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Time Spent Teaching Core Academic Subjects in Elementary Schools: Comparisons Across Community, School, Teacher, and Student Characteristics

Marianne Perie
American Institutes for Research

David P. Baker
American Institutes for Research
Catholic University of America

Sharon Bobbitt
National Center for Education Statistics

U.S. Department of Education
Office of Educational Research and Improvement **NCES 97-293**

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Marshall S. Smith
Acting Assistant Secretary

National Center for Education Statistics
Pascal D. Forgione, Jr.
Commissioner

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National Center for Education Statistics
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U.S. Department of Education
555 New Jersey Avenue, NW
Washington, DC 20208-5574

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Contact:
Mary Rollefson
(202) 219-1336

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Highlights

- Given the hetereogeneity of schools in the United States, remarkably few differences were found in the percentage of school time first through fourth grade teachers devoted to the core academic subjects among various community, school, teacher, and student characteristics.

- Although the amount of time teachers spent in school with students each week increased slightly between 1987–88 and 1993–94, the largest increase in time was found in the amount of time teachers spent on out-of-classroom activities, such as coaching, tutoring, grading, preparing lesson plans, meeting with parents, and attending staff meetings. In 1987–88, teachers spent, on average, about 1 hour and 45 minutes per day on these activities; by 1993–94, this time had increased to 2 hours and 18 minutes per day.

- Public school teachers of grades 1–4 spent approximately 68 percent of their school time, or almost 22 hours per week, on core curriculum; private school elementary teachers spent about 58 percent of school time, or almost 19 hours per week, on core academic subjects. About half of this time was spent on English/reading/language arts in both sectors.

- Teachers in public schools spent a larger percentage of school time teaching the core subjects to students in grades 1–4 than did teachers in private schools. This finding held true even across the various private school affiliations.

- Although new standards of excellence were implemented in the late 1980s and early 1990s, the percentage of school time spent on core curriculum in grades 1–4 remained relatively unchanged from 1987–88 to 1993–94.

- Teachers in most states spent about the same percentage of school time on core curriculum. In 1993–94, only Delaware and the District of Columbia differed from the national average. However, the average school week in Delaware and the District of Columbia is slightly longer than the national average, and when the raw number of hours spent on core curriculum were examined, neither Delaware nor the District of Columbia differed from the nation as a whole.

Introduction

The proportion of time that elementary school teachers use to teach the core academic subjects—English/reading/language arts, mathematics, social studies, and science—is an important aspect of instruction. These subjects are at the heart of the school curriculum, and the proportion of time spent during the school day teaching them to young students reflects the emphasis schools place on academic topics. Recent concerns about the quality of American schools have brought national attention to how teachers spend the time they have in an average school day. Many have suspected that the addition of a variety of activities at school has changed teachers' roles, and, as a result, time spent on basic core academic subjects may have dropped. Moreover, as a result of the concern that secondary school curricula "have been homogenized, diluted, and diffused to the point that they no longer have a central purpose," an image has emerged that the best schools in the nation are the ones that spend the most time teaching the basics (National Commission on Excellence in Education 1983, p. 18). If teachers could spend more time teaching these core subjects, many believe the country's education system could provide students with a better opportunity to learn the skills necessary to compete in the international business market.

The publication of *A Nation at Risk* in 1983 with its recommendation for more emphasis on the four core subjects—English/reading/language arts, mathematics, social studies, and science—focused national attention on strengthening the core academic curriculum of schools (National Commission on Excellence in Education 1983). As a result, organizations such as the National Council of Teachers of Mathematics (NCTM) and the National Academy of Sciences (NAS), to name a few, developed national standards for their subject areas and are working to have these standards implemented as a part of every school's curriculum.

Correspondingly, many current policy changes aim to increase school time spent on the four core academic subjects, some of which adjust the structure of the curriculum. For example, many high schools that before had either no graduation requirements or had more liberal policies now have adopted a more intensive core curriculum of 4 years of English; 3 years each of mathematics, social studies, and science; 2 years of a foreign language; and 1/2 year of computer science (Education Commission of the States 1993). Although some of the overall curriculum requirements have focused primarily on the secondary level, various councils and centers have created standards for elementary schooling as well. The organizations developing the individual course standards have divided students into three groups: Kindergarten through 4th grade, 5th through 8th grade, and 9th through 12th grade. This division, along with the standards themselves, corresponds to one of the National Education Goals established by President Bush and the nation's Governors during a 1989 summit meeting, which calls for American students to "leave grades 4, 8, and 12 having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography" (National Education Goals Panel 1995).

Several studies have shown that instruction in the core curriculum at the earliest level is important, as exposure to subjects at the elementary level is related to the courses students take

at the secondary level. The more content they are taught early on, the more they learn and the better they perform on later achievement tests (Medrich and Griffith 1992). In general, these goals espouse this philosophy and emphasize early exposure to each of the core subjects, engaging the students' imagination and capturing their interest, thus promoting continued study in these subjects.

Spending a large proportion of school time teaching core curriculum may be important not only in terms of school quality, but also in terms of teacher satisfaction. The research on teacher satisfaction indicates that the proportion of time spent on instruction is important to teachers. For example, an NCES report on the condition of teaching found that, on average, teachers are required to spend approximately 35 hours a week performing their regular duties at school (Choy et al. 1993). In addition, they may spend extra time coaching, supervising extracurricular activities, tutoring, grading papers, or writing lesson plans, raising the average total hours in a work week to 46. Teachers who feel that they spend more time with bureaucratic duties, disciplinary actions, and other nonteaching assignments tend to be less satisfied with their jobs than those who feel they spend more time in actual instruction and interaction with students (Choy et al. 1993). Moreover, job dissatisfaction can lead to a higher turnover rate in the teacher workforce, which in turn might have implications for teaching effectiveness and student outcomes (Bobbitt et al. 1994).

This report addresses these issues by comparing the amount of time spent teaching the four basic subjects to the amount of time students spend in elementary school each week. It compares various school and student variables such as control of school, urbanicity, school size, percentage of students who are minority, and percentage of students eligible for free or reduced-price lunches, as well as certain classroom and teacher variables. Data related to school time are available from the Schools and Staffing Survey (SASS), conducted by the National Center for Education Statistics (NCES). By comparing data from school years 1987–88 to 1990–91 to 1993–94, this report discerns whether changes have occurred in the proportion of school time spent teaching the core curriculum over this time period.

Teacher time spent on core academic subjects might vary among teachers and schools for several reasons. For example, the percentage of school time spent on instruction might vary by the resources available to an institution, by the experience levels of the teachers, or by student characteristics. If a school serves a largely poor or non-English-speaking population, for example, it may spend additional time on students' special needs and may also have fewer resources to devote to learning; thus, such a school may spend a smaller percentage of time on the core academic curriculum. Another reason for the variation in teaching time concerns the highly localized control over schooling in the United States as compared to other countries (Stevenson and Baker 1989). With different communities controlling various factors of the schools across the country, one might not expect to see much consistency between schools. These differences would, however, appear in comparisons across various communities. Offsetting this variation is the fact that schedules could be so tightly packed with enrichment courses (e.g., music, art, and physical education) and additional activities (e.g., homeroom, lunch, and recess) that there is very little room for variation regardless of the circumstances or policies. In addition to the possible variation in school time by certain community, school, and student characteristics, variation over time may also be expected. For example, because of the current education reform climate, teachers might have spent more time on core curriculum during the 1993–94 school year than during the 1987–88 school year.

This report describes the number of hours and the percentage of school time spent on core academic subjects during the elementary school week around the country. It addresses three central issues about using class time to teach core academic subjects. The first issue is the actual number of hours and the percentage of school time the nation's elementary school teachers spend on instruction in the core subject areas of English/reading/language arts, mathematics, social studies, and science. The second issue involves an analysis of how this time varies by characteristics of the local community, school, teacher, classroom, and students. Finally, trends over time are examined to see how the amount and percentage of time spent on the four core subjects has changed from 1987–88 to 1993–94.

Data

This report analyzes the NCES Schools and Staffing Survey (SASS), a large and comprehensive dataset on elementary and secondary schools in both the public and private sectors in the United States. SASS has collected data over three different school years: 1987–88, 1990–91, and 1993–94. With each iteration, it has surveyed elementary school teachers about the time they devote to teaching core academic subjects.

SASS uses a complex and random sample of schools stratified by state, sector, and school level that provides representative estimates of (1) the nation and each affiliation for private schools and (2) the nation and each state for public schools. SASS includes separate questionnaires for private and public schools, school districts (public only), school administrators, and teachers. About four teachers were sampled from each school, although this number varied depending on the school size and sector (public or private).

This report focuses on first through fourth (1–4) grade elementary school teachers because they are most likely to teach multiple subject areas to one intact class of students.[1] In addition, the analysis was restricted to full-time, self-contained regular classroom teachers (i.e., those who taught multiple subjects to the same class of students all or most of the day). Focusing on classes taught by only one teacher allows us to determine how teachers divide up their teaching time and thus to determine the relative importance elementary school teachers place on the core academic subjects. By doing this, the analysis omits (1) grade 1–4 teachers who team teach or (2) classrooms where a different teacher teaches each of the various subjects.

[1] Although fifth grade is often considered to be an elementary grade, the data show that students at this grade level were likely to be taught by multiple teachers and not to be in self-contained classrooms.

Teachers were asked to report the number of hours spent teaching each of the four core curriculum subjects in their most recent full week of teaching. Teachers were instructed to round their estimates to the nearest whole hour. A small number of teachers were removed from the sample because the number of hours reported for teaching core curriculum was either 0 or was disproportionately high.[2]

The calculations of the percentage of school time spent on core curriculum were done as follows. First, the number of hours spent teaching each of the four core academic subjects per week was summed to calculate the total number of hours spent teaching all four core academic subjects per week. Second, the length of the school day was used to determine how many hours per week could be spent teaching the core curriculum. Third, the proportion of this school time spent teaching the core academic curriculum was calculated as a percentage of the school week and was compared across community, school, teacher, classroom, and student characteristics. In other words, this report examines the amount of school time spent per week on the core academic subjects as a percentage of the time available to teach these subjects. In addition to calculating the percentage of school time spent on core curriculum, all analyses in this report have been conducted in terms of raw number of hours spent on core academic subjects. Discrepancies between the two types of calculations are noted in the text. In addition, the number of hours a teacher spent outside of the normal school day (i.e., outside of the classroom) doing school-related activities each week were calculated.

Because estimates presented in this report are based on samples, they are subject to sampling errors. Standard errors, indicating the accuracy of the estimates, were calculated with appropriate adjustments made for the complex sample design and multiple comparisons. These standard errors are included in appendix B. All comparisons discussed in the report are tested for statistical significance at the $\propto$=.05 level.

[2] Teachers who reported that they spent 0 hours on core curriculum were found primarily to be teachers who were working with learning disabled or emotionally disturbed students and thus were dropped from the sample for this study. In addition, teachers who reported teaching core curriculum for more than 40 hours a week were also dropped, as the school week generally ranged from 30 and 36 hours a week. Some latitude was granted since teachers who, for example, required students to write history reports could count that time as being spent on both history and English; however, since very few teachers reported spending more than 40 hours a week teaching and because no school week lasted longer than 40 hours, 40 hours was chosen as the cut-off point. Both of these restrictions together resulted in less than 3 percent of the sampled teachers being excluded.

Results

Because the amount of time spent on core curriculum depends on the total amount of time spent in school, the first part of this section examines the number of hours in a school week. This brief description of the length of the school week and changes in its length and structure over the past 6 years gives a context for interpreting the percentage of school time spent on English/reading/language arts, mathematics, science, and social studies. From there, the section focuses on the percentage of school time spent on core curriculum and the variation over time and across different student, classroom, school, and community characteristics.

What is the length of the school week in elementary schools, and has it changed over time?

In 1993–94, teachers in grades 1–4 spent an average of about 32 hours with students in school per week (table 1), which corresponds to 6 hours and 24 minutes per day (assuming students are in school for 5 days of equal length each week).[3] Although this time increased incrementally from 1987–88 to 1990–91 to 1993–94, the average overall increase over the 6 years was calculated to be approximately 25 minutes a week for public schools and 50 minutes a week for private schools.[4]

Teachers, however, spent an additional 9 to 12 hours per week on out-of-classroom activities in addition to their regular classroom time with students (table 1). These activities are outside the normal realm of classroom instruction, and include tasks such as mentoring, coaching, tutoring, meeting with parents, preparing lesson plans, and grading homework. The time spent on out-of-classroom activities increased substantially over the 6-year period in both public and private schools, increasing from about 9 hours per week (1.8 hours a day) in 1987–88 to approximately 10 hours per week (2 hours a day) in 1990–91 to at least 11.6 hours per week (almost 2.5 hours a day) in 1993–94. Thus, a typical work week for teachers increased from about 40 hours a week in 1987–88 to about 44 hours in 1993–94, although most of this increase was due to time spent outside of the classroom.

[3] Teachers reported the amount of time they spent on core subjects in hours per week. In some cases, this has been transformed into hours per day by dividing by 5 or into minutes per week by converting hours to minutes. These numbers will not be precise since they reflect any rounding teachers may have done in responding to the question.

[4] Note that the differences in the increasing length of the school day between public and private schools is within sampling variation and is not statistically significant.

Table 1— Mean number of hours spent per week on core curriculum, in school and on school-related activities, by 1st–4th grade teachers, by sector, year, and subject

Subject	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
English/Reading/Language arts	11.2	11.0	10.8	9.7	9.2	9.4
Arithmetic/Mathematics	4.8	4.8	5.2	4.5	4.5	4.6
Social studies/History	2.7	2.4	2.9	2.4	2.5	2.6
Science	2.5	2.2	2.8	2.2	2.2	2.3
All core curriculum	21.1	20.4	21.7	18.8	18.3	18.9
Hours spent in school	31.7	32.0	32.1	32.1	32.6	32.9
Hours spent on activities outside of the normal school day*	8.8	10.0	11.6	9.1	10.3	11.7

*Includes student-related activities such as coaching, field trips, or tutoring, and other school-related activities such as preparation, grading papers, parent conferences, and staff meetings.
NOTE: Individual subjects are averaged separately from all core curriculum.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

How much school time do elementary teachers spend teaching core curriculum, and has it changed over time?

As noted above, the amount of school time that teachers spend teaching the core academic subjects can be calculated two different ways: (1) as the percentage of school time (i.e., the time available in the school week in which to teach core subjects) that teachers devote to the core academic subjects, and (2) as the raw number of hours that teachers spend on core curriculum. This report primarily examines the percentage of school time spent on core curriculum. The data for raw hours per week spent on core curriculum can be found in tables A.4–A.8 in appendix A. Any discrepancies between the two types of analyses are noted in the text.

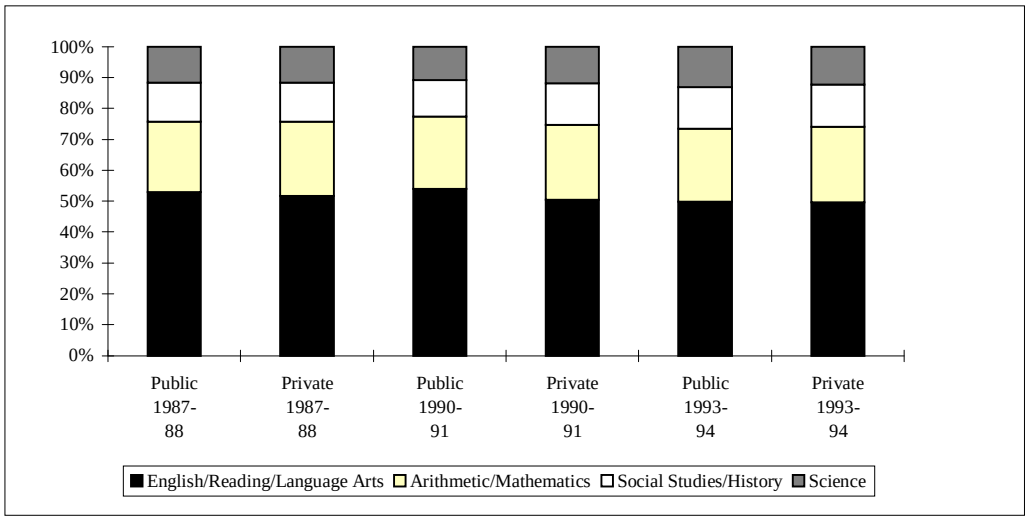
The 1993–94 SASS data show that public school teachers of grades 1–4 spent, on average, about 22 hours per week, or just over 4 hours per day, on core academic curriculum; private school teachers spent almost 19 hours per week, or just under 4 hours per day, on all core subjects (table 1). In other words, teachers spent about two-thirds of their time in the classroom on the core academic subjects (table 2). Of the time spent on core curriculum, public school teachers devoted almost 50 percent (2 hours per day) to English/reading/language arts, 24 percent (1 hour per day) to mathematics, and about 13 percent (35 minutes per day) each to social studies and science. Although the proportions of time spent on core curriculum were similar in private schools, the average time spent was slightly lower: 1 hour and 52 minutes a day in English/reading/language arts, 55 minutes in mathematics, 31 minutes in social studies, and 28 minutes in science (figure 1).

Table 2— Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and subject

Subject	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
English/Reading/Language arts	35.6	34.9	33.9	30.7	28.9	29.0
Arithmetic/Mathematics	15.3	15.0	16.2	14.3	13.8	14.2
Social studies/History	8.5	7.6	9.3	7.5	7.7	7.9
Science	7.8	7.0	8.8	6.9	6.6	7.1
All core curriculum	67.3	64.5	68.2	59.3	56.9	58.2

NOTE: Individual subjects are averaged separately from all core curriculum.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Figure 1— Percentage distribution of school time spent by 1st–4th grade teachers among each of the core subjects, by sector and year



NOTE: For numbers accompanying figure 1, see table A.1 in appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Although the absolute numbers of hours spent on core curriculum were lower in private schools, proportionally, all schools distributed their teaching time the same way across the four subjects for all three years (figure 1). Overall, about twice as much time was spent on English/reading/language arts as on arithmetic and mathematics, and almost twice as much time was spent on arithmetic and mathematics as on social studies/history or science. And, once again, the percentage distribution of time spent on each of the four core subjects varied little over the period or between the public and private sectors. It is important to note that the slight increase from 1987–88 to 1993–94 in the total time spent on core curriculum in public schools does not reflect a substantial change in school time.

Another way to examine this issue is to take into consideration the effect of schools having different school-week lengths. Even when the length of the school week is taken into consideration, however, the trends in the percentage of time spent on core curriculum remain the same (table 2). In other words, there was virtually no change in the proportion of classroom time spent teaching core curriculum from 1987–88 to 1990–91 to 1993–94. English/reading/language arts was the subject that public and private school teachers spent proportionally the most time teaching. In addition, public school teachers spent proportionally more time on core curriculum than did private school teachers.

Does the percentage of school time spent teaching core curriculum vary across different types of communities, schools, teachers, students, and classrooms?

In general, the answer is remarkably little. For example, there were only minute differences in the percentage of time spent on core curriculum in different geographic regions and in different types of communities (table 3). For example, in 1994, public schools in the Northeast spent a greater percentage of time on core curriculum than public schools in the Midwest. Furthermore, when the raw number of hours per week spent on core curriculum are analyzed, the 1993–94 data show that public school teachers in the South spent about 1 hour per week more than teachers in the West (table A.4, appendix A). There were no real changes over time. A school's environment and characteristics of its students, such as size of school, minority enrollment, percentage of students receiving free or reduced-price lunches, and percentage of students who are limited English proficient (LEP), had no relation to the percentage of school time spent on core curriculum. Public elementary school teachers taught core subjects around 68 percent of their total classroom time—private elementary school teachers, about 58 percent of classroom time—regardless of the school's community, size, and type of students enrolled (table 3). This consistency is notable across unstandardized, locally controlled schools operating in the United States.

One might assume that even though basic characteristics of schools are not associated with the percentage of time spent teaching the core academic subjects, perhaps specific characteristics of classrooms and teachers are related. But not so. Similar to school and community characteristics, classroom characteristics and teacher experience were generally not associated with the percentage of time devoted to core curriculum (table 4). Where statistically significant differences exist, most are substantively trivial. One example of a difference occurs with teaching experience; in 1993–94, public school teachers who had 3 or fewer years of teaching experience spent a smaller percentage of time on the core curriculum than those who had 10 or more years of teaching experience, corresponding to approximately 12–15 minutes per day less.

Table 3— Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and various community and school characteristics

Community and School Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
Total	67.3	64.5	68.2	59.3	56.9	58.2
Geographic region						
Northeast	67.3	65.3	71.4	59.1	57.0	59.7
Midwest	68.3	65.2	66.7	60.6	56.6	58.1
South	66.7	63.1	67.2	58.7	58.7	56.4
West	67.1	65.2	68.5	57.9	54.1	59.3
Community type						
Central city	69.1	63.9	68.8	58.6	55.2	57.5
Urban fringe	67.2	66.3	68.9	59.3	57.7	58.5
Small town/Rural	66.1	63.6	67.0	60.7	58.6	59.2
Size of school						
Less than 150	66.2	61.1	66.5	59.5	56.0	57.8
150–499	66.6	64.9	67.3	59.3	57.3	58.8
500–749	67.8	64.5	69.0	60.4	60.4	55.6
750 or more	69.5	64.0	68.6	55.2	53.3	57.7
Minority enrollment						
Less than 20 percent	66.9	64.3	67.8	59.5	57.4	57.8
20 percent or more	67.9	64.8	69.4	58.7	56.1	58.8
Percent of students receiving free or reduced-price lunch						
5 percent or less	67.7	65.4	70.4	58.9	—	58.5
6–19 percent	67.4	64.1	68.0	62.2	—	56.4
20 percent or more	67.2	64.4	67.9	56.4	—	57.6
Percent of students who are limited English proficient (LEP)						
Less than 5 percent	—	—	67.9	—	—	58.3
5 to 40 percent	—	—	69.2	—	—	57.5
More than 40 percent	—	—	69.3	—	—	†

(†) Too few cases to analyze.
— Data were not available from the survey for that particular year.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Two particular areas do show some interesting differences: class size and grade level. In 1993–94, a greater percentage of school time was spent on core curriculum in public school classes with 19 or more students than in those with 10 or fewer students (table 4)—a difference that amounts to about 2.8 hours a week, or just over 30 minutes a day. However, classes with fewer than 10 students could be geared toward students with special needs, such as students with limited English proficiency; in this case, it would not be surprising to find that classes of this size spend a smaller percentage of time on core curriculum than a more standard-sized classroom.

Table 4— Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and classroom and teacher characteristics

Classroom and Teacher Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
Total	67.3	64.5	68.2	59.3	56.9	58.2
Class size						
1–10	61.5	59.3	60.3	58.9	54.3	56.2
11–18	67.5	63.8	67.9	58.4	57.5	57.6
19–27	67.4	65.0	68.3	59.9	57.2	57.8
28 or more	67.9	65.4	70.3	60.3	56.4	60.8
Grade level of class						
1st grade	69.0	66.8	71.4	58.9	59.0	57.0
2nd grade	67.3	66.0	68.0	59.8	59.2	57.4
3rd grade	68.4	63.9	67.6	59.8	58.7	58.3
4th grade	65.1	62.7	67.6	60.3	55.2	59.9
Combination classes*	66.3	63.6	66.0	58.4	54.6	57.9
Percent of students in classroom who are limited English proficient						
5 percent or less	—	—	67.9	—	—	58.3
6–19 percent	—	—	69.2	—	—	57.5
20 percent or more	—	—	69.3	—	—	†
Years of teaching experience						
3 years or less	67.2	63.1	65.5	57.1	50.4	56.0
4–9 years	66.0	63.7	67.9	59.9	58.2	58.0
10–19 years	67.3	64.1	69.0	60.0	57.3	58.5
20 years or more	68.4	66.0	68.4	59.3	61.0	60.1

* Combination classes are those with more than one grade level in a classroom.
† Too few cases to analyze.
— Data were not available from the survey for that particular year.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Does the percentage of school time spent teaching core curriculum vary across grade levels?

Teachers of grades 1–4 were similar in the percentage of school time they spent teaching the core academic subjects; however, as students progressed from first through fourth grades, a decreasing percentage of time was spent on English/reading/language arts, while an increasing percentage of time was spent on social studies and science (table 5). In 1993–94, for example, the percentage of time spent on English/reading/language arts in public schools was about 38 percent in first grade, compared to 30 percent in fourth grade; in private schools, the respective percentages were 33 percent and 26 percent. However, when examined in terms of raw number of hours spent on core curriculum, no significant differences were found in the amount of time spent on English/reading/language arts across the grade levels in private schools (table A.6, appendix A).

Table 5— Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, subject, and grade level

Subject and Grade Level	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
All core curriculum						
1st grade	69.0	66.8	71.4	58.9	59.0	57.0
2nd grade	67.3	66.0	68.0	59.8	59.2	57.4
3rd grade	68.4	63.9	67.6	59.8	58.7	58.3
4th grade	65.1	62.7	66.0	60.3	55.2	59.9
English/Reading/Language arts						
1st grade	39.7	37.4	38.2	33.8	34.2	32.7
2nd grade	37.7	35.8	35.6	33.6	31.7	30.3
3rd grade	35.8	32.3	33.4	31.4	29.9	29.6
4th grade	29.9	28.3	30.0	26.2	22.6	25.7
Arithmetic/Mathematics						
1st grade	14.9	14.7	16.2	14.0	13.6	13.8
2nd grade	14.9	14.6	16.1	14.3	13.9	14.0
3rd grade	15.6	15.3	16.1	14.0	13.8	14.1
4th grade	15.4	15.5	16.2	14.1	14.2	14.1
Social studies/History						
1st grade	7.4	7.6	8.6	5.8	6.4	5.5
2nd grade	7.6	8.1	8.3	6.4	7.0	6.9
3rd grade	8.8	8.3	9.1	7.3	8.0	8.1
4th grade	10.6	10.1	11.3	10.6	10.5	10.3
Science						
1st grade	7.0	7.1	8.5	5.3	4.8	5.0
2nd grade	7.2	7.5	8.1	5.6	6.7	6.3
3rd grade	8.3	8.0	9.0	7.1	7.0	7.0
4th grade	9.1	8.7	10.1	9.3	7.9	9.8

NOTE: Individual subjects are averaged separately from all core curriculum.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

In 1993–94, teachers spent similar percentages of time teaching mathematics across all four grade levels—about 16 percent of classroom time in public schools and about 14 percent in private schools (table 5). In both public and private schools, fourth grade teachers spent a slightly larger percentage of time on social studies than did teachers of first through third grades.[5] Fourth grade teachers also spent slightly more time on science than first through third grade teachers in both public and private schools.[6]

Do public and private schools differ in the percentage of school time spent teaching core curriculum?

One school characteristic is associated with differences in the percentage of school time spent on core subjects: school sector. In 1993–94, public school teachers spent a larger percentage of time teaching core academic curriculum than did private school teachers—68.2 percent versus 58.2 percent, respectively (figure 2). Furthermore, there were some differences within private school types (figure 3).[7] Comparing the three main categories of private schools—Catholic, other religious, and nonsectarian—with other types of private schools shows that Catholic schools spent a greater percentage of time teaching core curriculum than did other religious schools in 1993–94. In addition, no significant differences were found between nonsectarian private schools and either of the two types of religious private schools. Furthermore, there were no differences between the subgroups within each of the three main types of private schools. In other words, whereas both types of Catholic schools differed from all three types of other religious schools in 1993–94, diocesan and parochial schools did not differ from each other; similarly, conservative Christian, affiliated, and unaffiliated schools did not differ from each other.

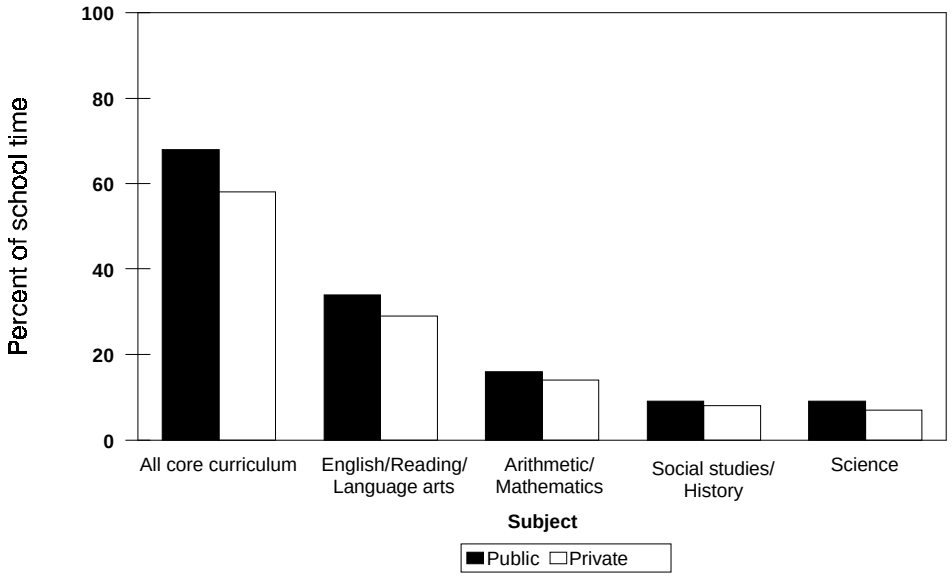
The difference between the percentage of school time devoted to core curriculum in Catholic and other religious private schools was rather large. In 1993–94, teachers in Catholic schools spent about 61 percent of their school time on the core subjects, while teachers in other religious schools spent about 55 percent of school time on core curriculum (figure 3). However, in terms of raw number of hours, teachers in Catholic schools spent only 1.3 hours per week more than teachers in other religious schools—a difference that is not statistically significant (table A.7, appendix A). Although the data in table A.2 of appendix A show some apparent fluctuations among the years, there were no significant changes in the percentage of time spent on core curriculum across private schools from 1987–88 through 1993–94; thus, only the most recent data (1993–94) are shown in figure 3.

[5] Analysis of raw hours spent on social studies shows no difference between third and fourth grade.

[6] Analysis of raw hours spent on science shows no difference between third and fourth grade.

[7] Private schools can be broken down into nine categories using the typology developed by McMillen and Benson (1991), which consists of three types of Catholic schools (parochial, diocesan, and private order), three other religious-oriented schools (conservative Christian, nationally affiliated, and unaffiliated), and three nonsectarian schools (regular, special emphasis, and special education). For the purpose of this analysis, private order Catholic schools were omitted since they are predominately at the secondary level and there were too few cases at the elementary level to analyze.

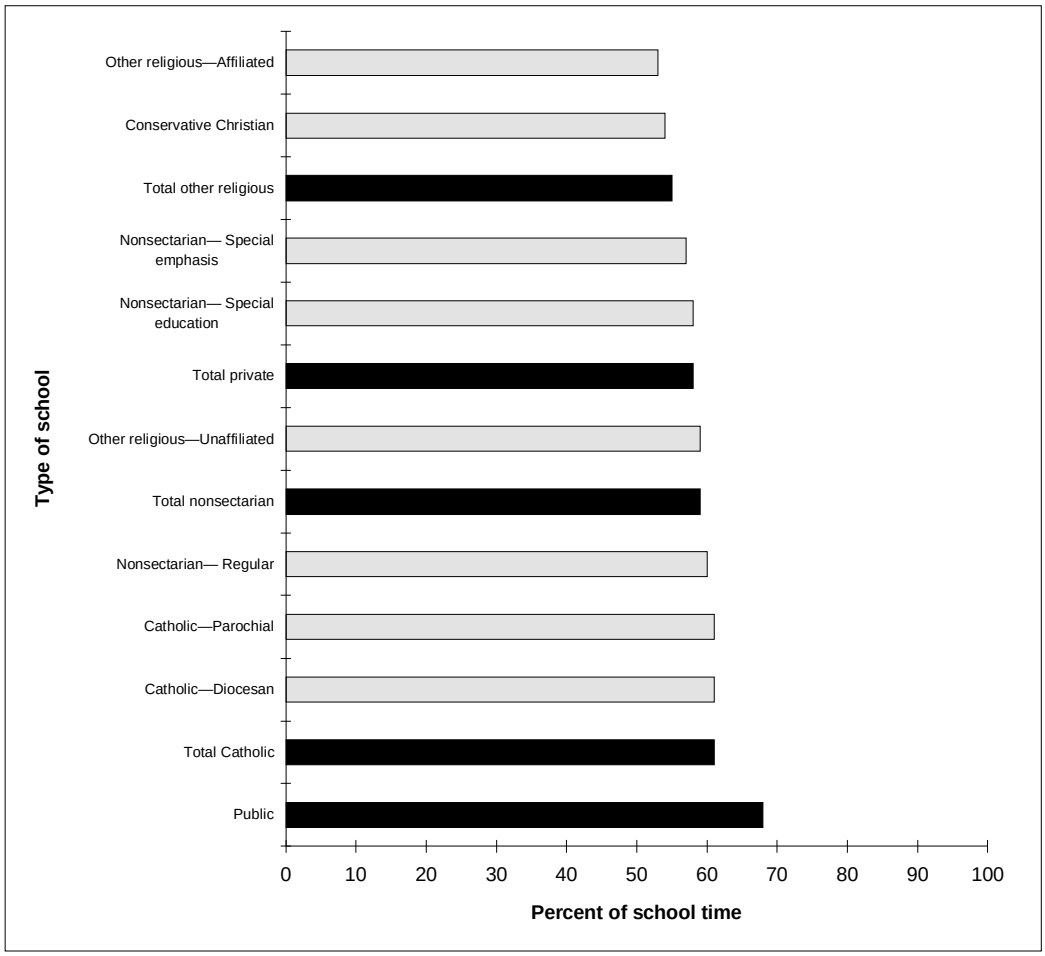
Figure 2— Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector and subject: 1993–94 (graphed from results in table 2)



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Even though SASS data cannot address why private school teachers spend a smaller percentage of time on core subjects than public school teachers, several explanations may account for these differences. First, public schools are usually more highly regulated in terms of what must be taught in any given school year, while private schools often have more flexibility in designing their academic programs. Second, Catholic and other religious-oriented schools spend a portion of each school day teaching religion, leaving less time to teach the traditional core academic subjects. Although this explanation does not apply to nonsectarian schools, it may explain the differences between the religious schools and public schools. Finally, private schools may provide more time than public schools for enrichment activities, such as art or music. Specifically, nonsectarian special emphasis schools may stress one or more of the arts, and special education schools may spend additional time addressing students' specific needs.

Figure 3— Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector and type of private school: 1993–94*



* Catholic private order schools were omitted from this analysis since they are predominately at the secondary level and there were too few cases to analyze.
NOTE: For numbers accompanying figure 3 as well as data for earlier years, see table A.2 in appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

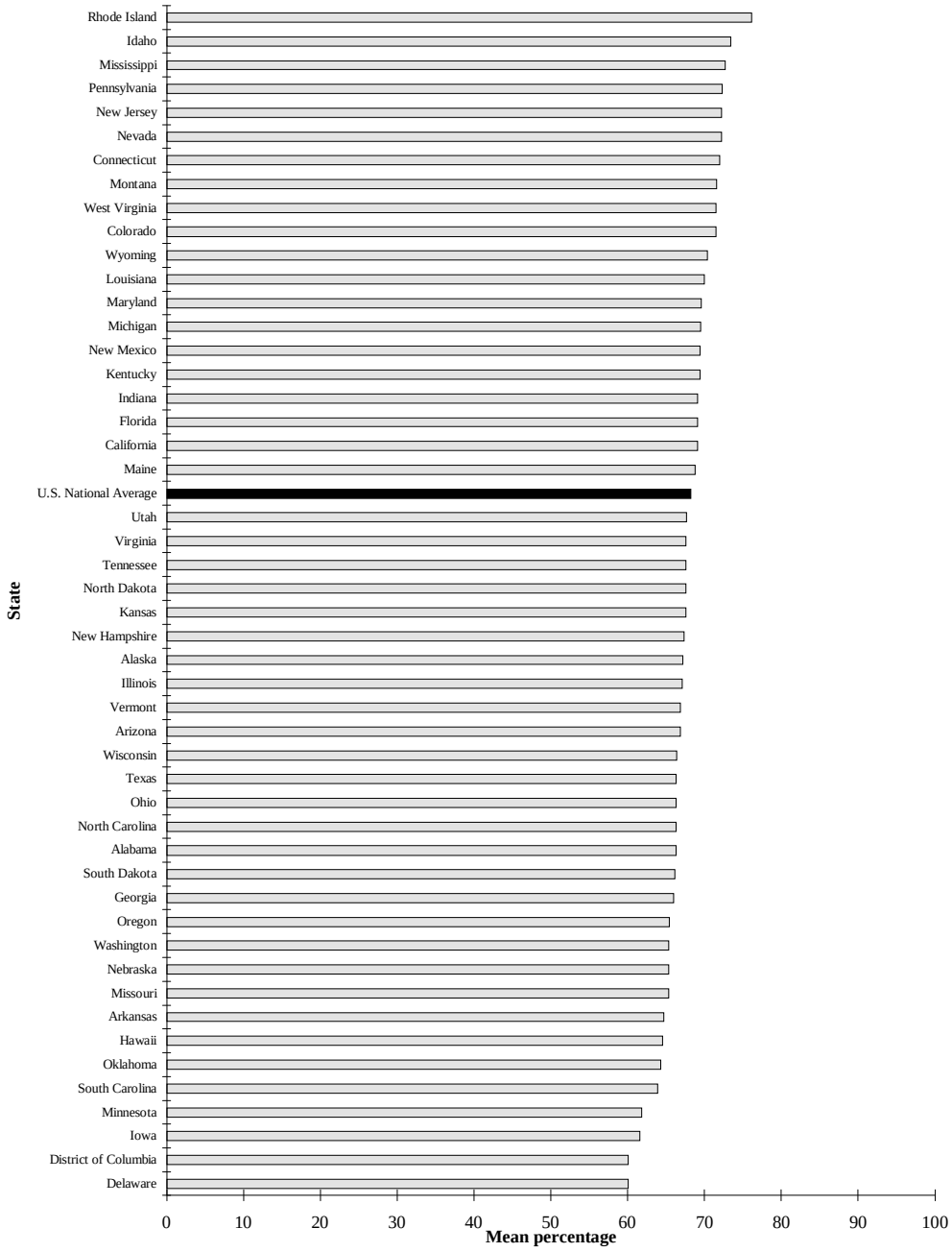
Does the percentage of school time spent teaching core curriculum vary among the states?

Public schools spent, on average, between 60 and 72 percent of school time on core curriculum in 1993–94 (figure 4). This proportion translates into a range of 19.8 to 24.9 hours per week (table A.8, appendix A). Even though curricular policy is the domain of state and local education agencies, there were fewer differences across the states than might be expected. The average percentage of time spent on core academic subjects in the majority of the states was close to the national average (68 percent) (see table A.3 in appendix A for the percentages for all states). Public schools in the District of Columbia and Delaware spent a smaller percentage of the school week on core subjects (60 percent) than did the nation as a whole.

Another way to examine this issue is to look at the numerator and denominator of this percentage separately—that is, the total number of hours spent on core curriculum each week and the total number of hours in the school week, both of which vary by state and can differ from the percentage ranking. Table A.8 in appendix A shows the rank ordering of states on hours spent on core subjects, along with each state's average school-week length. This table shows that the average school week in Delaware and the District of Columbia is slightly longer than the national average. Furthermore, when hours spent on core curriculum are examined, neither Delaware nor the District of Columbia differ from the nation as a whole. Only Mississippi stands out as the state that differed from the national average; teachers in this state reported spending more time (25 hours) on core curriculum than the national average (22 hours).

These findings highlight the need to incorporate the hours in a school week into any discussion of a state difference in time spent on core curriculum, since the length of the school week is often mandated by the state. In 1993–94, the number of hours in a school week varied from just under 30 hours in New Jersey to over 35 hours in Texas. In some states, this extra time is used to spend more time on core curriculum; in others, it is used to spend more time on other academic subjects or on enrichment activities.

Figure 4— Mean percentage of school time spent per week on core curriculum by public 1st-4th grade teachers, by state: 1993–94



NOTE: For numbers accompanying figure 4 as well as data for earlier years, see table A.3 in appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Conclusion

In the current education reform climate, teachers might be expected to report spending more time on core curriculum during the 1993–94 school year than during the 1987–88 school year. On the other hand, because of the concern that teachers are being required to spend more and more time on duties that are unrelated to instruction in the four core academic subjects, teachers might be expected to spend *less* time on core curriculum during the 1993–94 school year than during the 1987–88 school year. The SASS data for these years do not support either expectation. In 1993–94, approximately two-thirds of school time was spent on core curriculum in the nation's elementary schools—a finding that did not change from the previous 6 years.

Some have speculated that the percentage of school time spent on instruction might differ by various community, school, classroom, and student characteristics. One example, noted in the introduction to this report, concerned the possibility that a school serving a largely poor or non-English-speaking population may spend additional time on students' special needs and may have fewer resources to devote to learning, thus spending a smaller proportion of time on the core academic curriculum. However, SASS data show that the percentage of time spent on core curriculum generally does not vary as a result of student, classroom, teacher, school, or community characteristics. Teachers who work with predominately poor or non-English-speaking populations spend the same amount of time teaching the core academic subjects as do teachers who work with more advantaged students. Further, the percentage of school time spent on core academic subjects does not vary between most states.

In 1993–94, teachers in public schools across the country spent an average of 68 percent of school time, or almost 22 hours per week, teaching the core academic curriculum, while teachers in private schools spent an average of 58 percent of school time, or almost 19 hours per week, on core curriculum. This is the most notable difference found across all school, community, and classroom characteristics analyzed in this report. In addition, except for a few isolated cases, very few changes in the percentage of school time spent on core curriculum were found between 1987–88 and 1993–94.

These findings may not be expected; however, there may be little room for variation in a finite period of time during which core curriculum must be taught; enrichment activities, such as art and music, must be offered; lunch must be served; recess is usually provided; and administrative activities, such as roll call and announcements, must be made. For example, if a typical day at a public school lasts 6 hours, and 1 hour is spent on lunch and recess, 45 minutes are spent on an enrichment class or physical education, and 15 minutes are spent on administrative duties, only 4 hours are left to teach core academic curriculum. Four hours a day result in 20 hours per week, almost 2 hours less than the average public school reports spending on core curriculum. Community, school, and classroom characteristics can have little effect on a tightly regulated environment. And although reform movements may call for an increased amount of time to be spent on the core academic subjects, few changes can be implemented if an increased

amount of time is not provided, either by lengthening the amount of time spent in school or by eliminating other requirements.

The finding that teachers spent more time on out-of-classroom activities during the 1993–94 school year than during the 1987–88 and 1990–91 school years may also explain how teachers are balancing the pressures of being asked to take on additional responsibilities and participate in more activities with the pressures of maintaining the goal of focusing the students' learning time on the four core academic subjects. Classroom time remained unchanged, but teachers worked longer days in order to meet expanding school activities in 1993–94 than they did in 1987–88 and 1990–91.

This report found very few differences in the percentage of time spent on the core academic subjects. Two are notable. First, even when private schools were examined by affiliation, it was found that public schools spent approximately 2–4 hours more on the core subjects per week than did any of the private school types. Although it might be argued that private schools teach a larger variety of subjects, they do not spend as much time on the basic subjects as the public schools. This does not necessarily mean that students in private schools learn less material than students in public schools, however. Teachers in private schools could be using their time more effectively, or students in private schools may be better prepared in the basic skills at an early age. Whatever the reason, the difference is notable. Second, among the 50 states and the District of Columbia, the average percentage of school time spent on core curriculum in Delaware and the District of Columbia was smaller than the national average in 1993–94. However, when the raw number of hours spent on core curriculum were examined, Delaware and the District of Columbia were not significantly different from the national average. In this case, only Mississippi stood out as spending a greater number of hours than the national average. The differences between both the public and private sectors and among the states may be explained by different curricula that have a variety of subjects competing for time allocation; however, there is no obvious explanation for these findings based on the analyses done in this report.

Future research should further understanding of how the time that is not spent on core curriculum is allocated. Are students participating in other enrichment activities such as music and art, or are teachers being burdened by too many bureaucratic duties and thus cannot devote more time to the academic curriculum? Also, are teachers integrating the subjects in their classrooms, adopting an interdisciplinary approach to teaching? This teaching method would make it difficult to measure the exact amount of time teachers are spending on each of the four core subjects. In addition to understanding how much time is spent on the core curriculum, it is also important to determine the quality of the time. What teaching methods are teachers employing to teach each of the four academic subjects? Even though the time spent on the core subjects has remained unchanged over time, teachers may have changed the presentation of the curriculum. Moreover, if the length of the school day or school year was increased, how would the extra time be spent? Finally, why are teachers spending more time on school activities outside of the classroom? Are they receiving expanded opportunities for professional growth, or are the number of burdensome bureaucratic tasks increasing?

Understanding time and other restrictions placed on schools helps to provide an explanation of why few changes in the amount of time spent teaching any one subject may occur in schools, regardless of policy changes. A broader understanding of what changes must accompany policy reforms requiring additional time to be spent on core curriculum is necessary if the goal of increasing the amount of time spent on English, mathematics, social studies, and science is to be accomplished.

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Appendix A

Table A.1— Percentage distribution of school time spent per week on each of the core subjects, by sector, year, and subject

Subject	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
English/Reading/Language arts	52.9	53.9	49.7	51.6	50.3	49.7
Arithmatic/Mathematics	22.8	23.3	23.8	24.1	24.3	24.5
Social Studies/History	12.6	11.9	13.5	12.7	13.5	13.6
Science	11.7	10.9	13.0	11.6	11.8	12.3
All core curriculum	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: Columns may not sum to 100.0 due to effects of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.2— Percentage of time spent per week on core curriculum by 1st–4th grade teachers, by year, sector, and type of private school

Sector and Type	1987–88	1990–91	1993–94
Public	67.3	64.5	68.2
Total private	59.3	56.9	58.2
Catholic	61.4	58.1	61.1
Catholic—Parochial	60.5	57.3	61.1
Catholic—Diocesan	65.4	60.5	61.1
Catholic—Private order	†	†	†
Other religious	57.6	53.8	54.7
Conservative Christian	57.6	57.0	53.6
Affiliated	56.1	50.8	52.7
Unaffiliated	60.9	54.7	58.7
Nonsectarian	57.5	62.6	59.3
Regular	57.3	65.6	60.3
Special emphasis	61.0	60.4	56.9
Special education	53.3	53.1	57.7

† Too few cases to analyze.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.3— Percentage of school time spent per week on core curriculum by public 1st–4th grade teachers, by year and state

State	1987–88	1990–91	1993–94
Total	67.3	64.5	68.2
Alabama	68.2	64.7	66.3
Alaska	67.7	64.7	67.2
Arizona	70.5	60.4	66.9
Arkansas	72.5	61.8	64.7
California	67.8	66.7	69.1
Colorado	71.0	62.2	71.5
Connecticut	69.7	67.5	72.0
Delaware	65.5	56.6	60.1
District of Columbia	75.5	63.6	60.1
Florida	66.8	65.8	69.1
Georgia	69.2	59.9	66.0
Hawaii	66.4	60.6	64.5
Idaho	69.6	70.5	73.4
Illinois	70.1	65.9	67.1
Indiana	70.9	64.9	69.1
Iowa	64.0	57.8	61.6
Kansas	63.6	60.4	67.6
Kentucky	70.4	70.1	69.4
Louisiana	72.0	61.2	70.0
Maine	70.4	59.1	68.8
Maryland	63.2	64.7	69.6
Massachusetts	67.8	65.4	69.6
Michigan	71.4	71.0	69.5
Minnesota	60.5	60.3	61.8
Mississippi	70.9	61.6	72.7
Missouri	63.1	62.5	65.3
Montana	63.9	67.8	71.6
Nebraska	69.6	61.0	65.3
Nevada	65.6	67.8	72.2
New Hampshire		68.9	68.1
New Jersey	68.6	66.4	72.2
New Mexico	71.1	67.7	69.4
New York	66.3	66.1	71.5
North Carolina	66.7	64.5	66.3
North Dakota	65.9	68.1	67.6
Ohio	70.0	69.3	66.3
Oklahoma	63.5	62.7	64.3
Oregon	62.4	62.7	65.4
Pennsylvania	66.0	63.4	72.3
Rhode Island	73.1	66.3	76.1
South Carolina	65.2	62.9	63.9
South Dakota	68.6	66.0	66.1
Tennessee	62.8	64.2	67.6
Texas	63.5	60.8	66.3
Utah	64.8	63.2	67.7
Vermont	67.3	63.3	66.9
Virginia	69.1	64.7	67.6
Washington	61.8	63.8	65.3
West Virginia	66.2	66.6	71.5
Wisconsin	70.1	64.0	66.4
Wyoming	63.0	69.4	70.4

67.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.4— Number of hours spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and various community and school characteristics

Community and School Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
Total	21.1	20.4	21.7	18.8	18.3	18.9
Geographic region						
Northeast	20.8	20.3	22.0	18.1	17.6	18.6
Midwest	21.3	20.4	21.2	19.0	18.2	18.9
South	21.7	20.8	22.2	19.5	19.4	18.9
West	20.1	19.7	21.3	18.4	17.5	19.4
Community type						
Central city 21.3	20.0	21.9	18.6	17.9	18.8	
Urban fringe	20.9	20.6	21.6	18.7	18.4	19.0
Small town/Rural	21.1	20.5	21.8	19.4	18.9	19.1
Size of school						
Less than 150	21.0	20.1	21.4	19.1	18.0	18.6
150–499	20.9	20.5	21.6	18.6	18.4	19.1
500–749	21.2	20.4	22.0	19.1	19.6	19.0
750 or more	21.6	20.4	21.8	18.4	18.1	19.9
Minority enrollment						
Less than 20 percent	21.0	20.4	21.5	18.9	18.6	18.6
20 percent or more	21.2	20.4	21.8	18.5	17.9	19.1
Percent of students receiving free or reduced-price lunch						
5 percent or less	21.0	20.3	21.8	18.8	—	19.0
6–19 percent	21.1	20.3	21.6	19.3	—	18.3
20 percent or more	21.1	20.5	21.7	18.8	—	18.7
Percent of students who are limited English proficient (LEP)						
Less than 5 percent	—	—	21.7	—	—	19.0
5 to 40 percent	—	—	22.1	—	—	18.9
More than 40 percent	—	—	21.7	—	—	†

† Too few cases to analyze.

— Data were not available from the survey for that particular year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.5— Number of hours spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and classroom and teacher characteristics

Classroom and Teacher Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
Total	21.1	20.4	21.7	18.8	18.3	18.9
Class size						
1–10	19.3	18.7	19.3	19.2	17.4	18.0
11–18	21.4	20.6	22.0	18.9	18.7	18.8
19–27	21.2	20.6	21.7	19.0	18.4	18.8
28 or more	20.8	20.2	21.9	18.3	17.8	19.7
Grade level of class						
1st grade	21.6	21.1	22.6	18.7	18.6	18.8
2nd grade	21.3	21.1	21.8	18.8	19.0	18.4
3rd grade	21.4	20.3	21.7	18.8	18.8	19.4
4th grade	20.5	19.8	21.5	19.2	18.3	19.6
Combination classes*	20.6	20.0	21.0	18.8	17.6	18.7
Percent of students in classroom who are limited English proficient						
5 percent or less	—	—	21.7	—	—	19.0
6–19 percent	—	—	22.1	—	—	18.9
20 percent or more	—	—	21.7	—	—	†
Years of teaching experience						
3 years or less	21.1	20.1	20.9	18.1	16.5	18.2
4–9 years	20.8	20.2	21.7	18.9	18.5	18.7
10–19 years 21.1	20.4	22.0	19.1	18.4	19.2	
20 years or more	21.3	20.7	21.7	19.0	19.7	19.5

*Combination classes are those with more than one grade level in a classroom.
† Too few cases to analyze.
— Data were not available from the survey for that particular year.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.6— Number of hours spent per week on core curriculum by 1st–4th grade teachers, by sector, year, subject, and grade level

	Public			Private		
Subjects and Grade Levels	1987–88	1990–91	1993–94	1987–88	1990–91	1993–94
All core curriculum						
1st grade	21.6	21.1	22.6	18.7	18.6	18.8
2nd grade	21.3	21.1	21.8	18.8	19.0	18.4
3rd grade	21.4	20.3	21.7	18.8	18.8	19.4
4th grade	20.5	19.8	21.5	19.2	18.3	19.6
English/Reading/Language arts						
1st grade	12.4	11.8	12.1	10.7	10.6	10.8
2nd grade	11.9	11.4	11.4	10.5	10.1	9.7
3rd grade	11.2	10.3	10.8	9.9	9.5	9.6
4th grade	9.4	9.0	9.6	8.3	7.6	8.4
Arithmetic/Mathematics						
1st grade	4.7	4.6	5.2	4.5	4.3	4.6
2nd grade	4.7	4.7	5.1	4.5	4.5	4.5
3rd grade	4.9	4.8	5.2	4.4	4.5	4.7
4th grade	4.9	4.9	5.1	4.5	4.7	4.6
Social studies/History						
1st grade	2.3	2.4	2.7	1.9	2.0	1.8
2nd grade	2.4	2.6	2.7	2.0	2.3	2.2
3rd grade	2.7	2.6	2.9	2.3	2.5	2.8
4th grade	3.6	3.2	3.6	3.4	3.6	3.4
Science						
1st grade	2.2	2.3	2.7	1.7	1.6	1.7
2nd grade	2.3	2.4	2.6	1.8	2.1	2.0
3rd grade	2.6	2.6	2.9	2.2	2.3	2.3
4th grade	2.9	2.8	3.2	3.0	2.6	3.2

NOTE: Individual subjects may not sum to total due to the effects of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.7— Number of hours spent per week on core curriculum by 1st–4th grade teachers, by year, sector, and type of private school

Sector and Type	1987–88	1990–91	1993–94
Public	21.1	20.4	21.7
Total private	18.8	18.3	18.9
Catholic	18.6	18.2	19.6
Catholic—Parochial	18.3	18.0	19.5
Catholic—Diocesan	20.0	18.6	19.8
Catholic—Private order	†	†	†
Other religious	19.0	17.8	18.3
Conservative Christian	18.8	18.8	18.0
Affiliated	18.7	16.9	17.9
Unaffiliated	19.7	17.8	19.2
Nonsectarian	19.0	20.3	19.0
Regular	19.1	21.5	19.4
Special emphasis	20.0	19.7	18.2
Special education	16.3	15.5	18.1

†Too few cases to analyze.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.8— Number of hours in a school week and number of hours spent per week on core curriculum in public schools by 1st–4th grade teachers, by year and state

State	Hours spent on core curriculum per week			Hours in school week		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
United States average	21.1	20.4	21.7	31.7	32.0	32.1
Alabama	22.6	22.1	22.5	33.3	34.3	34.0
Alaska	21.8	20.4	21.3	32.4	31.8	32.2
Arizona	20.7	19.3	21.6	30.6	31.6	32.4
Arkansas	23.4	20.5	22.0	32.5	33.6	34.1
California	19.7	19.4	21.0	29.4	29.7	30.5
Colorado	22.7	19.8	23.1	32.0	32.1	33.1
Connecticut	21.7	21.1	22.2	31.1	30.9	30.9
Delaware	21.2	18.6	19.8	32.6	32.8	33.3
District of Columbia	22.9	19.3	19.8	30.4	30.1	32.4
Florida	20.8	20.9	21.4	31.4	31.7	31.1
Georgia	21.7	19.7	21.6	32.0	32.8	33.1
Hawaii	19.5	18.6	19.9	29.9	30.8	31.0
Idaho	20.2	21.2	21.9	29.6	30.2	30.4
Illinois	21.2	19.9	20.6	30.8	30.6	30.8
Indiana	23.0	21.0	22.6	32.5	32.4	32.7
Iowa	20.7	19.6	20.6	32.6	34.3	33.6
Kansas	20.1	19.8	21.9	31.9	32.8	33.0
Kentucky	22.8	22.9	22.8	32.5	32.8	33.2
Louisiana	22.5	19.4	23.1	31.4	32.1	33.1
Maine	21.8	18.6	21.1	31.3	31.5	30.8
Maryland	20.0	20.6	22.1	31.7	31.6	31.5
Massachusetts	20.8	19.9	21.1	30.7	30.3	30.5
Michigan	21.6	21.2	21.3	30.7	30.0	30.6
Minnesota	19.4	19.1	19.8	32.2	31.7	32.2
Mississippi*	22.9	21.0	24.9	33.1	34.2	34.7
Missouri	20.5	20.4	21.2	32.5	32.7	32.5
Montana	20.1	21.3	23.2	31.6	31.7	32.1
Nebraska	22.1	19.5	21.8	32.1	32.6	33.2
Nevada	19.3	20.5	22.5	29.6	30.1	31.1
New Hampshire	20.9	21.1	20.9	30.5	31.0	31.3
New Jersey	20.0	19.6	21.7	29.3	30.0	29.9
New Mexico	22.4	21.4	22.0	31.6	31.6	32.0
New York	20.5	21.0	22.2	31.2	31.6	31.3
North Carolina	21.7	20.5	21.5	32.7	32.1	32.1
North Dakota	21.1	21.4	21.2	32.3	31.9	31.5
Ohio	21.3	20.7	20.8	30.7	30.8	31.3
Oklahoma	20.4	20.1	20.8	32.2	32.2	32.5
Oregon	19.9	19.3	20.7	32.0	31.1	31.7
Pennsylvania	21.1	20.0	22.7	32.1	32.0	31.5
Rhode Island	22.3	20.4	22.5	31.1	30.7	30.0
South Carolina	21.3	20.7	21.2	33.0	33.1	33.2
South Dakota	21.7	21.1	21.9	31.6	32.4	33.3
Tennessee	21.2	21.6	22.8	33.7	33.7	33.9
Texas	22.4	21.3	23.2	35.3	35.2	35.3
Utah	19.9	19.7	21.7	30.8	31.2	31.9
Vermont	21.3	20.5	20.7	31.8	32.1	31.9
Virginia	21.7	20.4	21.5	31.5	31.6	31.9
Washington	19.0	19.9	20.6	31.1	31.2	31.6
West Virginia	20.0	21.8	23.8	31.1	33.1	33.3
Wisconsin	21.9	21.4	21.9	31.5	33.3	33.5
Wyoming	19.9	21.2	22.3	31.7	31.0	31.8

*Significantly higher than the national average.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table A.9— Rank order of states by average number of hours spent on core curriculum per week by 1st–4th grade teachers, length of school week in hours, percent of time on core curriculum, and rank order of percent of time: 1993–94

State	Hours per week spent on core curriculum	Length of school week in hours	Percent of time spent on core curriculum	Rank order of % time spent on core curriculum
Mississippi*	24.9	34.7	72.7	3
West Virginia	23.8	33.3	71.5	9
Montana	23.2	32.1	71.6	8
Texas	23.2	35.3	66.3	35
Colorado	23.1	33.1	71.5	10
Louisiana	23.1	33.1	70.0	13
Kentucky	22.8	33.2	69.4	18
Tennessee	22.8	33.9	67.6	26
Pennsylvania	22.7	31.5	72.3	4
Indiana	22.6	32.7	69.1	19
Alabama	22.5	34.0	66.3	38
Nevada	22.5	31.1	72.2	6
Rhode Island	22.5	30.0	76.1	1
Wyoming	22.3	31.8	70.4	12
Connecticut	22.2	30.9	72.0	7
New York	22.2	31.3	71.5	11
Maryland	22.1	31.5	69.6	14
Arkansas	22.0	34.1	64.7	45
New Mexico	22.0	32.0	69.4	17
Kansas	21.9	33.0	67.6	28
Wisconsin	21.9	33.5	66.4	34
Idaho	21.9	30.4	73.4	2
South Dakota	21.9	33.3	66.1	39
Nebraska	21.8	33.2	65.3	43
United States average	21.7	32.1	68.2	22
Utah	21.7	31.9	67.7	24
New Jersey	21.7	29.9	72.2	5
Georgia	21.6	33.1	66.0	40
Arizona	21.6	32.4	66.9	33
Virginia	21.5	31.9	67.6	25
North Carolina	21.5	32.1	66.3	37
Florida	21.4	31.1	69.1	20
Michigan	21.3	30.6	69.5	15
Alaska	21.3	32.2	67.2	30
North Dakota	21.2	31.5	67.6	27
South Carolina	21.2	33.2	63.9	48
Missouri	21.2	32.5	65.3	44
Maine	21.1	30.8	68.8	21
Massachusetts	21.1	30.5	69.6	23
California	21.0	30.5	69.1	16
New Hampshire	20.9	31.3	67.3	29
Ohio	20.8	31.3	66.3	36
Oklahoma	20.8	32.5	64.3	47
Vermont	20.7	31.9	66.9	32
Oregon	20.7	31.7	65.4	41
Washington	20.6	31.6	65.3	42
Illinois	20.6	30.8	67.1	31
Iowa	20.6	33.6	61.6	50
Hawaii	19.9	31.0	64.5	46
District of Columbia	19.8	32.4	60.1	51
Minnesota	19.8	32.2	61.8	49
Delaware	19.8	33.3	60.1	52

*Significantly higher than the national average.
NOTE: States have been ordered by the number of hours spent on core curriculum in 1993–94.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Appendix B

Table 1a— Standard errors for table 1: Mean number of hours spent per week on core curriculum, in school and on school-related activities, by 1st–4th grade teachers, by sector, year, and subject

	Public			Private		
Subject	*1987–88*	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
English/Reading/Language arts	0.06	0.10	0.18	0.15	0.15	0.16
Arithmetic/Mathematics	0.02	0.04	0.06	0.06	0.08	0.20
Social studies/History	0.02	0.04	0.04	0.06	0.07	0.05
Science	0.03	0.03	0.04	0.06	0.06	0.06
All core curriculum	0.08	0.10	0.22	0.17	0.23	0.25
Hours spent in school	0.05	0.05	0.07	0.11	0.12	0.40
Hours spent on activities outside of the normal school day	0.09	0.11	0.24	0.23	0.18	0.37

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 2a— Standard errors for table 2: Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and subject

Subject	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
English/Reading/Language arts	0.20	0.34	0.66	0.52	0.54	0.45
Arithmetic/Mathematics	0.08	0.13	0.20	0.20	0.23	0.77
Social studies/History	0.08	0.12	0.12	0.18	0.20	0.21
Science	0.08	0.09	0.14	0.17	0.18	0.19
All core curriculum	0.28	0.35	0.80	0.57	0.71	1.02

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 3a— Standard errors for table 3: Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and various community and school characteristics

Community and School Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
Total	0.28	0.35	0.80	0.57	0.71	1.02
Geographic region						
Northeast	0.70	0.74	2.11	1.24	1.45	3.12
Midwest	0.57	0.96	0.74	1.18	1.40	0.70
South	0.46	0.45	0.57	1.48	1.21	1.81
West	0.74	0.93	1.06	1.41	1.18	1.29
Community type]						
Central city	0.54	0.65	1.30	0.90	0.98	0.85
Urban fringe	0.60	0.67	0.96	1.07	1.24	1.61
Small town/Rural	0.50	0.56	0.59	1.21	1.77	1.77
Size of school						
Less than 150	1.26	1.58	1.15	1.26	1.34	1.63
150–499	0.37	0.54	0.80	0.80	0.86	0.67
500–749	0.59	0.56	0.98	2.01	4.18	2.86
750 or more	0.92	0.89	1.07	2.33	2.78	1.57
Minority enrollment						
Less than 20 percent	0.38	0.48	0.61	0.63	0.84	1.63
20 percent or more	0.42	0.79	1.90	1.35	1.15	1.42
Percent of students receiving free or reduced-price lunch						
5 percent or less	0.85	1.09	0.94	0.61	—	1.13
6–19 percent	0.57	0.81	0.78	2.01	—	1.65
20 percent or more	0.36	0.40	0.94	1.70	—	1.40
Percent of students who are limited English proficient (LEP)						
Less than 5 percent	—	—	0.58	—	—	1.06
5 to 40 percent	—	—	1.61	—	—	2.70
More than 40 percent	—	—	2.50	—	—	†

† Too few cases to analyze.

— Data were not available from the survey for that particular year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 4a— Standard errors for table 4: Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and classroom and teacher characteristics

Classroom and Teacher Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
Total	0.28	0.35	0.80	0.57	0.71	1.02
Class size						
1–10	1.28	1.64	1.70	2.63	2.24	3.16
11–18	0.57	0.70	0.86	0.71	1.06	1.47
19–27	0.41	0.51	0.88	1.23	1.36	0.88
28 or more	0.75	0.95	1.45	1.55	1.59	2.58
Grade level of class						
1st grade	0.63	0.75	1.14	1.23	1.64	1.08
2nd grade	0.62	0.76	0.86	1.59	1.80	1.66
3rd grade	0.71	0.86	0.84	1.53	1.21	1.28
4th grade	0.60	0.82	0.92	1.81	1.39	1.06
Combination classes	0.80	0.64	1.06	2.04	1.32	2.17
Percent of students in classroom who are limited English proficient						
5 percent or less	—	—	0.58	—	—	1.06
6–19 percent	—	—	1.61	—	—	2.70
20 percent or more	—	—	2.50	—	—	†
Years of teaching experience						
3 years or less	1.09	0.94	1.13	1.13	1.58	2.56
4–9 years	0.57	0.85	1.53	1.21	1.35	1.40
10–19 years	0.42	0.47	0.92	1.19	1.17	1.09
20 years or more	0.66	0.75	0.66	1.58	1.81	1.82

† Too few cases to analyze.
— Data were not available from the survey for that particular year.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 5a— Standard errors for table 5: Percentage of school time spent per week on core curriculum by 1st–4th grade teachers, by sector, year, subject, and grade level

Subject and Grade Level	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
All core curriculum						
1st grade	0.63	0.75	1.14	1.23	1.64	1.08
2nd grade	0.62	0.76	0.86	1.59	1.80	1.66
3rd grade	0.71	0.86	0.84	1.53	1.21	1.28
4th grade	0.60	0.82	0.92	1.81	1.39	1.06
English/Reading/Language arts						
1st grade	0.51	0.60	0.86	1.01	1.12	0.74
2nd grade	0.44	0.62	0.78	1.16	1.36	0.78
3rd grade	0.42	0.56	0.69	1.46	0.85	0.79
4th grade	0.38	0.54	0.62	0.98	0.77	0.49
Arithmetic/Mathematics						
1st grade	0.14	0.20	0.26	0.35	0.52	0.35
2nd grade	0.21	0.21	0.27	0.66	0.48	0.39
3rd grade	0.22	0.28	0.20	0.29	0.32	0.32
4th grade	0.21	0.28	0.22	0.33	0.53	0.61
Social studies/History						
1st grade	0.14	0.17	0.20	0.31	0.43	0.27
2nd grade	0.19	0.19	0.20	0.32	0.57	0.36
3rd grade	0.18	0.18	0.17	0.39	0.52	0.41
4th grade	0.19	0.28	0.21	0.48	0.51	0.22
Science						
1st grade	0.13	0.17	0.22	0.29	0.33	0.34
2nd grade	0.22	0.16	0.28	0.24	0.58	0.42
3rd grade	0.23	0.22	0.16	0.43	0.39	0.28
4th grade	0.14	0.25	0.21	0.57	0.45	0.46

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 6a— Standard errors for table A.1: Percentage distribution of school time spent per week on each of the core subjects, by sector, year, and subject

	Public			Private		
Subject	*1987–88*	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
English/Reading/Language arts	0.75	1.00	0.82	0.88	0.65	0.64
Arithmatic/Matematics	0.25	0.40	0.27	0.35	0.35	0.80
Social studies/History	0.25	0.40	0.18	0.35	0.30	0.20
Science	0.38	0.30	0.18	0.35	0.26	0.24
All core curriculum	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 7a— Standard errors for table A.2: Percentage of time spent per week on core curriculum by 1st–4th grade teachers, by year, sector, and type of private school

Sector and Type	1987–88	1990–91	1993–94
Public	0.28	0.35	0.80
Total private	0.57	0.71	1.02
Catholic	0.94	0.91	0.45
Catholic—Parochial	0.93	1.23	0.61
Catholic—Diocesan	2.41	2.55	1.00
Catholic—Private order	†	†	†
Other religious	1.29	1.09	2.35
Conservative Christian	2.08	2.01	1.27
Affiliated	1.40	1.39	2.26
Unaffiliated	2.36	3.52	4.07
Nonsectarian	1.90	2.26	1.87
Regular	2.38	3.58	2.93
Special emphasis	3.00	2.94	3.10
Special education	8.04	3.33	5.22

† Too few cases to analyze.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 8a— Standard errors for table A.3: Percentage of school time spent per week on core curriculum by public 1st—4th grade teachers, by year and state

State	1987–88	1990-91	1993-94	
Total	0.28	0.35	0.80	
Alabama	2.39	2.26	1.90	
Alaska	1.90	1.42	1.25	
Arizona	3.26	1.67	1.66	
Arkansas	2.03	2.46	2.20	
California	1.28	1.79	2.05	
Colorado	2.00	2.27	1.84	
Connecticut	2.27	1.47	1.54	
Delaware	2.90	2.34	2.18	
District of Columbia	3.15	3.37	1.76	
Florida	1.73	1.58	2.65	
Georgia	1.49	2.78	1.39	
Hawaii	4.15	1.34	1.66	
Idaho	2.03	1.75	1.65	
Illinois	1.83	2.05	1.59	
Indiana	1.53	1.53	2.16	
Iowa	1.99	3.05	2.42	
Kansas	1.72	1.34	2.02	
Kentucky	1.44	2.56	3.19	
Louisiana	2.96	2.31	2.19	
Maine	2.68	1.93	1.75	
Maryland	2.54	1.72	1.70	
Massachusetts	1.63	1.73	1.49	
Michigan	1.60	2.77	3.04	
Minnesota	1.61	1.77	2.12	
Mississippi	3.82	2.03	1.80	
Missouri	1.44	2.07	2.03	
Montana	1.95	1.97	2.21	
Nebraska	2.46	2.05	2.30	
Nevada	2.01	2.12	1.91	
New Hampshire		1.48	2.01	1.84
New Jersey	2.20	1.99	2.54	
New Mexico	1.89	2.32	1.93	
New York	1.50	1.76	5.28	
North Carolina	1.82	2.56	1.61	
North Dakota	1.79	2.04	1.76	
Ohio	1.61	3.15	2.19	
Oklahoma	2.44	1.76	2.50	
Oregon	1.84	1.75	2.07	
Pennsylvania	1.28	1.48	2.52	
Rhode Island	3.54	2.24	2.57	
South Carolina	2.06	1.61	2.14	
South Dakota	2.35	1.94	2.22	
Tennessee	1.73	2.35	2.40	
Texas	1.09	1.04	1.32	
Utah	2.16	1.99	1.79	
Vermont	1.82	1.52	1.55	
Virginia	1.92	1.80	1.87	
Washington	2.04	1.72	1.76	
West Virginia	3.04	2.11	1.92	
Wisconsin	2.56	2.06	2.36	
Wyoming	2.80	2.27	1.50	

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 9a— Standard errors for table A.4: Number of hours spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and various community and school characteristics

Community and School Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990-91*	*1993-94*
Total	0.08	0.10	0.22	0.21	0.23	0.25
Geographic region						
Northeast	0.21	0.22	0.67	0.41	0.44	0.96
Midwest	0.19	0.26	0.20	0.31	0.42	0.22
South	0.13	0.15	0.20	0.42	0.47	0.41
West	0.18	0.18	0.33	0.44	0.39	0.49
Community type						
Central city 0.15	0.18	0.39	0.28	0.32	0.23	
Urban fringe	0.14	0.19	0.19	0.34	0.41	0.49
Small town/Rural	0.13	0.17	0.23	0.42	0.56	0.60
Size of school						
Less than 150	0.27	0.40	0.39	0.37	0.11	0.55
150–499	0.12	0.15	0.26	0.27	0.06	0.17
500–749	0.16	0.15	0.27	0.93	0.28	0.64
750 or more	0.24	0.27	0.33	1.54	0.19	0.61
Minority enrollment						
Less than 20 percent	0.1	0.04	0.16	0.24	0.26	0.22
20 percent or more	0.13	0.04	0.14	0.46	0.39	0.45
Percent of students receiving free or reduced-price lunch						
5 percent or less	0.36	0.27	0.32	0.22	—	0.31
6–19 percent	0.18	0.24	0.24	0.53	—	0.48
20 percent or more	0.1	0.12	0.29	0.53	—	0.40
Percent of students who are limited English proficient (LEP)						
Less than 5 percent	—	—	0.15	—	—	0.26
5 to 40 percent	—	—	0.39	—	—	0.65
More than 40 percent	—	—	0.76	—	—	1.77

— Data were not available from the survey for that particular year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 10a— Standard errors for table A.5: Number of hours spent per week on core curriculum by 1st–4th grade teachers, by sector, year, and classroom and teacher characteristics

Classroom and Teacher Characteristics	Public			Private		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990-91*	*1993-94*
Total	0.08	0.10	0.22	0.21	0.23	0.25
Class size						
1–10	0.41	0.51	0.54	0.59	0.72	1.11
11–18	0.16	0.20	0.21	0.33	0.37	0.40
19–27	0.13	0.15	0.23	0.37	0.39	0.25
28 or more	0.18	0.25	0.56	0.46	0.48	0.70
Grade level of class						
1st grade	0.14	0.24	0.25	0.45	0.57	0.42
2nd grade	0.23	0.24	0.32	0.50	0.51	0.69
3rd grade	0.25	0.25	0.25	0.47	0.37	0.66
4th grade	0.14	0.23	0.22	0.47	0.45	0.28
Combination classes	0.20	0.18	0.34	0.40	0.41	0.73
Percent of students in classroom with limited English proficiency						
5 percent or less	—	—	0.15	—	—	0.26
6–19 percent	—	—	0.39	—	—	0.65
20 percent or more	—	—	0.76	—	—	†
Years of teaching experience						
3 years or less	0.25	0.27	0.37	0.47	0.49	0.82
4–9 years	0.22	0.24	0.43	0.27	0.46	0.43
10–19 years 0.13	0.15	0.24	0.36	0.34	0.29	
20 years or more	0.16	0.22	0.21	0.53	0.60	0.43

† Too few cases to analyze.

— Data were not available from the survey for that particular year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 11a— Standard errors for table A.6: Number of hours spent per week on core curriculum by 1st–4th grade teachers, by sector, year, subject, and grade level

	Public			Private		
Subject and Grade Level	*1987–88*	*1990–91*	*1993–94*	*1987–88*	*1990-91*	*1993-94*
All core curriculum						
1st grade	0.14	0.24	0.25	0.45	0.57	0.42
2nd grade	0.23	0.24	0.32	0.50	0.51	0.69
3rd grade	0.25	0.25	0.25	0.47	0.37	0.66
4th grade	0.14	0.23	0.22	0.47	0.45	0.28
English/Reading/Language arts						
1st grade	0.14	0.19	0.20	0.33	0.37	0.37
2nd grade	0.13	0.19	0.24	0.34	0.37	0.30
3rd grade	0.12	0.17	0.22	0.46	0.23	0.30
4th grade	0.12	0.16	0.18	0.35	0.24	0.18
Arithmetic/Mathematics						
1st grade	0.04	0.06	0.08	0.11	0.18	0.12
2nd grade	0.06	0.07	0.10	0.20	0.16	0.15
3rd grade	0.06	0.09	0.06	0.09	0.10	0.17
4th grade	0.07	0.08	0.07	0.10	0.17	0.12
Social studies/History						
1st grade	0.04	0.05	0.07	0.11	0.12	0.09
2nd grade	0.06	0.06	0.06	0.10	0.17	0.14
3rd grade	0.05	0.06	0.05	0.13	0.17	0.24
4th grade	0.06	0.08	0.08	0.16	0.15	0.07
Science						
1st grade	0.04	0.05	0.07	0.10	0.11	0.09
2nd grade	0.07	0.06	0.08	0.07	0.17	0.18
3rd grade	0.07	0.06	0.06	0.40	0.12	0.07
4th grade	0.05	0.07	0.06	0.19	0.13	0.17

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 12a— Standard errors for table A.7: Number of hours spent per week on core curriculum by 1st–4th grade teachers, by year, sector, and type of private school

Sector and Type	1987–88	1990–91	1993–94
Public	0.08	0.10	0.22
Total private	0.21	0.23	0.25
Catholic	0.27	0.26	0.16
Catholic—Parochial	0.32	0.39	0.18
Catholic—Diocesan	0.55	0.66	0.36
Catholic—Private order	†	†	†
Other religious	0.28	0.37	0.56
Conservative Christian	0.85	0.61	0.41
Affiliated	0.47	0.43	0.51
Unaffiliated	0.43	1.11	1.14
Nonsectarian	0.66	0.77	0.62
Regular	0.88	1.10	0.94
Special emphasis	0.69	1.05	0.92
Special education	0.91	1.00	1.77

† Catholic schools-private order were not included in this analysis because there were too few cases to analyze.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Table 13a— Standard errors for table A.8: Number of hours in a school week and number of hours spent per week on core curriculum in public schools by 1st–4th grade teachers, by year and state

State	Hours spent on core curriculum per week			Hours in school week		
	1987–88	*1990–91*	*1993–94*	*1987–88*	*1990–91*	*1993–94*
Total	0.08	0.10	0.22	0.05	0.05	0.07
Alabama	0.66	0.75	0.62	0.28	0.28	0.39
Alaska	0.99	0.42	0.47	0.34	0.25	0.16
Arizona	0.71	0.59	0.38	0.57	0.28	0.56
Arkansas	0.66	0.82	0.80	0.30	0.36	0.41
California	0.30	0.32	0.57	0.21	0.35	0.28
Colorado	0.52	0.60	0.90	0.26	0.42	0.26
Connecticut	0.55	0.45	0.46	0.31	0.19	0.18
Delaware	0.64	0.74	0.83	0.30	0.21	0.15
District of Columbia	0.82	0.89	0.68	0.47	0.08	0.05
Florida	0.51	0.48	0.80	0.33	0.17	0.15
Georgia	0.55	0.89	0.50	0.34	0.25	0.20
Hawaii	0.18	0.41	0.57	0.79	0.16	0.24
Idaho	0.58	0.45	0.32	0.49	0.23	0.39
Illinois	0.48	0.57	0.44	0.37	0.27	0.28
Indiana	0.38	0.48	0.65	0.28	0.32	0.38
Iowa	0.44	0.76	0.72	0.29	0.66	0.35
Kansas	0.59	0.41	0.91	0.32	0.21	0.23
Kentucky	0.47	0.83	0.96	0.22	0.28	0.27
Louisiana	0.50	0.61	0.67	0.40	0.41	0.32
Maine	0.64	0.57	0.58	0.40	0.35	0.42
Maryland	0.76	0.51	0.59	0.36	0.15	0.19
Massachusetts	0.48	0.53	0.44	0.23	0.25	0.13
Michigan	0.55	0.74	1.05	0.22	0.31	0.35
Minnesota	0.67	0.68	0.62	0.21	0.32	0.34
Mississippi	0.75	0.69	0.68	0.95	0.24	0.22
Missouri	0.59	0.62	0.63	0.23	0.29	0.25
Montana	0.61	0.52	0.89	0.26	0.32	0.30
Nebraska	0.72	0.63	0.83	0.39	0.33	0.35
Nevada	0.56	0.57	0.54	0.46	0.25	0.29
New Hampshire	0.47	0.60	0.70	0.26	0.23	0.25
New Jersey	0.53	0.53	0.70	0.31	0.34	0.44
New Mexico	0.90	0.64	0.53	0.44	0.28	0.36
New York	0.47	0.54	1.48	0.20	0.23	0.21
North Carolina	0.37	0.74	0.51	0.37	0.29	0.20
North Dakota	0.59	0.62	0.46	0.41	0.27	0.49
Ohio	0.44	0.63	0.71	0.32	0.35	0.39
Oklahoma	0.56	0.51	0.82	0.30	0.22	0.24
Oregon	0.61	0.41	0.71	0.29	0.34	0.24
Pennsylvania	0.44	0.39	0.80	0.22	0.28	0.53
Rhode Island	0.96	0.65	0.57	0.68	0.20	0.29
South Carolina	0.62	0.56	0.70	0.29	0.28	0.24
South Dakota	0.60	0.69	0.60	0.30	0.28	0.24
Tennessee	0.33	0.77	0.78	0.28	0.18	0.18
Texas	0.47	0.35	0.43	0.17	0.19	0.29
Utah	0.65	0.56	0.48	0.30	0.30	0.20
Vermont	0.62	0.55	0.75	0.30	0.26	0.16
Virginia	0.66	0.51	0.54	0.28	0.20	0.26
Washington	0.59	0.53	0.54	0.32	0.18	0.16
West Virginia	0.55	0.72	0.65	0.54	0.49	0.36
Wisconsin	0.58	0.64	0.80	0.40	0.30	0.30
Wyoming	0.77	0.53	0.44	0.30	0.36	0.24

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94.

Appendix C

Technical Notes

I. Survey Content

The Schools and Staffing Survey (SASS) consists of four main component surveys administered to districts, schools, principals, and teachers. These surveys are the Teacher Demand and Shortage Survey, the School Principal Survey, the School Survey, and the Teacher Survey.

- The *Teacher Demand and Shortage* questionnaire has two sections: (1) enrollment and teaching positions and (2) district policies. The first section, on enrollment and teaching positions, obtains information on the number of students, the number of teachers and librarians, position vacancies, new hires, and certification status. The second section, on district policies, obtains information on teacher salary schedules and benefits, incentives, hiring and retirement policies, and high school graduation requirements. Race-ethnicity data on the student population and the teacher work force are also collected. The corresponding sections for private schools are incorporated into the Private School questionnaire. The data derived from this survey permit an assessment of teacher demand and shortage, the estimation of the number of teachers who hold certification in their field of assignment, and the effect of various policies on teacher supply and demand balances.

- *The School Principal* questionnaire obtains information about the age, sex, race-/ethnicity, training, experience, salary, benefits, opinions, and attitudes of school principals/headmasters. Questions required both objective responses (e.g., number of years of teaching experience) and judgmental responses (e.g., ranking the seriousness of school problems). The data derived from this survey provide insight into qualifications of school principals, which school problems principals view as serious, and how principals perceive their influence on school policies.

- *School* questionnaires were sent to public schools and private schools. The private school version of the questionnaire included items for identifying the religious or other affiliation of the school. This survey obtained information about schools such as student characteristics, staffing patterns, student/teacher ratios, types of programs and services offered, length of school day and school year, graduation and college application rates, and teacher turnover rates. These data provide information about the teaching experience of the staff, the sources of newly hired teachers, and the destinations of teachers who left the school the previous year.

- *Teacher* questionnaires were sent to teachers in public and private schools. The two versions of the questionnaire were virtually identical. The survey collected data from teachers regarding their education and training, teaching assignment, teaching experience, certification, teaching workload, perceptions and attitudes about teaching, job mobility, and workplace conditions. This information permits analyses of how these factors affect movement into and out of the teaching profession.

In addition to these four main components, the 1993–94 SASS featured: (1) similar principal, school, and teacher components specific to federally funded Bureau of Indian Affairs or tribally run Indian schools, (2) new components focusing on Library Media Specialists/Librarians and Library/Media Centers, and (3) a new student records component. Future reports will feature data from these new components.

Copies of the questionnaires used in the SASS can be obtained by writing to:

Schools and Staffing Survey Questionnaires
National Center for Education Statistics
555 New Jersey Ave., N.W., Rm. 422
Washington, DC 20208–5651

II. Target Population and Estimates for SASS

Target Populations. The target populations for 1993–94 SASS were:

- Local Education Agencies (LEAs) that employ elementary and/or secondary level teachers (for example: public school districts, state agencies that operate schools for special student populations, such as inmates of juvenile correctional facilities, and cooperative agencies that provide special services to more than one school district).
- Public and private schools with students in any of grades 1–12.
- Principals of those schools.
- Teachers in public and private schools who teach students in grades K–12.

Estimates. The SASS was designed to support estimates at both the state and national levels for the public sector, and at the national and association levels for the private sector. The association groups for private schools were determined by the school's association or affiliation group listed on the 1991–92 Private Schools Survey (the frame) and updated with 1992–93 association lists. The association groups were determined in the following order:

1) Military - membership in the Association of American Military Colleges and Schools;

2) Catholic - affiliation as Catholic or membership in the National Catholic Education Association or the Jesuit Secondary Education Association;

3) Friends - affiliation as Friends or membership in the Friends Council on Education;

4) Episcopal - affiliation as Episcopal or membership in the National Association of Episcopal Schools;

5) Hebrew Day - membership in the National Society for Hebrew Day Schools;

6) Solomon Schechter - membership in the Solomon Schechter Day Schools;

7) Other Jewish - other Jewish affiliation;

8) Missouri Synod - membership in the Lutheran Church, Missouri Synod;

9) Wisconsin Synod - membership in the Evangelical Lutheran Church - Wisconsin Synod or affiliation as Evangelical Lutheran - Wisconsin Synod;

10) Evangelical Lutheran - membership in the Association of Evangelical Lutheran Churches or affiliation as Evangelical Lutheran Church in America;

11) Other Lutheran - other Lutheran affiliation;

12) Seventh-Day Adventist - affiliation as Seventh-Day Adventist or membership in the General Conference of Seventh-Day Adventists;

13) Christian Schools International - membership in Christian Schools International;

14) Association of Christian Schools International - membership in the Association of Christian Schools International;

15) National Association of Private Schools for Exceptional Children - membership in the National Association of Private Schools for Exceptional Children;

16) Montessori - membership in the American Montessori Society or other Montessori associations;

17) National Association of Independent Schools - member of the National Association of Independent Schools;

18) National Independent Private School Association - member of the National Independent Private School Association;

19) All else - member of any other association specified in the PSS or affiliated with a group not listed above or not a member of any association.

Comparisons between public and private schools are only possible at the national and regional levels, because private schools are selected for sampling by association group and not by geographic location, such as state.

The teacher survey was designed to support comparisons between new and experienced teachers. Comparisons between bilingual and nonbilingual teachers are possible at the national level.

III. Sample Design and Implementation[8]

A. Sampling Frames

1. Public Schools

The public school sampling frame was based on the 1991–92 school year CCD, which is a file of information collected annually by NCES from all state education agencies and which is believed to be the most complete public school listing available. The frame includes regular public schools, Department of Defense operated military base schools, and special purpose schools such as special education, vocational, and alternative schools. After the deletion of duplicate schools, schools outside of the United States, and schools that only teach prekindergarten, kindergarten, or postsecondary students, there were a total of 82,746 schools on the public school frame.

2. Private Schools

The sampling frame for private schools was the 1991–92 Private School Survey, updated with 1992–93 association lists (Broughman et al. 1994). This data collection uses two components to develop estimates of the number of private schools in the United States. A list frame was the primary private school frame and an area frame was used to identify schools not included on the list frame and thereby to compensate for the undercoverage of the list frame.

B. Sample Selection Procedures

Schools are the primary sampling unit in SASS. Public schools were selected to be representative at the national and state levels; private schools were selected to be representative at the national and association levels. More detail is available in Abramson et al. (1996).

Once schools were selected, LEAs associated with these schools were in sample as well. Hence, the LEA sample consisted of the set of LEAs that were associated with the SASS public school sample. This provided the linkage between the LEA and the school.

Each selected school was asked to provide a list of their teachers and selected characteristics. Nine percent of the private schools and 4 percent of the public schools did not provide teacher lists. A factor in the teacher weighting system was used to adjust for these nonparticipant schools.

C. Sample Sizes

Tables III–1 and III–2 show the sample sizes and number of interview cases for each questionnaire, by state and private school typology, respectively.

[8] For a detailed description of the sample design, see Abramson et al. (1996).

The number in sample is the number of in-scope, or eligible cases. This number excludes the out-of-scope cases, which are drawn for the sample but are not eligible for interview. For example, a school which has closed or a teacher who has left the country would be considered out-of-scope.

The number of interviews is the number of in-scope (eligible) cases minus the noninterview cases. The noninterview cases include refusals or sample questionnaires with too little valid data to be considered complete interviews for the survey. The number of interviews is the actual unweighted number of cases upon which estimates in this report are based. A nonresponse adjustment is included in the weights to reduce the bias due to nonresponse.

Table III–1— Number of in-scope sample cases and number of interviews, public school districts, principals, schools, and teachers: SASS 1993–94

	District		Public Principals		Public School		Public Teacher	
	# in sample	*# interviews*	*# in sample*	*# interviews*	*# in sample*	*# interviews*	*# in sample*	*# interviews*
50 States and D.C.	5,378	5,008	9,415	9,098	9,532	8,767	53,008	47,109
Alabama	104	97	234	232	234	224	1,308	1,172
Alaska	46	44	196	188	197	170	1,022	864
Arizona	94	92	203	194	206	190	1,229	1,101
Arkansas	123	120	164	162	164	156	955	863
California	264	223	401	380	406	352	2,578	2,124
Colorado	74	64	173	158	176	164	977	868
Connecticut	99	90	160	152	161	148	832	726
Delaware	19	17	71	70	71	63	309	268
District of Columbia	1	1	64	54	65	55	278	197
Florida	56	55	238	236	243	228	1,291	1,161
Georgia	97	95	179	177	179	168	924	845
Hawaii	1	1	92	88	93	85	713	616
Idaho	79	75	167	165	169	158	969	900
Illinois	185	163	253	246	254	238	1,284	1,125
Indiana	133	120	176	172	178	166	1,028	936
Iowa	127	115	165	163	163	158	975	906
Kansas	110	104	162	150	162	149	1,026	933
Kentucky	104	103	158	149	161	149	803	721
Louisiana	65	57	223	219	224	207	1,079	969
Maine	103	98	153	144	156	145	897	811
Maryland	23	19	162	154	167	135	730	646
Massachusetts	155	151	222	217	222	208	1,508	1,325
Michigan	187	178	208	201	214	202	1,034	933
Minnesota	121	103	167	163	172	160	977	910
Mississippi	116	113	204	200	207	195	1,098	988
Missouri	126	122	176	173	177	168	990	896
Montana	154	145	176	169	190	178	1,354	1,249
Nebraska	112	106	146	142	163	139	830	770
Nevada	18	18	123	115	123	109	507	431
New Hampshire	76	72	120	120	121	117	582	521
New Jersey	151	113	191	185	192	167	1,012	858
New Mexico	60	59	171	164	173	160	863	771
New York	200	183	312	281	315	270	1,831	1,460
North Carolina	83	78	204	199	204	181	1,010	908
North Dakota	117	114	171	168	123	166	1,179	1,101
Ohio	155	155	188	182	189	176	999	895
Oklahoma	231	214	323	307	326	306	1,987	1,740
Oregon	107	103	173	170	173	159	1,016	909
Pennsylvania	157	142	182	175	189	169	939	830
Rhode Island	34	34	99	93	99	88	421	356
South Carolina	69	64	162	157	162	141	781	701
South Dakota	113	108	170	168	172	165	1,079	970
Tennessee	86	82	187	183	187	179	989	888
Texas	290	277	403	388	406	380	2,498	2,245
Utah	31	30	175	173	176	174	1,004	928
Vermont	89	88	103	97	105	97	489	423
Virginia	88	80	179	174	180	158	845	758
Washington	117	112	210	207	212	200	1,213	1,065
West Virginia	55	53	166	166	168	154	926	850
Wisconsin	126	114	174	173	176	164	1,014	930
Wyoming	48	44	136	134	136	131	826	748

NOTE: The number of in-scope cases in sample is the actual sample size achieved, less out-of-scope cases. Out-of-scope cases are drawn for the sample but not eligible for interview. Districts may have merged, schools closed, or there may not have been a permanent principal assigned at the time of interview, for example. There are still other reasons for a case to be considered out-of-scope.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Teacher Demand and Shortage Questionnaire, Principal Questionnaire, School Questionnaire, and Teacher Questionnaire).

Table III–2— Number of in-scope cases in sample and number of interviews, private schools, principals, and teachers: SASS 1993–94

Private school type	Private School		Private Principal		Private Teacher	
	# in sample	*# interviews*	*# in sample*	*# interviews*	*# in sample*	*# interviews*
All private schools	3,074	2,585	3,143	2,722	10,386	8,372
Catholic	921	818	1,023	831	3,680	3,061
Parochial	465	408	462	427	1,776	1,474
Diocesan	290	263	290	244	1,192	988
Private Order	166	147	271	160	712	599
Other Religious	1,419	1,151	1,394	1,236	4,404	3,483
Conservative Christian	325	248	322	274	929	667
Affiliated	708	574	702	631	2,239	1,790
Unaffiliated	386	329	370	331	1,236	1,026
Nonsectarian	734	616	726	655	2,302	1,828
Regular program	366	297	364	321	1,279	1,036
Special emphasis	182	150	176	160	582	436
Special education	186	169	186	174	441	356

NOTE: The number of in-scope cases in sample excludes out-of-scope, or ineligible, cases. Reasons for a school, principal or teacher to be out-of-scope include school closure, principal or teacher leaving the school.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (School Questionnaire, Principal Questionnaire, and Teacher Questionnaire).

IV. Data Collection Procedures

Data collection operations for the 1993–94 SASS took place during the 1993–94 school year. Table IV–1 depicts both the specific data collection activity and the time frame in which it occurred.

Table IV–1. —Data collection time schedule

Activity	Date of activity
Introductory letters mailed to school districts	September 1993
Introductory letters and teacher listing sheets mailed to schools	October 1993
Census field representatives called school districts to obtain the name of a contact person to whom the Teacher Demand and Shortage questionnaire should be addressed	October 1993
Lists of teachers provided by schools	October - December 1993
First mailing of questionnaires to school districts and school principals	December 1993
First mailing of questionnaires to schools and to teachers	January - February 1994
Second mailing of questionnaires to districts and school principals	January 1994
Second mailing of questionnaires to schools and teachers	February - March 1994
Telephone follow-up of mail nonrespondents	March - June 1994

V. Response Rates

A. Survey Response Rates

The weighted response rates for each component of SASS are detailed in tables V–1 and V–2. Table V–1 provides public response rates by state for districts, schools, administrators, and teachers. Table V–2 lists private response rates by private school typology for administrators, schools, and teachers. The response rate tables are useful as an indication of possible nonresponse bias.

The weighted response rates were derived by dividing the sum of the basic weights for the interview cases by the sum of the basic weights for the eligible cases. The basic weight for each sample case was assigned at the time of sampling and is the inverse of the probability of selection.

Teacher response rates refer to the percentage of teachers responding in schools that provided teacher lists for sampling. Nine percent of private schools and 4 percent of public schools did not send in teacher lists. The effective response rate is calculated by multiplying together the teacher list rate and the response rate:

Public teachers: .96 x .882 = .8467 x 100 = 84.7% effective response rate
Private teachers: .91 x .801 = .7289 x 100 = 72.9% effective response rate

Table V–1— Final weighted district, public school administrator, school, and teacher response rates, by state: 1993–94

	Districts	Administrators	Schools	Teachers
Total	93.9%	96.6%	92.3%	88.2%
Alabama	93.4	99.6	95.0	89.6
Alaska	94.3	95.9	87.7	85.8
Arizona	98.7	95.2	91.9	89.9
Arkansas	97.5	98.4	94.2	91.1
California	90.7	94.2	88.2	81.9
Colorado	89.3	89.4	92.2	88.0
Connecticut	93.9	95.9	93.1	88.2
Delaware	89.5	98.5	88.2	85.9
District of Columbia	100.0	85.8	85.5	70.9
Florida	98.4	98.2	94.5	91.1
Georgia	97.8	99.5	93.9	91.7
Hawaii	100.0	95.7	92.1	85.7
Idaho	94.0	99.2	91.7	92.7
Illinois	92.5	97.8	94.3	86.5
Indiana	91.0	97.9	93.7	91.3
Iowa	92.1	99.1	96.1	92.0
Kansas	93.5	93.5	92.8	90.7
Kentucky	99.4	94.7	92.1	90.4
Louisiana	88.7	97.6	90.1	90.6
Maine	96.4	93.3	91.9	90.2
Maryland	82.5	95.2	84.8	87.8
Massachusetts	97.4	99.4	94.2	87.3
Michigan	96.6	98.0	96.5	89.2
Minnesota	89.6	98.9	94.8	93.0
Mississippi	98.0	98.2	93.8	90.5
Missouri	97.9	97.9	95.3	91.7
Montana	93.9	95.6	92.4	91.6
Nebraska	96.9	96.2	89.0	92.2
Nevada	100.0	93.7	88.3	84.0
New Hampshire	86.7	100.0	97.6	89.8
New Jersey	76.9	96.3	87.1	85.7
New Mexico	97.8	96.3	93.3	90.2
New York	94.0	92.8	89.3	79.9
North Carolina	96.3	97.5	89.8	90.3
North Dakota	95.9	98.7	95.7	93.3
Ohio	100.0	96.1	92.8	88.7
Oklahoma	94.2	94.8	94.5	87.2
Oregon	98.0	97.0	93.0	90.0
Pennsylvania	90.3	96.3	88.5	88.2
Rhode Island	100.0	93.9	89.8	84.5
South Carolina	93.5	96.8	87.3	90.6
South Dakota	95.9	98.9	95.9	89.4
Tennessee	96.9	97.4	94.5	89.1
Texas	96.5	96.9	94.2	89.6
Utah	95.9	99.5	98.4	91.5
Vermont	99.1	94.1	93.3	86.2
Virginia	88.4	96.0	89.3	89.9
Washington	97.7	98.7	95.8	88.1
West Virginia	96.4	100.0	92.8	92.0
Wisconsin	91.0	99.4	93.9	92.5
Wyoming	85.2	98.1	94.7	91.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Teacher Demand and Shortage Questionnaire, Principal Questionnaire, School Questionnaire, and Teacher Questionnaire).

B. Item Response Rates

The unweighted item response rates (i.e., the number of sample units responding to an item divided by the number of sample units that participated in the survey) for the SASS and the Library Survey ranged from 50 percent to 100 percent. Tables V–3 and V–4 provide a brief summary of the item response rates. The item response rates in these tables are unweighted, and do not reflect additional response loss due to respondents' refusal to participate in the survey.

Table V–3. —Summary of unweighted item response rates by questionnaire

Survey	Range of item response rates	Percent of items with a response rate of 90% or more	Percent of items with a response rate of less than 75%
LEA Survey	67–100%	91%	1%
Principal Survey			
Public	65–100%	92%	4%
Private	55–100%	90%	6%
Indian	72–100%	91%	1%
School Survey			
Public	83–100%	83%	0%
Private	61–100%	77%	3%
Indian	70–100%	84%	1%
Teacher Survey			
Public	71–100%	91%	0%
Private	69–100%	89%	1%
Indian	70–100%	84%	3%
Student Survey			
Public	90–100%	97%	0%
Private	84–100%	97%	0%
Indian	79–100%	88%	0%

Table V–4. —Items with response rates of less than 75 percent[9]

Survey	Items
LEA Survey	26c(2)
Principal Survey	
Public	14b(1,1), 14b(2,1), 14b(4,1), 14b(5,1), 14b(7,1), 14b(8,1)
Private	14b(1,1), 14b(2,1), 14b(4,1), 14b(5,1), 14b(8,1), 21a, 21c, 28b
School Survey	
Public	None
Private	31c(2), 31c(5), 31c(6), 31c(7), 31c(8), 31c(9)
Teacher Survey	
Public	41c
Private	39, 51c, 55

Tables V–5 through V–8 provide summaries of the unweighted item response rates for the items used in this report. All item response rates for the items used in this report are above 75 percent.

[9] The questionnaire wording for these items can be found in *The Schools and Staffing Surveys: 1993–1994, Data File User's Manual*, a forthcoming NCES publication.

Table V–5. —Unweighted item response rates, District File

	Source code		Response rate (%)	
Item description	Public	Private	Public	Private
Number of FTE teachers				
All	D1010	S1010	94.9	93.3
Certified	D1015	S1015	94.9	91.7
Continuing	D1010 minus D1050	S1010 minus S1050	--	--
Continuing and certified	D1015 minus D1055	S1015 minus S1055	--	--
Newly hired	D1050	S1050	99.2	96.6
Newly hired and certified	D1055	S1055	98.6	93.3
Total FTE positions				
Vacant	D1030	S1030	99.0	95.8
Withdrawn	D1035	S1035	98.6	95.9
Teacher salary schedules by earned degree and experience				
Bachelor's and no experience	D2100	S2100	98.2	87.5
Master's and no experience	D2105	S2105	97.2	81.2
Master's and 30 credits	D2110	S2110	91.8	71.1
Master's and 20 years	D2115	S2115	95.8	76.2

NOTE: Only for districts or private schools with no scheduled salaries.
-- Item response rates are not applicable for computed variables.

Table V–6. —Unweighted item response rates, School File

	Public and Private Item name	Response rate (%)	
Item description		Public	Private
English as a second language			
Program	S1410	98.9	98.5
Students	S1415	94.0	94.6
Bilingual education			
Program	S1420	98.6	98.4
Students	S1425	93.0	93.5
Remedial reading			
Program	S1360	98.3	97.5
Students	S1365	88.8	88.1
Remedial mathematics			
Program	S1370	97.7	97.1
Students	S1375	88.6	87.7
Handicapped			
Program	S1380	98.4	97.7
Students	S1385	91.0	89.2
Gifted and talented			
Program	S1390	98.1	96.9
Students	S1395	90.4	85.5
Diagnostic and prescriptive			
Services	S1430	98.2	98.1
Extended day/after-school			
Services	S1400	98.8	98.6
Students	S1405	88.0	90.8
Chapter 1			
Services	S1600	97.3	98.1
Students (pre-K)	S1605	99.6	99.8
Students (K and above)	S1610	83.2	89.2
Free or reduced-price lunch	(Public only)		
Services	S1645	98.1	98.2
Students (pre-K)	S1655	90.5	89.3
Students (K and above)	S1660	84.1	78.3
Schools with 12th grade students	S0245	99.2	98.4
Number of graduates last year	S1835	95.5	96.5
Number of graduates applied college	S1840	87.3	93.1

Table V–7. —Unweighted item response rates, Principal File

	Source code		Response rate (%)	
Item description	Public	Private	Public	Private
Associate's degree	A160	A160	98.9	98.0
Bachelor's degree	A060	A060	99.9	99.9
Master's degree	A125	A125	99.9	99.4
Education specialist degree	A175	A175	99.0	98.0
Ph.D./first professional degree	A190	A190	99.0	98.0
Current annual salary	A495	A495	96.1	91.6
Months employed	A500	A500	99.3	98.4
Years employed:				
As a principal in this school	A325	A325	100.0	100.0
As a principal in other schools	A330	A330	99.2	98.4

Table V–8. —Unweighted item response rates, teacher file

	Source code		Response rate (%)	
Item description	Public	Private	Public	Private
Associate's degree	T0270	T0270	96.4	93.8
Bachelor's degree	T0170	T0170	99.7	99.6
Master's degree	T0235	T0235	98.9	98.6
Education specialist degree	T0285	T0285	96.4	93.8
Ph.D./first professional degree	T0300	T0300	96.4	93.8
Full-time experience (private schools)	T0095	T0095	94.5	92.7
Full-time experience (public schools)	T0105	T0105	94.9	95.2
Academic base year salary	T1420	T1420	91.6	90.3
School year supplement	T1425	T1425	97.8	96.4
Salary from school year supplement	T1430	T1430	96.0	94.5
Summer supplement	T1390	T1390	97.7	96.1
Salary from summer supplement	T1395	T1395	95.2	94.2

VI. Imputation Procedures

For questionnaire items that should have been answered but were not, values were imputed by (1) using data from other items on the questionnaire, (2) extracting data from a related component of the Schools and Staffing Survey (for example, using data from a school record to impute missing values on that school's LEA questionnaire), (3) extracting data from the sample file (information about the sample case from other sources; for example, the Private School Survey or the Common Core of Data, collected in the 1991–92 school year), and (4) extracting data from a respondent with similar characteristics.

For some incomplete items, the entry from another part of the questionnaire or information from the sample file was directly imputed to complete the item; for others the entry was used as part of an adjustment factor with other data on the incomplete record. For example, if a respondent did not report whether a school offered remedial reading in item 22a of the public school questionnaire, the response (1 = Yes or 2 = No) for a similar school was imputed to item 22a of the incomplete record. However, if a respondent had answered "Yes" to item 22a but had not reported the number of students in the program, the ratio of number of students in remedial reading to the total enrollment for a similar school was used with the enrollment at the school for which item 22a was incomplete to impute an entry to item 22a (i.e., SCHOOL

A item 22a = SCHOOL A ENROLLMENT multiplied by the ratio of SCHOOL B item 22a to SCHOOL B ENROLLMENT).

Values were imputed to items with missing data for records that had been classified as interviews (ISR=1). Noninterview adjustment factors were used during the data weighting process to compensate for data that were missing because the sample case was a noninterview (ISR=2). For more information about imputation procedures, see Abramson et al. (1996).

VII. Weighting[10]

Weighting of the sample units from the public sector was carried out to produce national and state estimates for public schools, teachers, principals, and LEAs. The private sector was weighted to produce national and association group estimates.

VIII. Standard Errors

Estimates found in the tables of this report are based on samples and are subject to sampling variability. Standard errors were estimated using a balanced repeated replications procedure that incorporates the design features of the stratified, clustered sample. The standard errors provide indications of the accuracy of each estimate. If all possible samples of the same size were surveyed under the same conditions, an interval of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the universe value in approximately 95 percent of the cases. Note, however, that the standard errors do not take into account the effects of biases due to item nonresponse, measurement error, data processing error, or other systematic error. Estimates with large standard errors (coefficient of variation greater than 30 percent) should be interpreted with caution.

IX. Cautions Concerning Change Estimates

Care must be taken in estimating change over time in a SASS data element, because some of the measured change (e.g., an 8 percent increase in the number of students receiving Chapter 1 services) may not be attributable to a change in the education system. Some of the change may be due to changes in the sampling frame, to a questionnaire item wording, or other changes detailed in Abramson et al. (1996).

[10] For a detailed description of the weighting processes, see Abramson et al. (1996).

X. Definitions

The following survey terms are defined as they apply to SASS.

Local Education Agency (LEA). An LEA, or public school district, is defined as a government agency that employs elementary or secondary level teachers and is administratively responsible for providing public elementary and/or secondary instruction and educational support services.

Districts that do not operate schools but employ teachers are included. For example, some states have special education cooperatives that employ special education teachers who teach in schools in more than one school district.

Public School. A public school is defined as an institution that provides educational services for at least one of grades 1–12 (or comparable ungraded levels), has one or more teachers to give instruction, is located in one or more buildings, receives public funds as primary support, and is operated by an education agency. Schools in juvenile detention centers and schools located on military bases and operated by the Department of Defense are included.

Private School. A private school is defined as a school not in the public system that provides instruction for any of grades 1–12 (or comparable ungraded levels). The instruction must be given in a building that is not used primarily as a private home.

Teacher. A teacher is defined as a full-time or part-time teacher who teaches any regularly scheduled classes in any of grades K–12. This includes administrators, librarians, and other professional or support staff who teach regularly scheduled classes on a part-time basis.[11] Itinerant teachers are included, as well as long-term substitutes who are filling the role of a regular teacher on a long-term basis. An itinerant teacher is defined as a teacher who teaches at more than one school (for example, a music teacher who teaches three days per week at one school and two days per week at another). Short-term substitute teachers and student teachers are not included.

Special Education School. Special education schools focus primarily on direct instructional activities required to educate students with mental handicaps, such as mental retardation; physical handicaps, such as hearing- and speech-impairment, and learning disabilities, such as dyslexia.

Typology. Categories (three major with three sub-categories each) into which private schools are divided: (1) Catholic - parochial, diocesan, private; (2) Other religious - affiliated with a Conservative Christian school association, affiliated with a national denomination, unaffiliated; (3) Nonsectarian - regular, special program emphasis, special education (McMillen and Benson 1992).

[11] This represents a change in the definition of teacher from previous administrations of SASS. In 1987–88 and 1990–91 a teacher was defined as any full-time or part-time teacher whose *primary assignment* was teaching in any of grades K–12. The prior definition excluded administrators and other staff who taught regularly scheduled classes, but whose primary assignment was not teaching.

In the case of other religious schools, recent work (Carper and Hunt 1984) documents major differences in decisionmaking, educational goals, revenue, and enrollment trends between denomination schools (i.e., Lutheran, Jewish, Seventh-day Adventist) and those nondenominational schools affiliated with a Conservative Christian school association (e.g., Accelerated Christian Education, American Association of Christian Schools, Association of Christian Schools International, Oral Roberts Educational Fellowship). This category is reportedly the fastest growing private school sector. Schools in this type are commonly known as evangelical or fundamental, and are not tied to a denomination per se, but rather are governed by a single church, a foundation, or a local society. A third Other Religious category, Unaffiliated, is suggested to capture those religious schools which affiliate with neither a national denomination nor with a conservative Christian school association.

The three nonsectarian school categories are determined not by governance but by program emphasis. This classification disentangles private schools offering a conventional academic program (Regular) from those which either serve special needs children (Special Education) or provide a program with a Special Emphasis (e.g., arts, vocational, alternative).

Common Core of Data. The Common Core of Data is a group of surveys that acquire and maintain public elementary and secondary education data from the 50 states, the District of Columbia, and the outlying areas through the state-level (or equivalent) education agencies. Information about staff and students in public schools is collected annually at the school, LEA (local education agency or school district), and state levels. Information about revenues and expenditures is also collected at the state level.

Newly hired teachers. Newly hired teachers are teachers who were newly hired by the school district for the 1993–94 school year. It includes teachers returning from unpaid leave of absence of one school year or more, but does not include substitute teachers.