011–12.

The imputation flags are included on the restricted-use data files. By looking at the flag values, data users are able to identify which items were imputed and how the imputations were performed. The data user can use this imputation flag to decide whether or not to include imputed data in his or her analysis and which types of imputed data to employ.

Hot Deck Imputation

During 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 metropolitan center, these variables were used to find another respondent in a school with similar characteristics.

Each item on each questionnaire was assigned a group of matching variables along with a routine describing the hierarchy of importance of each of the matching variables in determining an appropriate donor. The matching variables were chosen and ordered to ensure that the donors chosen were the most similar to the record with the unanswered data and therefore the best donors possible. All public school sector donor records needed to be from the same state or group of states²⁰ as the record with missing data. Similarly, all private school sector donor records needed to have the same religious affiliation, or matching strata, as the record with missing data.

For example, on the Principal Questionnaire, item 54 asks for the principal's birth year. If the respondent left this item blank, then the most important variable in predicting its value would be the number of years as a principal in any school (YEARPRIN), followed by the grade levels offered by the school (NLEVEL). Therefore, the ordered matching variables were STGROUP, YEARPRIN, NLEVEL.

²⁰ STGROUP classifies states into 23 groups according to their geographic locations and school system similarities. STGROUP was used, rather than the school's specific state, because there are occasional problems with finding appropriate donor records for records with unanswered items for schools in small states.

However, item 25 concerns the frequency at which a number of problems occur at the school, an area in which the number of years as a principal would not be useful predictors. Instead, the grade levels offered by the school (NLEVEL) would be the most important indicator, followed by the type of school at which the respondent served as principal (TYPE), and the proximity of the respondent's school to a metropolitan center (URB). Therefore, the ordered matching variables for this item would be STGROUP, NLEVEL, TYPE, URB. The tables in appendix O show the complete list of matching variables used during 2011–12 SASS hot deck imputation for each data file, along with their definitions and items for which they were used as matching variables.

The matching variables of the donor records had to perfectly match those of the record undergoing imputation. When there were not enough donor records within any given stratification cell of perfectly matched matching variables, the matching variable(s) of least importance was dropped, and the imputation program began a new search for a donor record based upon the subset of matching variables established as variable(s) were dropped in sequence.

All public school sector donor records needed to be from the same state or group of states as the record with missing data and all private school sector donor records needed to have the same religious affiliation as the record with missing data; therefore, these variables could never be dropped when searching for a donor. If the matching variables were reduced to state group or religious affiliation and no donor was found, then the value was imputed based on the mean or mode of matching groups of respondents. Once the donor relationship was established, the donor record provided data items either directly or indirectly to the imputed record. Directly meant that the donor's response to an item was imputed to the record undergoing imputation; this occurred most frequently with categorical items. Indirectly meant that a combination of donor's replies, most commonly a ratio, was used to derive a response for the record undergoing imputation. Eight main types of commonly-used direct and indirect donor relationships were defined and used during hot deck imputation, and these are described in further detail below.

- *Simple Imputation.* During the most basic type of imputation, known as simple imputation, the missing item was imputed directly from that item on the donor record. For example, item 33 on the School District Questionnaire asks if training is available to prepare staff members in the district to teach in fields with current or anticipated shortages, at no cost to themselves. If this item was still unanswered upon entering the imputation stage of data processing, then item 33 was imputed with the response from the donor record and flagged accordingly.
- *Simple Imputation for Multiple Items.* Simple imputation for multiple items was an expansion of simple imputation, where a series of missing items were imputed directly from those items on the donor record. For example, item 6 on the Principal Questionnaire asks whether the principal held a variety of positions at a school prior to becoming a principal. The item has seven parts, a through g, which include the positions of department head, curriculum specialist or coordinator, assistant principal or program director, guidance counselor, library media specialist/librarian, athletic coach/athletic director, or sponsor for student clubs or debate teams. If any or all parts of this item were still unanswered upon entering the imputation stage of data processing, then they were imputed with the response from the donor record and flagged accordingly.
- *Simple Imputation with Blanking Edit, then Simple Imputation.* Items requiring simple imputation with blanking edits, then simple imputation had two parts. The first part was a simple imputation, where the initial missing item (an item with a yes/no response, referred to as a “screener” item) was imputed using simple imputation, directly from that item on the donor record. Then, depending on the imputed response, the subsequent item(s) were either imputed using simple imputation (when “yes” is imputed to the screener item) or blanked (if “no” is imputed to the

screener item). This type of imputation occurs for items where this skip pattern is present. Items following a different skip pattern likely fell into the “Complex Imputation” donor relationship described later in this section.

For these items, there were always two donors established. The first donor was used when both parts (the “screener” portion and the subsequent items) of the imputed item were missing. The second donor was used when the respondent answered the screener item with a “yes” response, but the subsequent item(s) were missing and needed to be imputed. The method of imputation for this second donor was simple imputation.

For example, item 14a on the School Questionnaire asks if the school uses any special requirements when admitting students other than proof of immunization, age, or residence. If the response to 14a is “yes,” then item 14b asks whether the school uses a variety of requirements for admission. This item has eight parts, which include student scores on an admission test, student scores on a standardized achievement test, academic record, special student needs, special student aptitude, skills, or talents, a personal interview, recommendations, and a signed school-parent compact. If both 14a and 14b were unanswered upon entering the imputation stage of data processing, then item 14a was imputed with the response from the donor record and flagged accordingly first. If “No” was imputed to 14a, then all parts of item 14b were assigned the valid skip code. However, if “Yes” was imputed to 14a, then all parts of item 14b were imputed with the responses from the donor record and flagged accordingly.

- *Ratio Imputation.* During ratio imputation, the missing item was imputed using the donor's ratio of that item to some predetermined related item (“ratio variable”) and applying it to that same related item on the record being imputed. For example, item 18b on the School Library Media Center Questionnaire asks how many of the computer workstations in the library media center have access to the Internet. If this item was still unanswered upon entering the imputation stage of data processing, then item 18b was imputed by applying the ratio of the computers with internet access (item 18b) to total computers for student or staff use in the library media center (item 18a) from the donor record to the total computers for student or staff use (item 18a) on the record undergoing imputation and flagged accordingly.
- *Ratio Imputation for Multiple Items.* Ratio imputation for multiple items was an expansion of basic ratio imputation, where a series of missing items were imputed using the donor's ratio of each of those items to some predetermined related item (“ratio variable”) and applying these ratios to that same related item on the record being imputed. For example, item 39e on the Private School Questionnaire asks how many full- and part-time staff held the position of librarians or library media specialist in the school. If one or both parts of this item were still unanswered upon entering the imputation stage of data processing, then they were imputed by applying the ratio of the number of full- or part-time librarians or library media center specialists (item 39e) to total teachers (item 37, total) from the donor record to the total teachers (item 37, total) on the record undergoing imputation and flagged accordingly.
- *Simple Imputation with Blanking Edit, then Ratio Imputation.* Items requiring simple imputation with blanking edit, then ratio imputation had two parts. The first part was a simple imputation, where the initial missing item (usually an item with a yes/no response, referred to as a “screener” item) was imputed using simple imputation, directly from that item on the donor record. Then, depending on the imputed response, the subsequent item(s) were either imputed using ratio imputation (when “yes” was imputed to the screener item) or blanked (if “no” was imputed to the screener item). This type of imputation occurred for items where this skip pattern was present.

Items following different skip patterns likely fell into the “Complex Imputation” donor relationship.

For these items, there were always two donors. The first donor was used when both parts (the “screener” portion and the subsequent items) of the imputed item were missing. The second donor was used when the respondent answered the screener item with a “yes” response, but the subsequent item(s) were missing and needed to be imputed. The method of imputation for the second donor was ratio imputation.

For example, item 5a on the School District Questionnaire asks if the district enrolls any prekindergarten students. If the response to 5a is “yes,” then item 5b asks how many prekindergarten students were enrolled in the district around the first of October. If both 5a and 5b were unanswered upon entering the imputation stage of data processing, then item 5a was imputed with the response from the donor record and flagged accordingly first. If “No” was imputed to item 5a, then item 5b was assigned the valid skip code. However, if “Yes” was imputed, then item 5b was imputed by applying the ratio of prekindergarten students (item 5b) to total students enrolled in the district (item 2) from the donor record to the total students enrolled in the district (item 2) on the record undergoing imputation and flagged accordingly.

- *Ratio Imputation with Blanking Edit, then Ratio Imputation.* Items requiring ratio imputation with blanking edit, then ratio imputation have two parts. The first part was a ratio imputation, where the initial missing item (referred to as a “screener” item) was imputed using the donor's ratio of that item to some predetermined related item (“ratio variable”) and applying it to that same related item on the record being imputed. Then, depending on the imputed response (whether a value of 0 or a value greater than 0 was imputed), the subsequent item(s) were either imputed using ratio imputation (when a value greater than 0 was imputed to the screener item) or blanked (if a value of 0 was imputed to the screener item). This type of imputation occurred for items where this skip pattern was present. Items following different skip pattern patterns likely fell into the “Complex Imputation” donor relationship.

For these items, there were always two donors. The first donor was used when both parts (the “screener” portion and the subsequent items) of the imputed item were missing. The second donor was used when the respondent answered the screener item with a response greater than 0, but the subsequent item(s) were missing and needed to be imputed. The method of imputation for the second donor was ratio imputation.

For example, item 32a on the School Questionnaire asks how many teachers were newly hired by the school for grades K–12 and comparable ungraded levels. If the response to 32a is greater than 0, then item 32b asks how many of the newly hired teachers are in their first year of teaching. If both 32a and 32b were unanswered upon entering the imputation stage of processing, then item 32a was imputed by applying the ratio of newly hired teachers (item 32a) to total teachers (item 27c) from the donor record to the total teachers (item 27a) on the record undergoing imputation. If a value of 0 was imputed to 32a, then item 32b was assigned the valid skip code. However, if a value greater than 0 was imputed to 32a, then item 32b was imputed by applying the ratio of newly hired first year teachers (item 32b) to total newly hired teachers (item 32a) from the donor record to the total newly hired teachers (item 32a) on the record undergoing imputation and flagged accordingly.

- *Complex Imputation.* Complex imputation was used when the imputation could not be accomplished using one of the other seven donor relationship types. In these cases, it was simply because, while the general methodology might fit one of the other donor relationships, the skip

pattern might have been reverse (e.g. the subsequent items are imputed if the screener is imputed as “No” rather than “Yes”). In other cases, the imputation was deemed “complex” due to its level of difficulty (e.g., too many steps in the imputation process), and therefore separate imputation programs had to be drafted.

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.

Data imputed during the “hot deck” imputation were given an imputation flag of value “7.”

Mean and Mode Imputation

During mean and mode imputation, responses were imputed by establishing groups of similar questionnaires (donor groups) and then imputing for a particular item by substituting either the mean (the average of all the responses for that item) or mode (the response that occurs most frequently) of the same data item within that established donor group. Donor groups were selected based on respondents’ data for specified items called “matching variables.” If several respondents answered the selected matching variables in the same manner, then it was assumed that imputation of one data item from the mean or mode of the cases within the similar group was reasonable. The mode of responses within a donor group was used for the categorical items, while the mean was used for continuous items.

The matching variables used to establish donor groups for mean and mode imputation were the same matching variables used during the hot deck imputation. However, if a donor group could not be established even after collapsing each matching variable completely, the mean and mode imputation would drop the least important matching variable(s) in the established matching variable hierarchy and look for a donor group until one was established and the missing data item was imputed.

Data imputed during the mean and mode imputation were given an imputation flag of value “8.”

Postimputation Processing

Following imputation, the computer edits were re-run and any remaining data issues were resolved. These edits were used to ensure that the values imputed were within acceptable ranges and were consistent with other items on the same questionnaire. In a very small number of cases, an imputed value was blanked out by one of these computer edits due to inconsistency with other data within the same questionnaire or because it was out of the range of acceptable values. In these situations, Census Bureau analysts looked at the items and tried to determine an appropriate value based on a number of factors. 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
- means and modes of similar subsamples.

When analysts changed or added data for any reason during the postimputation data review, an imputation flag with a value of “9” was set to indicate this. Once this analyst review was complete, 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 nonresponse bias analysis).

Imputation Summary Tables

The number of source codes (specific items) that were imputed for a given percentage of records during each imputation method are summarized in tables 67 through 74. For example, during hot deck imputation, 109 survey items were imputed for between 1 and 15 percent of the school district items.

The first column, “Not imputed for any record,” includes items that are not eligible for imputation (e.g., “please specify” write-in items, respondent information not included on the final data files, time to complete survey) as well as items that required no imputation at one or both of the stages.

The tables in appendix P show the number of imputations applied during each method of imputation to each source code, by data file.

Table 67. Number of source codes for public school districts, including district items from the Public School Questionnaire (With District Items) imputed, by percentage of records receiving imputation and type of imputation: 2011–12

Type of imputation	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
Donor	28	104	0	0
Mean or mode	127	5	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 variable 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,” 2011–12.

Table 68. Number of source codes imputed, by percentage of records receiving imputation and type of imputation for public school principals, including public charter school principals: 2011–12

Type of imputation	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
Donor	10	178	0	0
Mean or mode	168	20	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 variable 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,” 2011–12.

Table 69. Number of source codes imputed, by percentage of records receiving imputation and type of imputation for private school principals: 2011–12

Type of imputation	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
Donor	12	170	1	0
Mean or mode	176	7	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 variable 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,” 2011–12.

Table 70. Number of source codes imputed, by percentage of records receiving imputation and type of imputation for public schools, including public charter schools: 2011–12

Type of imputation	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
Donor	27	165	5	0
Mean or mode	193	4	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 variable 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,” 2011–12.

Table 71. Number of source codes imputed, by percentage of records receiving imputation and type of imputation for private schools: 2011–12

Type of imputation	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
Donor	82	224	2	0
Mean or mode	292	16	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 variable 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,” 2011–12.

Table 72. Number of source codes imputed, by percentage of records receiving imputation and type of imputation for public school teachers, including public charter school teachers: 2011–12

Type of imputation	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
Donor	101	272	5	0
Mean or mode	338	40	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 variable 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,” 2011–12.

Table 73. Number of source codes imputed, by percentage of records receiving imputation and type of imputation for private school teachers: 2011–12

Type of imputation	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
Donor	122	275	6	0
Mean or mode	371	32	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 variable 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,” 2011–12.

Table 74. Number of source codes imputed, by percentage of records receiving imputation and type of imputation for public school libraries, including public charter school libraries: 2011–12

Type of imputation	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
Donor	3	51	0	0
Mean or mode	54	0	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 variable 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,” 2011–12.

Preliminary Data Products

After all stages of imputation were completed and the blanking and consistency edits were run once again, the data were split into data files by questionnaire type (i.e., District, Principal, School, Teacher, and Library). Eight data files were created from the questionnaire data files so that the data could be categorized by school type (i.e., Public and Private).

Public School District (doc_District)

The public school district final file includes all items from the School District Questionnaire (Form SASS-1A). It also includes the district items included on the Public School Questionnaire (with District Items) (form SASS-3Y; these items can be found on both questionnaires and include topics such as student enrollment, recruitment and hiring of staff, and teacher compensation. It does not include the district items for public charter schools governed by school districts.

Public School Principal (doc_PubPrinc)

The public school principal final file includes all items from the Principal Questionnaire (Form SASS-2A).

Private School Principal (doc_PriPrinc)

The private school principal final file includes all items from the Private School Principal Questionnaire (Form SASS-2B).

Public School (doc_PubSch)

The public school final file includes all items from the School Questionnaire (form SASS-3A). It also includes the school-level items from the Public School Questionnaire (with District Items) (Form SASS-3Y).

Private School (doc_PriSch)

The private school final file includes all items from the Private School Questionnaire (Form SASS-3B).

Public School Teacher (doc_PubTea)

The public school teacher final file includes all items from the Teacher Questionnaire (Form SASS-4A).

Private School Teacher (doc_PriTea)

The private school teacher final file includes all items from the Private School Teacher Questionnaire (Form SASS-4B).

Public Library Media Center (doc_PubLibr)

The public school library media center final file includes all items from the School Library Media Center Questionnaire (Form SASS LS-1A).

Each of these data files included all variables, including frame variables, survey variables, created variables, weighting variables, and imputation flags. These files were used as the source files for the documentation files and the restricted-use files. The documentation files were used to run the 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; processing variables and most sampling

variables were removed. In addition, the documentation files and restricted-use files were altered to meet the requirements of data nondisclosure.

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Chapter 8. Weighting and Variance Estimation

This chapter describes the weighting procedure used for 2011–12 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

This section describes the weighting processes for each SASS respondent. The general purpose of weighting is to scale up 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., merged schools or split schools), which produces the base weight. Next, a nonresponse adjustment factor is calculated and applied using information known about the respondents and nonrespondents 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. However, in general, each adjusts the sample totals to frame totals in order to reduce sampling variability.

Most components of the weighting process employ weighting classes in the calculation of the weighting adjustments factors. 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. In subsequent sections, the formula for computing the particular weighting component is presented for each component of SASS, 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, and was collapsed according to specified criteria. 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 and private school weights have similar structures and are presented together. They differ only by the definition of the cells that are 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 and private school principal 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 are computed. Teacher weights are described in the sixth section. Since the public and private school teacher weights have the same structure, they are presented together. They differ only in the definition of the cells that are used to compute the various weighting factors. These cells are described separately within the teacher weight section. The final section describes the school library weights. The School Library Media Center Questionnaire was only offered to public schools in this administration of SASS.

The distribution of the final weights from each file is provided in table 75 below.

Table 75. Distribution of final weights for interviewed cases, by data file: 2011–12

Source	Mini- mum	Weight at given percentile									Maxi- mum	Mean
		1 st	5 th	10 th	25 th	50 th	75 th	90 th	95 th	99 th		
Public School District	0.58	0.98	1.07	1.14	1.41	2.25	3.97	7.79	11.05	21.58	85.56	3.66
Traditional Public School	0.90	1.21	1.76	2.33	4.23	7.61	16.09	27.16	36.20	64.52	126.50	12.18
Public Charter School	1.23	1.60	1.92	2.47	3.98	7.38	13.73	20.08	23.65	33.29	42.90	9.72
Private School	0.98	1.59	3.35	4.71	7.79	12.25	19.11	28.09	35.23	56.93	107.70	14.92
Traditional Public School Principal	0.98	1.22	1.76	2.36	4.18	7.54	15.89	26.73	36.23	63.32	126.59	12.13
Public Charter School Principal	1.08	1.50	1.90	2.45	3.83	7.44	13.94	19.78	22.58	31.31	43.64	9.42
Private School Principal	1.12	1.51	3.27	4.50	7.49	12.54	19.33	28.12	33.45	54.45	133.97	14.93
Traditional Public School Teacher	1.85	6.60	11.05	15.46	27.35	49.33	97.68	213.03	320.03	707.17	2107.58	93.53
Public Charter School Teacher	2.41	3.41	4.67	5.72	10.87	19.77	66.04	122.77	157.62	231.16	418.08	45.51
Private School Teacher	3.10	8.03	11.67	18.85	38.06	79.32	124.76	191.19	299.05	550.73	1392.77	102.78
Public School Library Media Center	0.78	1.15	1.70	2.25	4.06	7.29	15.10	25.46	34.55	60.96	225.00	11.59

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Private School, Public School Principal, Private School Principal, Public School Teacher, Private School Teacher, and Public School Library Media Center Data Files,” 2011–12.

School Weight (Public School and Private School Data Files)

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)²¹

where:

²¹ The second-stage ratio-adjustment factor applies to private schools only.

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 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 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. For the first time, the 2011–12 SASS determined cell definitions by a procedure known as CHAID (Chi-squared Automatic Interaction Detection). The CHAID procedure determines an optimal set of cell definitions. These cells require no further collapsing. The cells used are as presented in appendix Q. 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 schools minus out of scope sample schools to the weighted sample estimate of the total number of schools within each weighting class, or cell, defined for this step in the weighting procedure. 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 (PSUs) were in sample and there were no universe counts for all noncertainty PSUs. These schools were assigned a factor 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 2011–12 SASS, the list frame for private schools was the current 2011–12 PSS list frame, whereas the area frame was based on an older 2009–10 PSS area frame sample. The second-stage ratio-adjustment factor is the ratio of the weighted 2011–12 PSS estimates of schools to the weighted 2011–12 SASS sample estimate of schools within each cell.

School Weighting Adjustment Cells

The school nonresponse adjustment factor 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.

Nonresponse adjustments were determined using CHAID, or Chi-squared Automatic Interaction Detection. CHAID is a classification method for building decision trees by using chi-square statistics to identify optimal splits.

CHAID first examines the cross tabulations between each of the input fields and the outcome, and tests for significance using a chi-square independence test. If more than one of these relations is statistically significant, CHAID will select the input field that is the most significant (smallest p value). If an input has more than two categories, these are compared, and categories that show no differences in the outcome are

collapsed together. This is done by successively joining the pair of categories showing the least significant difference. This category-merging process stops when all remaining categories differ at the specified testing level.

Public, Public Charter, and Private School Adjustment Cells

Exhibit 10 presents a summary of the collapsing criteria applied for the first- and second-stage ratio-adjustment factors to the different types of schools in the weighting process. The exact cells are shown in appendix Q.

Exhibit 10. Adjustment factors and collapsing criteria for school weights: 2011–12

	First-stage ratio-adjustment factor			Second-stage ratio adjustment factor (list and area frames)					
	Collapsing criteria		Collapsing order	Collapsing criteria		Collapsing order			
Public schools									
Public charter	Factor	$\geq .667$ and ≤ 1.5	Grade level, state/region						
	Interviews	≥ 10							
Other public	Factor	$\geq .667$ and ≤ 1.5	Enrollment category, collapsed locale, grade level						
	Interviews	≥ 10							
Private schools									
List frame	Factor	$\geq .667$ and ≤ 1.5	Grade level, affiliation				Factor	$\geq .667$ and ≤ 1.5	Enrollment category, collapsed locale, grade level
	Interviews	≥ 15							
Area frame	†			Interviews	≥ 15				

† Not applicable.

NOTE: Grade level is defined for charter and private schools as elementary, secondary, and combined. For other public schools, grade level is primary, middle, high, and combined. Collapsed locale consists of city, suburb, town, and rural. Affiliation, enrollment category, and state/region are as listed in Appendix Q.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

This table 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 homogenous 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 Q. Note that collapsing for public schools was restricted to within type (public charter, other public). For example, if a particular cell in the charter public school table met the collapsing criteria (i.e., had at least ten interviewed schools and an initial factor of less than 1.5), 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 grade level. 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 (Public School Principal and Private School Principal Data Files)

The regular public, public charter, 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 school and principal interview status.

Public School District Weight (School District Data File)

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 (i.e., the joint probability 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, within each state. At this stage of the weighting, out-of-scope and noninterviewed districts are assigned a weight of zero. As with schools, the district nonresponse cells were determined using the CHAID procedure.

First-Stage Ratio-Adjustment Factor is a factor that adjusts the sample estimates to the 2009–10 CCD total number of districts with schools. 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, (see exhibit 11) within each state. Certainty districts were assigned a factor of one.

Exhibit 11. Adjustment factors and collapsing criteria as applied to public school district weights: 2007–08

Type of public school district	First-stage ratio adjustment factor		
	Collapsing criteria		Collapsing order
Certainty districts	†		
Remaining districts	Factor	$\geq .667$ and ≤ 1.5	Enrollment category, collapsed locale
	Interviews	≥ 10	

† Not applicable.

NOTE: Collapsed locale consists of city, suburb, town, and rural. Enrollment categories are as described in appendix Q.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

This table 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 Florida, Maryland, Nevada, and West Virginia, and 2) districts in Florida, Maryland, Nevada, and West Virginia, which are all certainty districts. See chapter 4 for a discussion of district sample selection.

District Initial Basic Weights for Districts Outside 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. The base weight, therefore, is more complex than for other respondents.

Since schools were stratified by grade level (i.e., primary, middle, high, and combined for traditional schools; elementary, secondary, and combined for charter schools) and by type (i.e., public charter, other public) the probability of selection for district k , $(P_k(\text{sel}))$ can be written as follows:

$$P_k(\text{sel}) = 1 - [(1 - P_k(\text{PUB}, \text{PRI})) (1 - P_k(\text{PUB}, \text{MID})) (1 - P_k(\text{PUB}, \text{HIG})) (1 - P_k(\text{PUB}, \text{COM})) (1 - P_k(\text{CHA}, \text{ELM})) (1 - P_k(\text{CHA}, \text{SEC})) (1 - P_k(\text{CHA}, \text{COM}))]$$

where:

- $P_k(\text{PUB}, \text{PRI})$ is the probability of selecting district k which contains schools that are classified as primary (PRI) and not charter (PUB). This equals the sum of the school selection probabilities for the schools that are regular public primary and in district k . If the sum is greater than one, $P_k(\text{PUB}, \text{PRI})$ is set equal to one.
- $P_k(\text{PUB}, \text{MID})$ is the probability of selecting district k which contains schools that are middle (MID) and are not public charter schools (PUB). This equals the sum of the school selection probabilities for the schools that are not public charter, but are middle and in district k . If the sum is greater than one, then $P_k(\text{PUB}, \text{MID})$ is set equal to one.
- $P_k(\text{PUB}, \text{HIG})$ is the probability of selecting district k which contains schools that are high (HIG) and are not public charter schools (PUB). This equals the sum of the school selection probabilities for the schools that are not public charter, and are high schools and in district k . If the sum is greater than one, then $P_k(\text{PUB}, \text{HIG})$ is set equal to one.
- $P_k(\text{PUB}, \text{COM})$ is the probability of selecting district k which contains schools that are combined (COM) and not public charter (PUB). This equals the sum of the school selection probabilities for the schools that are not public charter, and are combined and in district k . If the sum is greater than one, then $P_k(\text{PUB}, \text{COM})$ is set equal to one.

$P_k(\text{CHA}, \text{ELM})$ 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 $P_k(\text{CHA}, \text{ELM})$ is set equal to one.

$P_k(\text{CHA}, \text{SEC})$ is the probability of selecting district k 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 $P_k(\text{CHA}, \text{SEC})$ is set equal to one.

$P_k(\text{CHA}, \text{COM})$ 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, $P_k(\text{CHA}, \text{COM})$ is set equal to one.

Note that $1/P_k(\text{sel})$ equals the initial basic weight.

District Initial Basic Weights for Florida, Maryland, Nevada, and West Virginia

The initial basic weight was one for all regular districts in Florida, Maryland, Nevada, and West Virginia since all districts in these four states were guaranteed to be selected for sample. Their final weights, however, may not equal one due to adjustment for nonresponse.

Teacher Weight (Public School Teacher and Private School Teacher Data Files)

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 appendix Q). As with other nonresponse adjustments, the cells were determined using CHAID.

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 appendix Q). CHAID was used to define the cells. 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 2009–10 CCD or the updated 2009–10 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 12). 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 first-stage ratio adjustments are the same as those used in the school first-stage adjustments, and are described in the previous School Weight section. However, exhibit 12 describes the criteria for the teacher adjustments.

Exhibit 12. Adjustment factors and collapsing criteria as applied to teacher weights: 2011–12

	Teacher adjustment factor		
	Collapsing criteria		Collapsing order
Public charter	Factor	$\geq .667$ and ≤ 1.5	Grade level, race/ethnicity, state/region
	Interviews	≥ 15	
Other public	Factor	$\geq .667$ and ≤ 1.5	Enrollment category, race/ethnicity, grade level, state
	Interviews	≥ 15	
Private	Factor	$\geq .667$ and ≤ 1.5	Race/ethnicity, enrollment category, grade level, affiliation
	Interviews	≥ 15	

NOTE: For charter and private schools, grade level is defined as elementary, secondary, combined. For other public schools, grade level is defined as primary, middle, high, and combined. Race/ethnicity is defined as Asian/Pacific Islander, White, American Indian/Alaskan Native, Hispanic, and Black. Enrollment category, affiliation, and state/region are as defined in Appendix Q.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011–12.

This table 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 Weight (Library Media Center Data File)

SASS school library data were used to estimate the characteristics of schools with libraries as well as schools without libraries. Whenever possible, sampled schools with libraries and sampled schools without libraries were adjusted separately. Thus, interviewed libraries were weighted up to the weighted estimate of sampled schools known to have libraries, as determined at the time library questionnaires were distributed. Likewise, the number of interviewed schools with no library was weighted up to the weighted number of all schools without libraries 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 libraries and schools without libraries were adjusted as a whole. This was necessary to handle instances where the existence of the library could not be established during data collection. Due to reporting inconsistencies between the library survey and the school survey, library survey data is not adjusted directly to schools reporting to have libraries on the school questionnaire.

The final weight for the public school library 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 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.

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 status was not known. This factor adjusts all schools (with and without libraries) together because it was not clear whether the school had a library. It is the weighted (product of the initial basic weight and the sampling adjustment factor) ratio of the total school library records to the total in-scope interviewed school libraries plus out-of-scope school libraries. Cells (as described in appendix Q) were defined using CHAID.

Library Type B (Known Status) Nonresponse Adjustment Factor is an adjustment that accounts for library nonrespondents where the status of the library is known based on the status of the School Library Media Center Questionnaire. Given that schools with libraries were able to be distinguished from schools without libraries, this adjustment was made separately for SASS sampled schools with and without libraries. Cells (as described in appendix Q) were defined using CHAID.

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 libraries plus the noninterviewed libraries to the interviewed libraries.

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 libraries plus the noninterviewed schools without libraries to the interviewed schools without libraries. At the conclusion of the nonresponse adjustment procedures, noninterviewed libraries are 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, the first-stage ratio-adjustment factor is equal to the ratio of the total number of SASS frame schools minus out-of-scope sample schools to the weighted sample estimate of the total number of schools within each weighting class, or cell, defined for this step in the weighting procedure. This is the same factor that was applied to the SASS school sample.

Variance Estimation

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. This section describes the variance estimation used for the 2011–12 SASS, how the replicates were assigned, and how to use the replicate weights to compute variances.

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 surveys (i.e., school, principal, school district, teacher, and library) 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 adjustment (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 (PPS) 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 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 1993–94. In 1999–2000, 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 2003–04 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 2011–12 SASS used the same bootstrap variance estimation procedure as the 2003–04 SASS.

The idea behind the public school district bootstrap variance estimation is to use the distribution of the sample 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 basic weights (inverse of the probability of selection) generated for the fielded sample were subsequently reweighted by processing each set of replicate basic weights through the weighting procedure.

The other bootstrap weights (public schools and teachers and private list frame schools and teachers) were calculated using the updated bootstrap system. This system is based on a series of assumptions about the sampling design: 1) the traditional systematic PPS 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:

- For noncertainty schools, nonresponse is considered a nested random process within selected PSUs. Within appropriately defined cells (see the earlier section on “School Weighting Adjustment Cells”), 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”). 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.

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. The next sections describe how replicate weights were produced for each file.

Applying Replicate Weights

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 normally distributed.

The computation of sampling errors using these replicate weights can be done easily using one of the following software packages: 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 <https://www.westat.com/our-work/information-systems/wesvar-support>.
- **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 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 the 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 School and Public School Principal Replicates

The bootstrap estimator as described in the previous section was used for developing both the public school and administrator replicates. The replicate weights for the school files are SREPWT1 through SREPWT88. The replicate weights for the public school principals are AREPWT1 through AREPWT88.

Private School and Private School Principal Replicates

For private schools, the list frame used the bootstrap methodology as described above. For the area frame, the PSU sampling rates 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 PSUs 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 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 public charter school library 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 2011–12 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, public charter, 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.

Chapter 9. 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 includes 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). The following are aspects of the datasets that were reviewed:

- general data quality;
- nonresponse;
- weighting; and
- external data checks.

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 cross tabulations 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 any evidence of bias at the unit or item level was investigated. The details of this analysis are discussed in greater detail in chapter 6. The nonresponse analysis identifies the levels of possible bias, methods for addressing potential bias, and the reduction in bias as a result of these efforts.

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.) The findings across public school respondents showed

that weighting adjustments substantially reduced possible bias for national estimates, though many state-level estimates remained biased. Similarly, for private school respondents, weighting adjustments substantially reduced bias for most items nationally, but a number of affiliation-level estimates remained biased. The weighted national response rates for questionnaires varied from 64.7 percent for the Private School Principal Questionnaire to 80.6 percent for the School District Questionnaire. The base-weighted response rate was below 50 percent for at least one questionnaire for the following states: Alaska, District of Columbia, Florida, Hawaii, Maryland, Rhode Island. The Baptist, Jewish, other religious, nonsectarian regular program, and nonsectarian special emphasis program affiliation stratum each had at least one questionnaire with a base-weighted response weight less than 50 percent.

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, there were no items removed from the data files. However, items with a response rate lower than 70 percent are footnoted as such in published tables.

Replicate Weight Checks

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 coverage analysis was performed for the public school and private school final replicate weights using the school frame, Common Core of Data, and Private School Survey frame variables such as full-time teacher equivalents and Title I status. Normal distribution theory dictates that confidence intervals generated using the standard errors from the replicate weights (equal to the sample estimate plus or minus two standard errors) should cover the true population 95 percent of the time. This was checked empirically using these known frame variables as the true population values: the percentages of times the true population value was within the confidence intervals using the replicate standard errors was tabulated as a quality check on the 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 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 drawn from the universe data files, which pertain to 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 any given school 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 Data File)

Comparisons of the number of public school districts by state and region were made to the CCD 2009–10 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 2011–12 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 are those that employed elementary- and/or secondary-level teachers and were in operation in the 2011–12 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 76 and 77. 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 2009–10 CCD Public Education Agency Universe. The second table compares the estimated number of public school districts in SASS (calculated using the district base 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 77 is between the total number of districts and the number of regular districts.

Table 76. Estimated number and percentage of public school districts in the 2011–12 SASS compared with total and regular districts in 2009–10 CCD Public Education Agency Universe, by state, region, and community type: 2009–10 and 2011–12

State and region (1)	2009–10 CCD regular districts ¹ (2)	2009–10 CCD regular districts with students ² (3)	2009–10 CCD regular districts with schools ³ (4)	2011–12 SASS frame (2009–10 CCD without charter and state-run districts) ⁴ (5)	2011–12 SASS frame (charter and state-run districts only) ⁵ (6)	2011–12 SASS districts (charter and state-run only) ⁶ (7)	2011–12 SASS districts (without charter and state-run) ⁷ (8)	SASS estimate as a percent- age of CCD districts with schools ⁸ (9)	SASS estimate as a percent- age of 2011–12 SASS frame ⁹ (10)
Total	17,807	13,629	14,245	14,213	3,871	2,803	14,188	99.6	99.8
State									
Alabama	171	133	133	133	48	4	146	109.8	109.8
Alaska	54	53	53	53	1	16	42	79.2	79.2
Arizona	642	224	242	242	575	79	599	247.5	247.5
Arkansas	295	244	258	258	22	55	222	86.0	86.0
California	1,190	958	1,102	1,102	55	106	943	85.6	85.6
Colorado	262	178	186	186	18	45	154	82.8	82.8
Connecticut	200	169	172	172	65	39	165	95.9	95.9
Delaware	40	19	19	19	25	4	41	215.8	215.8
District of Columbia	59	1	1	1	94	6	47	4,700.0	4,700.0
Florida	75	67	72	72	15	3	78	108.3	108.3
Georgia	206	180	183	183	36	4	201	109.8	109.8
Hawaii	1	1	1	1	0	0	0	0.0	0.0
Idaho	142	116	116	116	26	14	115	99.1	99.1
Illinois	1,076	869	1,002	1,002	48	246	621	62.0	62.0
Indiana	387	294	309	309	64	26	338	109.4	109.4
Iowa	371	361	361	361	0	93	276	76.5	76.5
Kansas	327	316	292	292	11	7	310	106.2	106.2
Kentucky	194	174	175	175	3	22	150	85.7	85.7
Louisiana	123	69	74	74	129	0	157	212.2	212.2
Maine	255	246	182	182	4	61	142	78.0	78.0
Maryland	25	24	24	24	1	0	22	91.7	91.7
Massachusetts	393	244	330	330	67	65	324	98.2	98.2
Michigan	855	551	605	605	320	73	853	141.0	141.0
Minnesota	558	337	381	381	190	75	456	119.7	119.7
Mississippi	165	152	152	152	13	9	166	109.2	109.2
Missouri	565	523	527	527	145	214	396	75.1	75.1
Montana	502	417	345	345	3	238	114	33.0	33.0
Nebraska	294	253	281	281	5	122	164	58.4	58.4
Nevada	18	17	18	17	12	0	21	116.7	123.5
New Hampshire	280	180	158	158	13	29	166	105.1	105.1

See notes at end of table.

Table 76. Estimated number and percentage of public school districts in the 2011–12 SASS compared with total and regular districts in 2009–10 CCD Public Education Agency Universe, by state, region, and community type: 2009–10 and 2011–12—Continued

State and region (1)	2009–10 CCD regular districts ¹ (2)	2009–10 CCD regular districts with students ² (3)	2009–10 CCD regular districts with schools ³ (4)	2011–12 SASS frame (2009–10 CCD without charter and state-run districts) ⁴ (5)	2011–12 SASS frame (charter and state-run districts only) ⁵ (6)	2011–12 SASS districts (charter and state- run only) ⁶ (7)	2011–12 SASS districts (without charter and state-run) ⁷ (8)	SASS estimate as a percent- age of CCD districts with schools ⁸ (9)	SASS estimate as a percent- age of 2011–12 SASS frame ⁹ (10)
New Jersey	675	603	592	592	174	149	571	96.5	96.5
New Mexico	108	89	89	89	30	18	85	95.5	95.5
New York	879	696	765	734	175	148	631	82.5	86.0
North Carolina	231	115	116	116	124	0	256	220.7	220.7
North Dakota	228	185	191	191	3	112	62	32.5	32.5
Ohio	1,047	615	663	663	348	86	857	129.3	129.3
Oklahoma	584	532	548	548	9	222	306	55.8	55.8
Oregon	221	190	194	194	17	26	184	94.8	94.8
Pennsylvania	798	500	610	610	152	36	735	120.5	120.5
Rhode Island	52	32	36	36	18	1	53	147.2	147.2
South Carolina	103	85	99	99	37	0	124	125.3	125.3
South Dakota	166	156	158	158	5	40	135	85.4	85.4
Tennessee	140	140	140	140	0	0	140	100.0	100.0
Texas	1,280	1,032	1,031	1,031	500	131	1,333	129.3	129.3
Utah	117	41	41	41	84	0	103	251.2	251.2
Vermont	357	291	183	183	3	0	246	134.4	134.4
Virginia	207	134	198	198	96	38	223	112.6	112.6
Washington	310	295	305	305	0	81	206	67.5	67.5
West Virginia	57	55	55	55	25	0	68	123.6	123.6
Wisconsin	461	425	428	428	50	55	400	93.5	93.5
Wyoming	61	48	49	49	13	4	44	89.8	89.8

See notes at end of table.

Table 76. Estimated number and percentage of public school districts in the 2011–12 SASS compared with total and regular districts in 2009–10 CCD Public Education Agency Universe, by state, region, and community type: 2009–10 and 2011–12—Continued

State and region (1)	2009–10 CCD regular districts ¹ (2)	2009–10 CCD regular districts with students ² (3)	2009–10 CCD regular districts with schools ³ (4)	2011–12 SASS frame (2009–10 CCD without charter and state-run districts) ⁴ (5)	2011–12 SASS frame (charter and state-run districts only) ⁵ (6)	2011–12 SASS districts (charter and state-run only) ⁶ (7)	2011–12 SASS districts (without charter and state-run) ⁷ (8)	SASS estimate as a percent- age of CCD districts with schools ⁸ (9)	SASS estimate as a percent- age of 2011–12 SASS frame ⁹ (10)
Region									
Northeast	3,889	2,961	3,028	2,997	671	528	3,033	100.2	101.2
Midwest	6,335	4,885	5,198	5,198	1,187	1,150	4,867	93.6	93.6
South	3,955	3,156	3,278	3,278	1,177	498	3,678	112.2	112.2
West	3,628	2,627	2,741	2,740	836	627	2,610	95.2	95.3

¹ CCD Published Count, 2009–10, Overview of Public and Secondary Schools and Districts: School Year 2009–10 (NCES 2011-346), Table 2, Column 1 (regular school districts include those that are components of supervisory unions).

² CCD Published Count, 2009–10, Overview of Public and Secondary Schools and Districts: School Year 2009–10 (NCES 2011-346), Table 4, Column 1.

³ CCD 2009–10 Preliminary File: ccdsch09_combined.sas7bdat (regular districts do not include those that supervise charter schools or are run by the state).

⁴ 2011–12 SASS Frame (CCD 2009–10 with adjustments), Final District Frame File (only includes regular school districts)

⁵ 2011–12 SASS Frame (CCD 2009–10 with adjustments), Final District Frame File (only includes charter and state run districts).

⁶ SASS, 2011–12, District File, Final Weight (only includes regular school districts).

⁷ SASS, 2011–12, District File, Final Weight (only includes charter school and state run districts).

⁸ Calculated by dividing column 7 by column 4.

⁹ Calculated by dividing column 7 by column 5.

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,” 2011–12; Common Core of Data (CCD), “Preliminary File,” 2009–10, ccdsch09_combined.sas7bdat; *Overview of Public and Secondary Schools and Districts: School Year 2009–10*, Common Core of Data (CCD), “Local Education Agency Universe Survey,” 2009–10.

Table 77. Estimated number and percentage of public school districts in the 2011–12 SASS compared with total public school districts in 2009–10 CCD Public Education Agency Universe, by state and region: 2009–10 and 2011–12

State and region (1)	2009–10 CCD total districts (2)	2011–12 SASS frame total with charter and state-run schools (3)	2011–12 SASS total districts (including charter and state-run) (4)	SASS estimate as a percentage of CCD total districts ¹ (5)	SASS estimate as a percentage of 2011–12 SASS frame ² (6)
Total	18,226	18,084	16,991	93.2	94.0
State					
Alabama	171	181	151	88.3	83.4
Alaska	54	54	58	107.4	107.4
Arizona	674	817	678	100.6	83.0
Arkansas	297	280	277	93.3	98.9
California	1,197	1,157	1,049	87.6	90.7
Colorado	262	204	199	76.0	97.5
Connecticut	201	237	204	101.5	86.1
Delaware	43	44	44	102.3	100.0
District of Columbia	63	95	53	84.1	55.8
Florida	77	87	81	105.2	93.1
Georgia	208	219	205	98.6	93.6
Hawaii	1	1	0	0.0	0.0
Idaho	142	142	129	90.8	90.8
Illinois	1,083	1,050	868	80.1	82.7
Indiana	387	373	364	94.1	97.6
Iowa	374	361	369	98.7	102.2
Kansas	332	303	317	95.5	104.6
Kentucky	195	178	172	88.2	96.6
Louisiana	123	203	157	127.6	77.3
Maine	324	186	203	62.7	109.1
Maryland	25	25	22	88.0	88.0
Massachusetts	502	397	389	77.5	98.0
Michigan	859	925	926	107.8	100.1
Minnesota	567	571	530	93.5	92.8
Mississippi	165	165	174	105.5	105.5
Missouri	566	672	611	108.0	90.9
Montana	514	348	352	68.5	101.1
Nebraska	296	286	286	96.6	100.0
Nevada	18	29	21	116.7	72.4
New Hampshire	281	171	195	69.4	114.0
New Jersey	698	766	720	103.2	94.0
New Mexico	108	119	103	95.4	86.6
New York	914	909	779	85.2	85.7
North Carolina	234	240	256	109.4	106.7
North Dakota	233	194	174	74.7	89.7

See notes at end of table.

Table 77. Estimated number and percentage of public school districts in the 2011–12 SASS compared with total public school districts in 2009–10 CCD Public Education Agency Universe, by state and region: 2009–10 and 2011–12—Continued

State and region (1)	2009–10 CCD total districts (2)	2011–12 SASS frame total with charter and state-run schools (3)	2011–12 SASS total districts (including charter and state-run) (4)	SASS estimate as a percentage of CCD total districts ¹ (5)	SASS estimate as a percentage of 2011–12 SASS frame ² (6)
Ohio	1,089	1,011	943	86.6	93.3
Oklahoma	586	557	528	90.1	94.8
Oregon	221	211	210	95.0	99.5
Pennsylvania	803	762	771	96.0	101.2
Rhode Island	56	54	54	96.4	100.0
South Carolina	104	136	124	119.2	91.2
South Dakota	169	163	175	103.6	107.4
Tennessee	140	140	140	100.0	100.0
Texas	1,284	1,531	1,464	114.0	95.6
Utah	124	125	103	83.1	82.4
Vermont	362	186	246	68.0	132.3
Virginia	208	294	261	125.5	88.8
Washington	310	305	287	92.6	94.1
West Virginia	57	80	68	119.3	85.0
Wisconsin	464	478	454	97.8	95.0
Wyoming	61	62	48	78.7	77.4
Region					
Northeast	4,141	3,668	3,561	86.0	97.1
Midwest	6,419	6,385	6,017	93.7	94.2
South	3,980	4,455	4,177	104.9	93.8
West	3,686	3,576	3,237	87.8	90.5

¹ Calculated by dividing column 4 by column 2.² Calculated by dividing column 4 by column 3.

NOTE: Column 2 source: Common Core of Data (CCD), “Preliminary Public Education Agency Universe Survey File.” Column 3 source: “Final District Frame Data File,” 2011–12. Column 4 source: SASS 2011–12, “District File (weighted total).” 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,” 2009–10; Schools and Staffing Survey (SASS), “Final District Frame Data File,” 2011–12.

The sample selection for districts included “other” types of districts that have become more common in CCD. These “other” types of districts are largely 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 some state and federally-run schools were not sent a separate district questionnaire, but instead received the Public School Questionnaire (with District Items). The Public School Questionnaire with District Items incorporated most, but not all, 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, with the exception of charter school data for public charter schools that are under the jurisdiction of a regular school district. 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 77 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 that 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 76’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.

The largest differences between SASS estimates and CCD or the adjusted SASS frame occurred in the following states: Arizona, District of Columbia, Louisiana, Michigan, North Carolina, Rhode Island, and Utah. With the exception of Rhode Island, the primary difference between the SASS district estimates and the CCD totals may be attributable to the high number of charter schools in those states. Because SASS considered independent charter schools as ‘district entities,’ these changes are substantive differences between the two data collections and will impact the district count for SASS. The estimates in table 77 provide comparisons that eliminate the majority of these discrepancies. The two remaining states with large discrepancies are the District of Columbia and Vermont. The difference in the District of Columbia is related to the large number of charter schools and the presence of only one regular district. In Vermont, the discrepancies are related to the issues discussed above.

Public School Unit Count Comparison (Public School and 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 2009–10 CCD, the year from which SASS drew its sample of schools. The number of public schools in SASS is 2.0 percentage points higher than the number of CCD public schools with students (table 78). There were four states (California, Delaware, Kentucky, and Minnesota) that exceeded the CCD number by more than 15 percent and four states (Iowa, Montana, North Dakota, and South Dakota) that were more than 15 percent lower. The four states with estimates higher than CCD include a number of schools with a discrepancy between the CCD-reported number of students and SASS-eligibility (the presence of students) and the presence and number of students reported in SASS. The schools with lower estimates include states that experience collapsing of schools between the CCD frame year and SASS collection. However, all of these states were within that range when comparing the SASS estimate as a percentage of the frame. Five states have an estimated number of public schools for SASS that is below 90 percent of the SASS frame: Alabama, Arizona, District of Columbia, Minnesota, and South Dakota. Overall, the percentage difference between SASS and the frame year CCD count of public schools was 2.0; this increases to 4.9 once the school collapsing operation is taken into consideration. The school collapsing operation described in chapter 4 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.

Table 78. Estimated number and percentage of public schools in 2011–12 SASS compared with 2009–10 CCD, by state, region, and community type: 2009–10 and 2011–12

State and region (1)	2009–10 CCD public schools ¹ (2)	2009–10 CCD public schools with students (published count) ² (3)	2011–12 SASS Frame (2009–10 CCD with adjustments) ³ (4)	2011–12 SASS public schools ⁴ (5)	SASS estimate as a percentage of CCD public schools with students ⁵ (6)	SASS estimate as a percentage of SASS frame ⁶ (7)
Total	98,817	88,214	95,606	90,012	102.0	94.1
State						
Alabama	1,600	1,347	1,598	1,412	104.8	88.4
Alaska	506	450	516	505	112.2	97.9
Arizona	2,248	1,912	2,337	2,007	105.0	85.9
Arkansas	1,120	1,078	977	944	87.6	96.6
California	10,068	8,392	10,075	9,766	116.4	96.9
Colorado	1,793	1,683	1,671	1,587	94.3	95.0
Connecticut	1,165	1,040	1,120	1,029	98.9	91.9
Delaware	217	181	216	220	121.5	101.9
District of Columbia	233	198	222	172	86.9	77.5
Florida	4,043	3,222	3,913	3,520	109.2	90.0
Georgia	2,461	2,236	2,450	2,370	106.0	96.7
Hawaii	289	284	290	281	98.9	96.9
Idaho	742	632	721	714	113.0	99.0
Illinois	4,405	4,005	4,147	3,922	97.9	94.6
Indiana	1,961	1,867	1,944	1,776	95.1	91.4
Iowa	1,468	1,402	1,266	1,173	83.7	92.7
Kansas	1,419	1,380	1,373	1,271	92.1	92.6
Kentucky	1,542	1,217	1,517	1,443	118.6	95.1
Louisiana	1,488	1,259	1,464	1,349	107.1	92.1
Maine	649	619	643	622	100.5	96.7
Maryland	1,447	1,321	1,436	1,364	103.3	95.0
Massachusetts	1,836	1,755	1,834	1,722	98.1	93.9
Michigan	3,879	3,249	3,690	3,351	103.1	90.8
Minnesota	2,433	1,647	2,204	1,936	117.5	87.8
Mississippi	1,085	924	1,094	1,010	109.3	92.3
Missouri	2,427	2,166	2,123	1,938	89.5	91.3
Montana	828	822	570	555	67.5	97.4
Nebraska	1,120	1,021	909	871	85.3	95.8
Nevada	636	590	656	589	99.8	89.8
New Hampshire	484	483	452	438	90.7	96.9

See notes at end of table.

Table 78. Estimated number and percentage of public schools in 2011–12 SASS compared with 2009–10 CCD, by state, region, and community type: 2009–10 and 2011–12—Continued

State and region (1)	2009–10 CCD public schools ¹ (2)	2009–10 CCD public schools with students (published count) ² (3)	2011–12 SASS Frame (2009–10 CCD with adjustments) ³ (4)	2011–12 SASS public schools ⁴ (5)	SASS estimate as a percentage of CCD public schools with students ⁵ (6)	SASS estimate as a percentage of SASS frame ⁶ (7)
New Jersey	2,590	2,358	2,584	2,470	104.7	95.6
New Mexico	855	804	762	734	91.3	96.3
New York	4,730	4,584	4,752	4,621	100.8	97.2
North Carolina	2,550	2,507	2,574	2,554	101.9	99.2
North Dakota	517	471	378	352	74.7	93.1
Ohio	3,796	3,644	3,649	3,383	92.8	92.7
Oklahoma	1,795	1,786	1,494	1,476	82.6	98.8
Oregon	1,301	1,252	1,285	1,205	96.2	93.8
Pennsylvania	3,244	3,120	3,281	3,156	101.2	96.2
Rhode Island	321	295	313	282	95.6	90.1
South Carolina	1,206	1,132	1,196	1,176	103.9	98.3
South Dakota	714	670	482	425	63.4	88.2
Tennessee	1,772	1,672	1,716	1,713	102.5	99.8
Texas	8,619	7,490	8,919	8,297	110.8	93.0
Utah	1,046	851	1,000	937	110.1	93.7
Vermont	323	307	325	311	101.3	95.7
Virginia	2,164	1,866	2,146	2,040	109.3	95.1
Washington	2,318	1,865	2,209	2,013	107.9	91.1
West Virginia	759	692	756	756	109.2	100.0
Wisconsin	2,242	2,132	2,016	1,932	90.6	95.8
Wyoming	363	334	341	320	95.8	93.8
Region						
Northeast	15,342	14,561	24,181	14,651	95.5	60.6
Midwest	26,381	23,654	15,304	22,330	84.6	145.9
South	34,101	30,128	33,688	31,817	93.3	94.4
West	22,993	19,871	22,433	21,214	92.3	94.6

¹ CCD Published Count, 2009–10, Overview of Public and Secondary Schools and Districts: School Year 2009–10 (NCES 2011-346), Table 2, Column 1, regular school districts include those that are components of supervisory unions).

² CCD Published Count, 2009–10, Overview of Public and Secondary Schools and Districts: School Year 2009–10 (NCES 2011-346), Table 4, Column 1.

³ CCD 2009–10 Preliminary File: ccdsch09_combined.sas7bdat (regular districts do not include those that supervise charter schools or are run by the state).

⁴ SASS, 2011–12, School File, Final Weight.

⁵ Calculated by dividing column 5 by column 3.

⁶ Calculated by dividing column 5 by column 4.

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 Public School Frame Data File and Public School Data File,” 2011–12; Common Core of Data (CCD), “Preliminary File,” 2009–10, ccdsch09_combined.sas7bdat; *Overview of Public and Secondary Schools and Districts: School Year 2009–10*, Common Core of Data (CCD), “Local Education Agency Universe Survey,” 2009–10.

Public School Student Count Comparison (Public School Data File)

Comparisons of the number of public school students in SASS were made to the frame year of CCD from the published student counts for 2009–10 (table 79). 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 0.1 percentage points higher than CCD’s count of total K–12 students from 2 years prior to SASS (table 79). There were 1,278,678 prekindergarten students included in CCD in 2009–10. Excluding the prekindergarten students 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 2011–12 in some states being higher than the frame year CCD count, but that does not help to explain why the SASS count of students in 2011–12 is lower for 17 states than the adjusted frame-year CCD count.

There were three states in which the amount of the difference between the 2009–10 CCD and SASS as a percentage of the SASS frame was 10 percentage points or more: Alaska, New York, Tennessee, and West Virginia. The remaining states with a higher count in the SASS frame than estimated in the 2011–12 SASS were less than 10 percent different from the adjusted frame count. The amount of that difference may be reduced in some states when comparing the SASS data to the same year of CCD, if those data were available (which they are not as of the time this report is being prepared). There were 21 states in which the number of students was more than 5 percentage points higher in SASS compared to the 2009–10 CCD. Some of these states are among those that have sometimes had over-reporting of enrollment and teachers in SASS. This may indicate that the school collapsing operation narrowed, but did not entirely eliminate, the over-reporting of students in some states and perhaps over-compensated on the over-reporting in other states. The reports of enrollment in Alaska have been inconsistent in previous SASS administrations.

Table 79. Estimated number and percentage of public students in 2011–12 SASS compared to 2009–10 and 2011–12 CCD, by state and region: 2009–10 and 2011–12

State and region (1)	2009–10 CCD public students ¹ (2)	2009–10 CCD public students less pre-K ² (3)	2011–12 SASS public students ³ (4)	SASS as a percentage of CCD public students less pre-K (preliminary file), 2009–10 count ⁴ (5)
Total	49,484,181	48,205,503	49,509,048	100.1
State				
Alabama	755,552	747,373	680,465	91.0
Alaska	132,104	129,114	101,709	78.8
Arizona	1,071,751	1,063,197	1,137,406	107.0
Arkansas	482,114	468,055	506,215	108.2
California	6,289,578	6,217,174	6,286,985	101.1
Colorado	843,316	812,723	857,651	105.5
Connecticut	560,546	544,625	507,037	93.1
Delaware	129,403	127,777	130,158	101.9
District of Columbia	71,284	61,703	63,959	103.7
Florida	2,643,347	2,590,568	2,599,613	100.3
Georgia	1,677,067	1,634,251	1,770,145	108.3
Hawaii	179,601	178,208	193,454	108.6
Idaho	275,859	274,038	296,617	108.2
Illinois	2,091,654	2,013,394	1,953,731	97.0
Indiana	1,047,232	1,035,580	1,046,015	101.0
Iowa	495,775	468,564	472,810	100.9
Kansas	483,701	466,383	443,082	95.0
Kentucky	673,128	648,868	691,105	106.5
Louisiana	696,558	666,901	608,399	91.2
Maine	189,077	184,830	202,057	109.3
Maryland	852,211	822,834	770,459	93.6
Massachusetts	955,563	927,816	972,718	104.8
Michigan	1,587,067	1,558,880	1,652,898	106.0
Minnesota	838,037	823,632	866,169	105.2
Mississippi	490,526	487,079	538,928	110.6
Missouri	918,710	890,215	911,411	102.4
Montana	141,693	140,342	150,623	107.3
Nebraska	298,500	285,844	264,757	92.6
Nevada	437,149	432,705	471,859	109.0
New Hampshire	194,711	191,614	181,501	94.7
New Jersey	1,402,548	1,348,984	1,393,872	103.3
New Mexico	338,122	330,142	313,824	95.1
New York	2,734,955	2,683,306	2,962,015	110.4
North Carolina	1,490,605	1,467,095	1,417,468	96.6
North Dakota	96,323	94,794	102,403	108.0

See notes at end of table.

Table 79. Estimated number and percentage of public students in 2011–12 SASS compared to 2009–10 and 2011–12 CCD, by state and region: 2009–10 and 2011–12—Continued

State and region (1)	2009–10 CCD public students ¹ (2)	2009–10 CCD public students less pre-K ² (3)	2011–12 SASS public students ³ (4)	SASS as a percentage of CCD public students less pre-K (preliminary file), 2009–10 count ⁴ (5)
Ohio	1,754,191	1,724,144	1,766,327	102.4
Oklahoma	659,911	619,223	635,414	102.6
Oregon	570,720	561,328	601,496	107.2
Pennsylvania	1,793,284	1,776,990	1,926,946	108.4
Rhode Island	143,793	141,739	131,676	92.9
South Carolina	725,838	701,650	770,690	109.8
South Dakota	126,128	124,154	128,003	103.1
Tennessee	987,422	958,635	1,071,881	111.8
Texas	4,935,715	4,686,593	4,955,027	105.7
Utah	585,552	575,176	596,658	103.7
Vermont	96,858	86,180	88,440	102.6
Virginia	1,251,440	1,220,619	1,134,597	93.0
Washington	1,043,788	1,031,732	966,257	93.7
West Virginia	282,879	268,219	304,511	113.5
Wisconsin	872,286	822,086	824,140	100.2
Wyoming	89,009	88,427	87,468	98.9
Region				
Northeast	8,071,335	7,886,084	8,366,261	106.1
Midwest	10,609,604	10,307,670	10,431,747	101.2
South	18,805,000	18,177,443	18,649,033	102.6
West	11,998,242	11,834,306	12,062,007	101.9

¹ CCD 2009–10 Preliminary File: ccdsch09_combined.sas7bdat, Total Student Count.

² CCD 2009–10 Preliminary File: ccdsch09_combined.sas7bdat, Total Student Count without Total Prekindergarten Students.

³ SASS, 2011–12 Public School File, Total Student Count, School Final Weight.

⁴ Calculated by dividing column 4 by column 3.

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, Common Core of Data (CCD), “Preliminary File,” 2009–10, ccdsch09_combined.sas7bdat; Schools and Staffing Survey (SASS), “Final Public School Frame and Public School Data Files,” 2011–12.

Public Charter School Comparison (Public School Data File)

Public charter schools in the 2011–12 SASS were selected to be representative of the United States overall and at the regional level. Although the overall sample is representative at the national and regional level only, among those states with a large number of public charter schools, the sample does attempt to be representative for those states. States with fewer public charter schools were all sampled together, and those states with no public charter schools were excluded from the sampling.

The comparisons that are shown in table 80 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 by CCD only after the state grants a charter for the school and permits the school to begin operation.

Table 80. Estimated number and percentage of public charter schools in 2011–12 SASS compared to 2009–10 CCD, by state, region, and community type: 2009–10 and 2011–12

State and region (1)	2009–10 CCD public charter schools ¹ (2)	2009–10 CCD public charter schools (published count) ² (3)	2011–12 SASS frame (2009–10 CCD with adjust- ments) ³ (4)	2011–12 SASS public charter schools (CCD ident- ified) ⁴ (5)	2011–12 SASS un- weighted public charter schools (CHAR FLAG = 1) ⁵ (6)	2011–12 SASS public charter schools (CHAR FLAG = 1) ⁶ (7)	SASS estimate as a percent- age of CCD ⁷ (8)	SASS estimate as a percent- age of SASS frame ⁸ (9)	SASS estimate (CHAR FLAG=1) as a percentage of CCD ⁹ (10)
Total	5,356	4,952	5,079	4,423	674	4,482	83.7	88.2	83.7
State									
Alaska	25	25	25	28	7	37	148.0	148.0	148.0
Arizona	575	504	571	453	58	479	83.3	83.9	83.3
California	878	813	842	821	120	761	86.7	90.4	86.7
Colorado	161	158	155	146	21	146	90.7	94.2	90.7
Delaware	21	18	21	31	7	33	157.1	157.1	157.1
District of Columbia	101	99	90	54	12	54	53.5	60.0	53.5
Florida	487	412	437	374	49	374	76.8	85.6	76.8
Georgia	67	63	63	63	17	110	164.2	174.6	164.2
Hawaii	31	31	31	22	6	22	71.0	71.0	71.0
Idaho	37	36	36	48	5	48	129.7	133.3	129.7
Indiana	53	53	53	40	10	44	83.0	83.0	83.0
Louisiana	98	77	77	51	13	45	45.9	58.4	45.9
Massachusetts	63	62	62	102	14	102	161.9	164.5	161.9
Michigan	302	294	291	257	30	257	85.1	88.3	85.1
Minnesota	188	181	178	165	23	165	87.8	92.7	87.8
New Jersey	81	70	81	99	13	102	125.9	125.9	125.9
New Mexico	73	72	71	62	16	62	84.9	87.3	84.9
New York	141	140	140	81	15	81	57.4	57.9	57.4
North Carolina	96	96	96	96	13	96	100.0	100.0	100.0
Ohio	361	323	336	280	43	280	77.6	83.3	77.6
Pennsylvania	136	134	133	113	25	113	83.1	85.0	83.1
Texas	578	536	556	506	51	495	85.6	89.0	85.6
Utah	78	72	76	62	17	62	79.5	81.6	79.5
Wisconsin	229	206	198	142	23	178	77.7	89.9	77.7
All other states	496	477	460	326	66	336	67.7	73.0	67.7

See notes at end of table.

Table 80. Estimated number and percentage of public charter schools in 2011–12 SASS compared to 2009–10 CCD, by state, region, and community type: 2009–10 and 2011–12—Continued

State and region (1)	2009–10 CCD public charter schools ¹ (2)	2009–10 CCD public schools (published count) ² (3)	2011–12 SASS frame (2009–10 adjust- ments) ³ (4)	2011–12 SASS public charter schools (CCD ident-ified) ⁴ (5)	2011–12 SASS un- weighted public charter schools (CHAR FLAG = 1) ⁵ (6)	2011–12 SASS public charter schools (CHAR FLAG = 1) ⁶ (7)	SASS estimate as a percent- age of CCD ⁷ (8)	SASS estimate as a percent- age of SASS frame ⁸ (9)	SASS estimate (CHAR FLAG=1) as a percentage of CCD ⁹ (10)
Region									
Northeast	467	451	458	437	74	440	94.2	96.1	94.2
Midwest	1271	1188	1181	975	144	1023	80.5	86.6	80.5
South	1,618	1462	1,493	1304	182	1340	82.8	89.8	82.8
West	2,000	1851	1,947	1707	274	1680	84.0	86.3	84.0

¹ CCD Preliminary File: ccdsch09_combined.sas7bdat, Charter School Indicator.

² CCD Published Count, 2009–10, Overview of Public and Secondary Schools and Districts: School Year 2009–10 (NCES 2011-345), Table 2, Column 6.

³ 2011–12 SASS Public School Frame (CCD 2009-10 with Adjustments), Charter School Indicator.

⁴ SASS, 2011–12, Public School File, Charter Schools Only, Final School Weight (First digit of SCHSTRAT = 4).

⁵ SASS, 2011–12, Public School File, Total Unweighted Charter School Count (Based on S0290=1 in preliminary benchmark tables).

⁶ SASS, 2011–12, Public School File, Charter Schools Only, Final School Weight (Based on S0290=1 in preliminary benchmark tables).

⁷ Calculated by dividing column 5 by column 2.

⁸ Calculated by dividing column 5 by column 4.

⁹ Calculated by dividing column 7 by column 2.

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, Common Core of Data (CCD), “Preliminary File,” 2009–10, ccdsch09_combined.sas7bdat; Schools and Staffing Survey (SASS), “Final Public School Frame and Public School Data Files,” 2011–12; “Overview of Public and Secondary Schools and Districts: School Year 2009–10” (NCES 2011-345).

Private School Comparison (Private School Data File)

Comparisons were made of the number of private schools in SASS to the number of private schools in the sampling frame year of the PSS, 2009–10, the same way that comparisons are made between SASS public schools and the sampling frame year of the CCD. By construction, the total number of private schools in SASS 2011–12 matches the total number of schools in 2011–12 PSS, 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. Note that totals by region do not match since region was not used to control SASS to PSS as described in the private school weighting section of Chapter 8.

The comparisons in table 81 show that the number of private schools measured by SASS in 2011–12 is lower than the comparable number of private schools from PSS in 2009–10. However, the number of private schools measured in the 2011–12 SASS has been adjusted to match the number of private schools in the 2011–12 PSS, and the number of private schools in the PSS did decrease from 2009–10 to 2011–12.

The stratification groups (termed Affiliation stratum in these tables) for the 2011–12 SASS are comparable to those used in SASS 2007–08, but are somewhat different from what had been used for previous SASS data collections. Prior to the 2003–04 SASS, there were 19 groups, plus “other,” based on a combination of religious affiliation and school membership groups. In the 2003–04 SASS, the previous 19 groups, and

“other,” a rather large category, were streamlined into 11 categories including an “All other religious” category that is smaller than the previous “other” category. The new stratification groups for both 2003–04 and 2007–08 did not use a combination of the religious affiliation and association membership responses for forming any of the categories; rather, only the religious orientation (religious or non-sectarian) and religious affiliation items are used. For the 2007–08 SASS, more streamlining was performed, such that only private schools with a membership size of 800 or more schools nationally have their own stratum group. Groups below that threshold had been sampled at a higher rate than larger groups, and as a result, had tended to respond at lower rates than the larger groups. Now, fewer of these smaller groups’ schools are burdened with responding, but the tradeoff is a lack of detail collected in SASS about those types of schools. Schools from those groups are still included in sample, but are not specifically drawn as part of any affiliation stratum except “all other religious.” The sampling for 2011–12 was consistent with the 2007–08 methodology.

Table 81. Estimated number of private schools in 2011–12 SASS compared to 2009–10 and 2011–12 PSS, by affiliation stratum, NCES typology, and region: 2009–10 and 2011–12

Affiliation stratum, NCES typology, and region (1)	2009–10 PSS private schools ¹ (2)	2011–12 PSS private schools ² (3)	2011–12 SASS private schools ³ (4)	SASS estimate as a percentage of 2009–10 PSS ⁴ (5)	SASS estimate as a percentage of 2011–12 PSS ⁵ (6)
Total	28,090	26,203	26,227	93.4	100.1
Affiliation stratum					
Catholic—parochial	3,092	2,893	2,893	93.6	100.0
Catholic—diocesan	2,946	2,897	2,901	98.5	100.1
Catholic—private	978	964	964	98.6	100.0
Baptist	2,021	1,790	1,790	88.6	100.0
Jewish	921	876	875	95.0	99.9
Lutheran	1,469	1,362	1,362	92.7	100.0
Seventh-Day Adventist	847	796	796	94.0	100.0
All other religious	8,951	8,212	8,213	91.8	100.0
Nonsectarian—regular	2,642	2,625	2,613	98.9	99.5
Nonsectarian—special emphasis	2,672	2,186	2,218	83.0	101.5
Nonsectarian—special education	1,551	1,603	1,603	103.4	100.0
NCES typology (3-level)					
Catholic	7,017	6,754	6,758	96.3	100.1
Other religious	14,209	13,035	13,036	91.7	100.0
Nonsectarian	6,865	6,414	6,434	93.7	100.3
Region					
Northeast	6,183	5,985	5,564	90.0	93.0
Midwest	7,612	7,176	7,391	97.1	103.0
South	8,975	8,051	8,142	90.7	101.1
West	5,322	4,991	5,130	96.4	102.8

¹ PSS, 2009–10, Final File (Only Traditional Schools), Final School Weight.² PSS, 2011–12, Final File (Only Traditional Schools), Final School Weight.³ SASS, 2011–12, “Private School Restricted-Use File,” Final School Weight.⁴ Calculated by dividing column 4 by column 2.⁵ Calculated by dividing column 4 by column 3.

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,” 2009–10; Schools and Staffing Survey (SASS), “Private School Restricted-Use Data File,” 2011–12.

Private School Student Count Comparison (Private School Data File)

Comparisons were made of the number of private school students in SASS to the number of private school students in the frame year (2009–10) as well as to the concurrent year of PSS. Overall, the SASS student count is about 7 percentage points higher than the PSS count in 2009–10 and about 12 percentage points higher than the concurrent year’s student count in PSS (table 82). By affiliation stratum, SASS estimates as a percentage of the 2009–10 PSS ranged from 90.2 percent for the Catholic, private stratum to 133.7 percent for the Nonsectarian regular school stratum, and the SASS estimates as a percentage of the 2011–12 PSS ranged from 93.2 percent for the Catholic, private school stratum to 137.8 percent for the Nonsectarian, special emphasis school stratum. However, by NCES typology, the SASS count of private school students was higher

for all of the three typology categories when compared to the 2011–12 PSS, by about 5 percent for Catholic, 9 percent for Other Religion, and 32 percent for Nonsectarian schools.

The percentage differences between SASS and the concurrent PSS are larger than the differences between SASS and the frame year PSS. While the differences are larger, sampling variability for some of the smaller strata may account for percentage differences greater than 5 percent. This difference may be attributable to higher response rates from larger private schools resulting in an over inflation of the weights of the larger schools relative to the smaller schools. Another factor may be weighting as the SASS weights are produced separately from the PSS weights, allowing for this difference to emerge. SASS and PSS weights control for the school counts but not the student counts.

Table 82. Estimated number of private school students in 2011–12 SASS compared to 2009–10 and 2011–12 PSS, by affiliation stratum, NCES typology, and region: 2009–10 and 2011–12

Affiliation stratum, NCES typology, and region (1)	2009–10 PSS private students in traditional schools ¹ (2)	2011–12 PSS private students in traditional schools ² (3)	2011–12 SASS private students ³ (4)	SASS estimate as a percentage of 2009–10 PSS ⁴ (5)	SASS estimate as a percentage of 2011–12 PSS ⁵ (6)
Total	4,626,609	4,432,624	4,962,708	107.3	112.0
Affiliation stratum					
Catholic—parochial	783,368	728,286	786,954	100.5	108.1
Catholic—diocesan	844,378	830,339	903,390	107.0	108.8
Catholic—private	379,893	367,651	342,651	90.2	93.2
Baptist	232,288	200,688	265,021	114.1	132.1
Jewish	224,867	242,536	242,390	107.8	99.9
Lutheran	169,123	161,059	181,991	107.6	113.0
Seventh-Day Adventist	51,376	48,614	48,097	93.6	98.9
All Other Religious	1,052,897	1,005,186	1,071,511	101.8	106.6
Nonsectarian—regular	593,646	581,340	793,904	133.7	136.6
Nonsectarian—special emphasis	194,118	162,510	223,965	115.4	137.8
Nonsectarian, special education	100,653	104,415	102,833	102.2	98.5
NCES Typology (3-level)					
Catholic	2,007,640	1,926,277	2,032,995	101.3	105.5
Other religious	1,730,551	1,658,083	1,809,010	104.5	109.1
Nonsectarian	888,418	848,265	1,120,702	126.1	132.1
Region					
Northeast	1,116,599	1,058,340	1,089,630	97.6	103.0
Midwest	1,124,185	1,089,458	1,255,219	111.7	115.2
South	1,527,380	1,453,483	1,709,697	111.9	117.6
West	858,444	831,344	908,162	105.8	109.2

¹ PSS, 2009–10, Final File (Only Traditional Schools), Total Student Count, Final School Weight.

² PSS, 2009–10, Final File (Only Traditional Schools), Total Student Count, Final School Weight.

³ Schools and Staffing Survey (SASS), “Private School Data File,” 2011–12 (Total Student Count, Final School Weight).

⁴ Calculated by dividing column 4 by column 2.

⁵ Calculated by dividing column 4 by column 3.

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,” 2009–10; Schools and Staffing Survey (SASS), “Private School Data File,” 2011–12.

Public School Teacher FTE Comparison (Public School Teacher Data File)

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 SASS public school teacher data are collected and reported in head counts of people rather than in the number of full-time-equivalent positions (FTEs) reported to CCD (table 83). 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 18 percent of schools in 2011–12 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 who 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.

The SASS teacher estimate of the number of FTE teachers (table 83) was 3.5 percent higher overall than the frame year CCD count of FTE 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, particularly within certain states. Another possible reason is that the school collapsing operation in SASS may not have completely taken care of the over-reporting of teachers in combined K–12 schools. At the state level, the larger discrepancies are likely a function of previously discussed factors including CCD-SASS discrepancies, higher numbers of charter schools, school collapsing, and lower response rates. A comparison of the SASS teacher estimate from the teacher file to the SASS teacher estimate from the school file produced a difference of only 0.1 percentage points and all but one state-level estimate (Wyoming) was within 5 percentage points of the school file.

Table 83. Estimated number and percentage of full-time-equivalent (FTE) teachers in public schools in 2011–12 SASS compared to the 2009–10 CCD, by state and region: 2009–10 and 2011–12

State and region (1)	2009–10 CCD FTE public school teachers ¹ (2)	2011–12 SASS FTE public school teachers (teacher file) ² (3)	2011–12 SASS public school teachers (head- count) (school file) ³ (4)	2011–12 SASS public school teachers (approx. FTE) (school file) ⁴ (5)	SASS school file as a percentage of 2009–10 CCD ⁵ (6)	SASS teacher file as a percentage of SASS school file ⁶ (7)
Total	3,165,781	3,278,059	3,385,281	3,275,132	103.5	100.1
State						
Alabama	52,112	43,730	45,046	44,127	84.7	99.1
Alaska	8,165	7,147	7,378	7,044	86.3	101.5
Arizona	65,307	59,547	62,473	59,916	91.7	99.4
Arkansas	38,533	37,284	38,102	37,171	96.5	100.3
California	289,424	272,332	284,382	271,895	93.9	100.2
Colorado	49,465	53,657	56,481	53,626	108.4	100.1
Connecticut	42,033	42,917	44,857	42,527	101.2	100.9
Delaware	8,739	9,112	9,344	9,223	105.5	98.8
District of Columbia	6,715	5,144	5,452	5,339	79.5	96.3
Florida	172,319	174,443	176,344	173,814	100.9	100.4
Georgia	117,172	121,594	123,058	120,984	103.3	100.5
Hawaii	11,500	13,751	13,868	13,567	118.0	101.4
Idaho	15,546	15,738	16,355	15,463	99.5	101.8
Illinois	134,476	136,935	140,579	135,398	100.7	101.1
Indiana	61,021	62,271	64,111	62,323	102.1	99.9
Iowa	35,041	34,520	36,101	34,427	98.2	100.3
Kansas	33,685	35,041	36,648	34,764	103.2	100.8
Kentucky	39,401	45,218	46,782	45,504	115.5	99.4
Louisiana	49,037	43,648	43,915	42,863	87.4	101.8
Maine	15,978	17,147	18,365	17,406	108.9	98.5
Maryland	57,503	56,125	58,404	57,074	99.3	98.3
Massachusetts	69,950	75,719	80,437	77,442	110.7	97.8
Michigan	91,046	93,333	95,823	91,660	100.7	101.8
Minnesota	53,761	58,405	62,748	58,261	108.4	100.2
Mississippi	33,347	36,899	37,618	37,222	111.6	99.1
Missouri	67,274	65,880	69,837	67,388	100.2	97.8
Montana	10,608	11,702	12,381	11,723	110.5	99.8
Nebraska	22,156	22,918	23,897	22,587	101.9	101.5
Nevada	22,990	24,590	24,908	24,630	107.1	99.8
New Hampshire	15,461	14,794	15,759	14,987	96.9	98.7

See notes at end of table.

Table 83. Estimated number and percentage of full-time-equivalent (FTE) teachers in public schools in 2011–12 SASS compared to the 2009–10 CCD, by state and region: 2009–10 and 2011–12—Continued

State and region (1)	2009–10 CCD FTE public school teachers ¹ (2)	2011–12 SASS FTE public school teachers (teacher file) ² (3)	2011–12 SASS public school teachers (head- count) (school file) ³ (4)	2011–12 SASS public school teachers (approx. FTE) (school file) ⁴ (5)	SASS school file as a percentage of 2009–10 CCD ⁵ (6)	SASS teacher file as a percentage of SASS school file ⁶ (7)
New Jersey	100,293	122,840	124,698	121,687	121.3	100.9
New Mexico	21,946	21,292	21,828	21,137	96.3	100.7
New York	213,417	231,829	241,052	234,571	109.9	98.8
North Carolina	99,217	99,175	103,834	101,502	102.3	97.7
North Dakota	8,236	9,449	10,260	9,585	116.4	98.6
Ohio	105,478	119,805	121,032	117,008	110.9	102.4
Oklahoma	42,734	44,317	46,228	44,660	104.5	99.2
Oregon	27,687	29,672	31,446	29,413	106.2	100.9
Pennsylvania	126,123	144,726	148,003	143,634	113.9	100.8
Rhode Island	11,334	11,620	12,192	11,483	101.3	101.2
South Carolina	46,694	49,456	52,046	50,863	108.9	97.2
South Dakota	9,394	10,444	10,808	10,293	109.6	101.5
Tennessee	63,455	75,606	76,965	75,135	118.4	100.6
Texas	346,944	346,646	352,925	347,751	100.2	99.7
Utah	25,816	26,985	28,263	26,529	102.8	101.7
Vermont	8,378	8,502	9,385	8,744	104.4	97.2
Virginia	79,804	85,995	88,522	85,945	107.7	100.1
Washington	53,942	52,918	55,463	51,767	96.0	102.2
West Virginia	20,125	23,285	24,186	23,347	116.0	99.7
Wisconsin	57,847	63,703	66,191	61,871	107.0	103.0
Wyoming	7,152	8,252	8,497	7,853	109.8	105.1
Region						
Northeast	679,414	670,092	694,750	672,482	99.0	99.6
Midwest	602,967	712,704	738,038	705,564	117.0	101.0
South	1,273,850	1,297,678	1,328,772	1,302,523	102.3	99.6
West	609,547	597,585	623,722	594,562	97.5	100.5

¹ CCD 2009–10 Preliminary File: ccdsch09_combined.sas7bdat.sas7bdat, Full-time Equivalency Count.² SASS, 2011–12 Public School Teacher File, Full-time Equivalency Count, Teacher Final Weight.³ SASS, 2011–12 Public School, Total Teacher Count, Final School Weight.⁴ SASS, 2007–08 Public School, Sum of full-time teachers and half of the part-time teachers reported in the 2007–08 SASS Public School Data File, Final School Weight.⁵ Calculated by dividing column 4 by column 2.⁶ Calculated by dividing column 3 by column 5.

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, Common Core of Data (CCD), “Preliminary File,” 2009–10, ccdsch09_combined.sas7bdat; Schools and Staffing Survey (SASS), “Final Public School Frame and Public School Data Files,” 2011–12.

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 in 2007–08 and this continued in 2011–12.

The number of private FTE teachers in SASS (table 84) is 2.6 percent lower overall than the frame year count of teachers in PSS and 1.2 percent higher 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 Catholic, private school teachers to about 24 percent above the PSS count for Nonsectarian, regular 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 2009–10 and 2011–12 would tend to lower the FTE estimate in SASS relative to the 2011–12 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. The 2011–12 SASS used the 2009–10 PSS area frame instead of the 2011–12 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 2011–12 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 84. Estimated number and percentage of full-time-equivalent (FTE) private school teachers in 2011–12 SASS compared to 2009–10 and 2011–12 PSS, by affiliation stratum, NCES typology, and region: 2009–10 and 2011–12

Affiliation stratum, NCES typology, and region (1)	2009–10 PSS FTE	2011–12 PSS FTE	2011–12 SASS private teachers (head- count) (school file) ³	2011–12 SASS private teachers (approx. FTE) (school file) ⁴	2011–12 SASS private full-time teachers (head- count) (school file) ⁵	2011–12 SASS private part-time teachers (head- count) (school file) ⁶	SASS school file (approx. FTE) as a percentage of 2009–10 PSS ⁷	SASS school file (approx. FTE) as a percentage of 2011–12 PSS ⁸
	traditional schools ¹ (2)	traditional schools ² (3)	(4)	(5)	(6)	(7)	(8)	(9)
Total	424,032	408,357	463,932	413,138	356,222	107,710	97.4	101.2
Affiliation stratum								
Catholic—parochial	52,557	49,277	52,180	46,950	41,683	10,496	89.3	95.3
Catholic—diocesan	58,343	57,848	61,733	56,459	50,301	11,432	96.8	97.6
Catholic—private	31,289	30,479	29,081	26,800	24,063	5,018	85.7	87.9
Baptist	22,156	19,819	23,908	20,905	17,929	5,979	94.4	105.5
Jewish	25,014	25,426	32,836	24,179	13,543	19,293	96.7	95.1
Lutheran	13,241	12,476	13,580	11,787	10,051	3,528	89.0	94.5
Seventh-Day Adventist	4,199	3,964	4,336	3,747	3,302	1,034	89.2	94.5
All Other Religious	103,630	98,388	107,343	94,036	80,388	26,955	90.7	95.6
Nonsectarian—regular	70,123	69,289	93,072	87,031	78,194	14,878	124.1	125.6
Nonsectarian—special emphasis	25,251	21,909	25,040	21,412	18,214	6,826	84.8	97.7
Nonsectarian—special education	18,229	19,483	20,824	19,835	18,554	2,270	108.8	101.8
NCES typology (3-level)								
Catholic	142,190	137,604	142,993	130,208	116,047	26,946	91.6	94.6
Other religious	168,240	160,074	182,003	154,653	125,214	56,789	91.9	96.6
Nonsectarian	113,602	110,680	138,937	128,277	114,962	23,975	112.9	115.9
Region								
Northeast	111,443	106,080	114,646	100,234	83,795	30,851	89.9	94.5
Midwest	90,168	89,214	103,106	90,949	78,902	24,204	100.9	101.9
South	148,578	141,605	163,250	148,471	131,792	31,458	99.9	104.8
West	73,843	71,458	82,930	73,484	61,733	21,197	99.5	102.8

¹ Private School Universe Survey (PSS), Final File (Only Traditional Schools), 2009–10 (Full-time Equivalency Count, Final School Weight).

² Private School Universe Survey (PSS), Final File (Only Traditional Schools), 2009–10 (Full-time Equivalency Count, Final School Weight).

³ SASS, 2011–12, Private School Count, Total Teacher Count, Final Teacher Weight (Column 6 + Column 7).

⁴ SASS, 2011–12, Private School Count, Approximate Full-time Equivalency Count, Final Teacher Weight.

⁵ SASS, 2011–12, Private School Count, Full-time Teacher Count, Final Teacher Weight.

⁶ SASS, 2011–12, Private School Count, Part-time Teacher Count, Final Teacher Weight.

⁷ Calculated by dividing column 5 by column 2.

⁸ Calculated by dividing column 5 by column 3.

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,” 2009–10; Schools and Staffing Survey (SASS), “Private School Restricted-Use Data File,” 2011–12; *Characteristics of Private Schools in the United States: Results of the 2011–12 Private School Universe Survey*, Private School Universe Survey (PSS), 2011–12.

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