



Sources of Newly Hired Teachers in the United States: Results from the Schools and Staffing Survey, 1987–88 to 2011–12

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Executive Summary

There are at least four ways teachers may enter a new school: directly after receiving a new degree, exiting a different career, transferring from another school or type of position in a school, or after a break from teaching. The data used in this report span 25 years, from 1987 to 2012, providing an overview of these four key sources of newly hired teachers in the United States using the Schools and Staffing Survey (SASS).

Four administrations of SASS (1987–88, 1999–2000, 2007–08, and 2011–12) provide data tracing the demographic characteristics, experience, qualifications, and prior year activities of newly hired K–12 teachers in the United States. Newly hired teachers are those who are new to teaching or those who are in a new position at a school in a different district or system in the academic year of the survey administration and taught at least half time or more at the school. The four sources of newly hired teachers described in this report follow:

- Newly prepared teacher: first-year teacher (no previous experience) whose main activity in the prior year was attending college or who earned his or her highest degree in the prior year;
- Delayed entrant: first-year teacher who in the prior year had engaged in other activities outside of attending college and teaching and had received the highest degree more than 1 year prior to the survey administration;
- Transfer: teacher with previous teaching experience whose main activity in the prior year was working in another school outside of the current school system or another sector (public or private school);¹ or

¹ This report draws on the sample selection and four major sources for newly hired teachers highlighted by Broughman and Rollefson (2000). To remain consistent with the definitions established by Broughman and Rollefson (2000), this report uses a district-level model of newly hired teachers and does not include transfers moving to a new school within the same school district as newly hired teachers. Intradistrict transfers are a highly variable source of newly hired teachers relative to other types of transfers and sources of teachers. First, intradistrict transfers often enter new schools through shortened application, hiring, and onboarding processes, which are less costly to school districts. Second, intradistrict transfers may be voluntary teacher requests or involuntary based on district needs and union policies, and analyzing these teachers as a single group may not best describe intradistrict transfers. Finally, the literature that addresses intradistrict transfers often assesses these moves in relation to attrition, school equity, and teacher performance (Goldhaber, Gross, and Player 2011), rather than as a source of new teachers entering the workforce.

- Re-entrant: teacher with previous experience whose main activity in the prior year was not teaching in grades K–12 but had taught in the past.

Estimates are produced from cross-tabulations of the data, and Student's *t* tests are performed to test for differences between estimates. Only findings that met the $\alpha = 0.05$ significance level are discussed in the text. Readers should not make causal inferences about the data presented here. Some of the major findings appear below.

Trends in the Type and Number of Newly Hired Teachers

The number of newly hired teachers in public schools was higher in 2011–12 than in 1987–88, while a similar change was not detected for private school teachers (table 1). Over this period, the number of teachers overall increased significantly in both public and private schools, so the percentage of all teachers who were new teachers remained at about 6 percent in public schools and fell from 17 to 11 percent in private schools. The percentage of public school teachers who were newly hired increased between 1987–88 and 1999–2000 to 10 percent, did not change significantly between 1999–2000 and 2007–08, and then fell between 2007–08 and 2011–12. Among private school teachers, the percentage who were newly hired stayed between 16 and 17 percent from 1987–88 to 2007–08 and then fell to 11 percent in 2011–12.

Focusing on the types of newly hired teachers, the percentage of first-time² teachers in both public and private schools increased between 1987–88 and 1999–2000 (table 2). Thirty percent of newly hired public school teachers were first-time teachers in 1987–88 compared to 43 percent in 1999–2000. Similarly, 24 percent of newly hired private school teachers were first-time teachers in 1987–88 compared to 33 percent in 1999–2000. There were no measurable differences in the percentages of first-time teachers in public or private schools between 1999–2000 and 2007–08 or between 2007–08 and 2011–12 in either public or private schools. Transfers as a percentage of newly hired teachers did not change significantly for public or private schools between 1987–88 and 2011–12. Re-entrants made up smaller percentages of newly hired teachers in public and private schools when comparing 1987–88 figures to 2011–12 figures.

² First-time teachers are teachers who reported teaching for the first time in the year of the survey administration and reported no previous teaching experience. First-time teachers may be newly prepared teachers or delayed entrants.

Newly Hired Teacher Demographics and Qualifications

The characteristics of newly hired teachers fluctuated over time and varied across different sources. However, there were several key findings for trends in teachers' race/ethnicity, salary, and education. Within both public and private schools, newly hired teachers exhibited a regular decrease in the percentage of White, non-Hispanic teachers since 1987–88 (table 3). Average base salary (in 2012 constant dollars) among newly hired public and private school teachers was lower in 1987–88 compared to 2007–08, with a rise of \$3,000 and \$5,000 in public and private schools, respectively. However, average base salaries did not change for either sector between 1999–2000 and 2011–12. The percentage of public and private school teachers whose highest level of education was a master's degree increased between 1987–88 and 2011–12 (table 4). While information about alternative credentialing was not collected in 1987–88, the percentage of public and private school teachers with alternative certification increased between 1999–2000 and 2011–12.³

Prior Year Activities of Newly Hired Teachers

The prior year activities of newly hired teachers are associated with their source; for example, newly prepared teachers were, by definition, enrolled in school in the year before they began teaching. During the period from 1987–88 to 2011–12, more than 50 percent of public and private school delayed entrants reported working in a nonteaching position in the prior year (table 7). In all four SASS administrations highlighted in this report, a higher percentage of public school transfers taught at a public school in the previous year compared to the percentage of private school transfers who taught at a public school in the previous year. Conversely, a higher percentage of private school transfers taught at private schools the previous year compared to the percentage of public school transfers that taught at private schools the previous year. The prior year activities of re-entrants varied at each time point among nonteaching work, attending school, caring for family members, and other activities. In 2011–12, more public and private school re-entrants worked in nonteaching fields the previous year than attended school or cared for family.

³ In 1999–2000, teachers were asked whether they earned their regular or standard state certification through a bachelor's degree program, a 5th-year program, an alternative program before or after beginning teaching, through continuing professional development, or other. In 2007–08 and 2011–12, teachers were asked "yes" or "no" as to whether they entered teaching through an alternative certification program. Such changes in question wording may affect comparisons over time. Some of the increase between 1999–2000 and 2011–12 may be attributed to changes in survey design.

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Introduction

Educational policy has long been concerned with predictions of the supply of and demand for teachers.¹ Concern in the early 1990s focused on rates of attrition, retirement of baby boomers, and supply sources of teachers, such as whether the nation's newest teachers were largely new college graduates or seasoned teachers who had exited the profession for a period (Bobbitt 1991; Broughman and Rollefson 2000; Hussar 1999). Recent issues in teacher supply focus on teacher shortages by school type and location, subject field, teacher race/ethnicity, and changing demand needs based on teacher turnover and retirement (Aragon 2016; Ingersoll and Perda 2010). Other research pertaining to the teacher labor market more broadly considers the role of various measures of teacher quality (including education level, experience, and in-field qualifications) in educational practice (Boyd et al. 2007; Clotfelter, Ladd, and Vigdor 2010; Darling-Hammond 2010).

This report summarizes results from 25 years of data focusing on changes in the supply sources for newly hired K–12 teachers in the United States between 1987 and 2012. The report uses data from four administrations of the Schools and Staffing Survey (SASS), a sample survey of public and private elementary and secondary schools in the United States sponsored by the National Center for Education Statistics (NCES) of the U.S. Department of Education and conducted by the U.S. Census Bureau. While SASS collects data from several different types of respondents (district staff, school principal, teachers, and library media center staff), this report focuses on data collected from public (regular and charter) and private school teachers. The SASS data provide information on several topics, including teacher characteristics, recruitment, retention, qualifications, training, and experience.

The analyses highlight central pathways through which teachers enter schools. Teachers may enter a school directly after receiving a new degree, after a different

¹ The supply of teachers in the United States would include all individuals seeking teaching positions in a given year, while demand for teachers would address the total number of positions required to instruct enrolled children in specific subjects across the United States. Issues of supply are complicated by the number of effective teachers seeking employment that will be willing to work in the conditions offered for the wages offered (Murnane and Steele 2007). The demand for teachers depends on class sizes, district budgets, and curriculum requirements, and these are just a few highlighted contextual issues (Murnane and Steele 2007). Instead of measuring either of these factors as formally defined, this report focuses on sources of the nation's new hires over time, and differences across these supply sources in teacher characteristics and experiences.

career, from another school or type of position in a school, or after a break from teaching. The types of newly hired teachers described in this report include newly prepared, delayed entrants, transfers, and re-entrants (all defined below). Results include discussion of demographic characteristics, experience, qualifications, and prior occupations of the nation's sources of teachers.

In 2000, NCES published *Teacher Supply in the United States: Sources of Newly Hired Teachers in Public and Private Schools, 1987–88 to 1993–94*, which contained similar information to that presented in this report from earlier administrations of SASS (Broughman and Rollefson 2000). This report draws on the sample selection and four major supply sources for newly hired teachers highlighted by Broughman and Rollefson (2000). These are listed in additional detail below, with similar measures adjusted to accommodate survey changes over time, such as new response options for teachers' activities in the previous year. To extend understanding of the sources of newly hired teachers into the most recent decade, the data included in this report represent survey administrations from the years 1987–88, 1999–2000, 2007–08, and 2011–12.

Study Considerations

This report focuses on the sample of newly hired K–12 teachers in each administration of SASS. Newly hired teachers are those who are new to teaching or who are in a new position at a school in a different district or system in the academic year of the survey administration and taught at least half time or more at the school. There are four sources of newly hired teachers described in the report, as follows:

- Newly prepared teacher: first-year teacher (no previous experience) who in the previous year was attending college or earned his or her highest degree, also a first-time teacher;
- Delayed entrant: first-year teacher who in the previous year had engaged in other activities outside of attending college and teaching and had received the highest degree more than 1 year prior to the survey administration, also a first-time teacher;
- Transfer: teacher with previous teaching experience whose main activity in the previous year was working in another school outside the current school system, in another sector (public or private school), or in another state; or
- Re-entrant: teacher with previous experience who in the previous school year was not teaching in grades K–12 but who had taught in the past.

Organization of This Report

This report begins with a discussion on data and measures, which provides additional detail on the survey questions used to create the categories highlighted in the report.

The chapter on findings is divided into four sections. In the first section, tables 1 and 2 show the number of newly hired teachers relative to continuing teachers over time and the distribution of newly hired teachers by source and school sector.

The next section of the chapter focuses on key demographic characteristics of newly hired teachers over time. The demographic characteristics listed in the tables include sex, teacher race/ethnicity, age, and income/salary. Table 3 features public and private school teachers' demographic characteristics for each source of newly hired teachers.

The third section presents information about newly hired public- and private-school teacher qualifications and teaching field in tables 4 through 6. These tables include results related to change over time in newly hired teachers' highest educational degree and main teaching assignment and whether they hold a major and certification in their main teaching assignment. This section also includes a variable for data from 1999 to 2000 and later as to whether the teacher holds an alternative teaching certificate.

The last section of the findings chapter shows data on newly hired teachers' activities and occupations in the year prior to the survey administration. Table 7 shows the prior year activity of newly hired public and private school teachers by source.

The last chapter, "Summary and Limitations," provides a brief set of conclusions and a note on possible limitations. The report concludes with appendices that provide standard errors for the tables, as well as detail on the report sample, measures, and coding.

Data and Measures

Data used in this report come from four SASS administrations: 1987–88, 1999–2000, 2007–08, and 2011–12.² SASS is a nationally representative sample survey of public (including charter) and private K–12 schools, principals, and teachers in the 50 states and the District of Columbia. The sampling also includes school districts and library media centers associated with public schools.

The analyses described in this report use public and private school teacher data taken from a school-based sample design in which teachers associated with a selected school were sampled from a list of teachers provided by the school or district. Additional information about SASS data collections over time, sampling methods, and response rates for each administration of data appear in detail in appendix B and in the survey documentation for each individual administration referenced in appendix B.

Defining Newly Hired Teachers

The teachers included in this report work half time or more and are regular full- or part-time teachers; that is, they do not classify themselves as student teachers, teacher aides, or substitute teachers. The data in the report focus only on newly hired teachers, with the exception of table 1, which includes all regular teachers working half time or more. Newly hired teachers are defined as those who began teaching at the sampled school in the respective survey administration or academic year, unless the teacher transferred to a new school from within the district. Teachers who moved from within the district, or intradistrict transfers, are not included as newly hired teachers. This newly hired teacher status is determined using the teacher questionnaire, which asks teachers to report in what year they began teaching at “this

² Preliminary analysis indicated that including data from other administrations would have made this report more complex but would not have affected the results. Time series analyses of all seven administrations were conducted to estimate regularity in trends for newly hired teachers and their education, salary, qualifications, and race/ethnicity. With the exception of race/ethnicity and increases in the number and percentage of new teachers, few significant results were found. This indicated frequent fluctuation in newly hired teachers’ sources and characteristics, rather than a constant directional trend. Broughman and Rollefson (2000) include data from 1987–88, 1990–91, and 1993–94. The 2003–04 SASS data were excluded because in most cases the new-hire categories in 2003–04 showed a consistent trend relative to 1999–2000 and 2007–08, while 2007–08 to 2011–12 showed a marked decline.

school.” For example, in 1987–88, teachers who reported they began teaching in either 1987 or 1988 are considered newly hired teachers.³

Newly hired teachers are further divided into four descriptive categories: newly prepared teachers, delayed entrants, transfers, and re-entrants, as described in the study considerations above. Distribution into these categories is based on responses to three questions on the teacher questionnaire: the year a highest degree was earned, years of teaching experience, and main activity in the previous year. *Newly prepared* teachers are those whose total years of teaching experience are equal to 1, the maximum year for highest degree equals the fall of the survey year (e.g., 2011 for the 2011–12 survey) or the prior year activity was attending college. *Delayed entrants* are teachers whose total years of teaching experience are equal to 1, the maximum year for highest degree falls prior to the fall of given survey year (e.g., 2010 for the 2011–12 survey) and the prior year activity is listed as anything other than attending college or primary or secondary teaching. *Transfers* are those teachers whose total years of teaching experience are greater than 1 and the prior year activity is reported as teaching in a different school system in the same state, teaching in another state, or teaching in a school in a different sector. Finally, *re-entrants* are those teachers whose total years of experience are greater than 1 and the prior year activity is listed as anything other than primary or secondary teaching. Appendix C lists the headings for each of these variables (highest degree earned, prior year activity, total years of experience) and the names of the specific variables in the data file from each administration used to define the four sources.

Three groups of teachers that report working at the sampled school for the first time are excluded from the analyses. Over the four administrations, between 1 and 4 percent of teachers that report the survey year as the year they began teaching in the school are excluded because of missing data. Additionally, over the four administrations between 7 and 24 percent of teachers who report being a new hire in their current school do not fit into one of the four categories because they also report teaching in the same school the previous year. Finally, between 20 and 30 percent of public school teachers that report the survey year as the year they began teaching in the current school report transferring to their current school from another school within the district. These excluded groups of teachers are included as continuing teachers in table 1 and excluded from the sample of newly hired teachers. More detail on the weighted percentages of these teachers appears in the technical notes in

³ In the 2011–12 survey, teachers were asked to report the academic year in which they began working at the school. As a result, for previous years, teachers who reported either calendar year of the survey administration were eligible as newly hired. A small percentage of teachers reported the fall year of the survey administration compared to the spring in earlier administrations. For example, in 2007–08, less than 1 percent of teachers reported being newly hired in 2007. This approach may capture a minority of cases in which a teacher began working at the school in the previous spring rather than the fall of the current survey administration, but is unlikely to affect results substantively.

appendix B. In particular, table B-2 provides detail on teachers reporting a new position in that academic year that were not included in the sample of newly hired teachers. More information on changes to the teacher questionnaire over time also appears in appendix B.

Key Variables of Interest

The analyses presented in this report provide detailed information on each source of newly hired teachers, separated by school sector (public and private schools). The results for each sector are presented either in the same table or in separate tables. Private schools are sampled from the Private School Universe Survey and supplemental lists of private school organizations. Public schools are sampled from the Common Core of Data. Within each category of newly hired teachers, the tables summarize data on teachers' demographic information, qualifications and experience, and prior year activity. Brief overviews of the information provided in the tables appear below; the detailed SASS variables from the Teacher Questionnaire used to create the information in the tables are summarized in appendix C.

Demographic information includes teachers' sex, race/ethnicity, age, and annual salary and income. Race includes four categories: Asian/Native Hawaiian/Pacific Islander, Black, White, and individuals who report Two or more races. Ethnicity is presented as a separate, mutually exclusive category from race and includes individuals of Hispanic or Latino origin who may be of any race.⁴ Base year salary is a teacher's current salary for the academic year. Total year-round income reflects any additional individually earned income from bonuses, additional compensation, nonteaching jobs, or nonschool jobs. Annual income and salary are in constant 2012 dollars, adjusted for inflation using the Consumer Price Index.

Qualifications and experience include a teacher's highest level of education, years of teaching experience, main teaching field, whether the teacher holds a major or certification in that field, and whether the teacher used an alternative certification program.⁵ For main teaching field, each teacher may report only one main assignment, defined in the SASS Teacher Questionnaire as the field in which he or

⁴ The survey questionnaires changed significantly between 1987–88 and 2011–12 with respect to question wording on race/ethnicity. These changes are discussed in more detail in appendix B and described when relevant in the notes for table 3.

⁵ In 1999–2000, teachers were asked whether they earned their regular or standard state certification through a bachelor's degree program, a 5th-year program, an alternative program before or after beginning teaching, through continuing professional development, or other. In 2007–08 and 2011–12, teachers were asked "yes" or "no" as to whether they entered teaching through an alternative certification program. Comparisons over time should be approached with caution as changes in question wording may affect results.

she teaches the most classes.⁶ This report includes 10 subject fields: general elementary education, English, mathematics, science, social science, foreign languages, art/arts and crafts, music, dance/drama/theater, and health education.⁷ These fields represent academic subjects where there are clear matches for teacher assignment, teacher major, and teacher certification.⁸

Teacher qualifications are based on a postsecondary degree, certification, or both. The criterion for determining that a teacher has an in-field major is holding at least a bachelor's degree in the subject of the main assignment.⁹ The criterion for determining that a teacher is certified is holding a regular or standard state certification, an advanced professional certificate, or a certificate issued after satisfying all certification requirements except the completion of a probationary period in the state where the teacher currently teaches in the same subject area as the teacher's main assignment.¹⁰ This report uses similar measures as those applied to describe middle and high school teachers' qualifications in recent NCES reports (Baldi, Warner-Griffin, and Tadler 2015; Hill and Stearns 2015). Appendix B provides additional information on the matching of main assignment with major and certification. Appendix C includes a crosswalk for relevant fields, majors, and certification subjects in each of the four SASS administrations used in the report.

Given that teachers in these analyses are newly hired at their current school, this report also details teachers' activities in the previous year. The variables describe previous teaching-related positions and other activities, such as attending school or caring for family members in the previous year. For teachers who reported working but not teaching, the occupation first is divided into fields within education and outside education.

⁶ Teaching most classes does not necessarily mean the subject accounts for more than 50 percent of a teacher's total classes, especially if a teacher instructs students in multiple subjects.

⁷ The 1987–88 SASS administration did not include a code for the dance, drama, or theater assignment.

⁸ Teachers of special education; English as a Second Language (ESL); career and technical education (CTE); driver's education; library or information science; military science or ROTC; philosophy; religious studies; theology or divinity; other foreign languages; and "other" were not examined in this report due to analytical constraints. For example, all of the fields aside from CTE, ESL, and special education lack a sufficient number of responses for analysis. While special education is reported as a main assignment in a sufficient number of newly hired teachers, it is not included due to different certification and in-field requirements in both core content and pedagogy.

⁹ Degrees awarded by subject-specific departments and subject-specific degrees awarded by departments of education are included. For example, a major in the department of mathematics was included as an in-field qualification as was a mathematics degree awarded by a school of education.

¹⁰ For the purposes of these analyses, in-field certification is not restricted by the grades the teacher instructs. For example, a teacher teaching elementary school but certified in grades 7–12 would still be considered certified in the certification subject that matches the main assignment.

Findings: Newly Hired Teachers

This chapter describes four sources of newly hired teachers and variations in their characteristics and previous activities using four administrations of the SASS Public School and Private School Teacher Data Files. The teachers identified in tables 1 through 7 work half time or more and are regular full- or part-time teachers. Newly hired teachers are defined as those who began teaching at the sampled school in the current survey administration or academic year and did not report teaching at the same school or school district in the previous year.

The tables presented below provide cross-tabulation estimates between which Student's *t* tests were used to compare differences for statistical significance. The findings presented include comparisons across the four SASS administrations in the report, with the particular SASS administrations being compared highlighted in the presentation of findings. All differences cited in this report are statistically significant at the $p < 0.05$ level. No corrections were made for multiple comparisons. As a result, the possibility of Type I error is increased; Type I error is the observation of a statistical difference when in fact there is none.

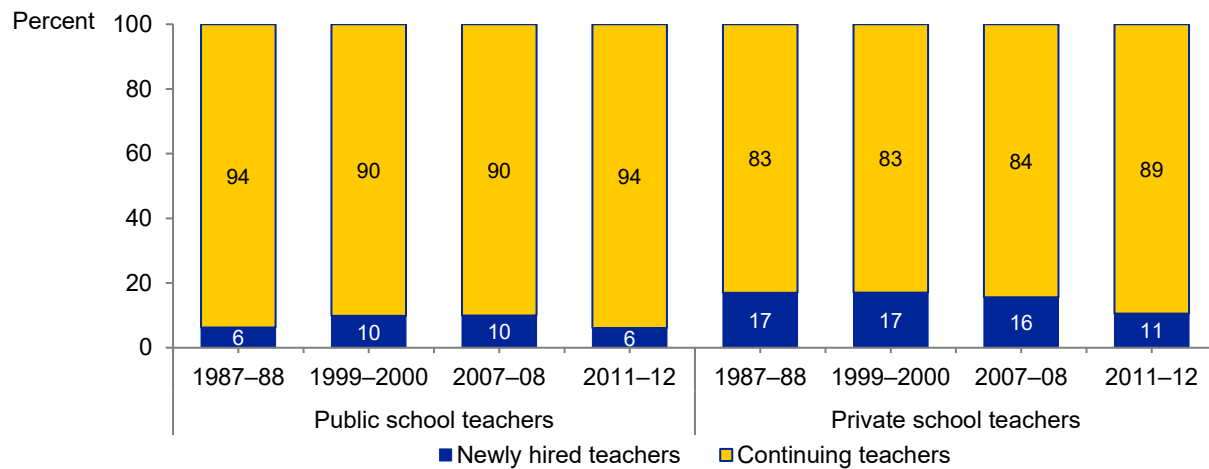
Overview

This report offers a descriptive picture of newly hired K–12 teachers in the United States. This section presents data on the major sources of newly hired teachers and variation in hiring patterns across source between 1987–88 and 2011–12.

Public Sector: Newly Hired and Continuing Teachers

As shown in figure 1, newly hired teachers were 6 percent of the teacher workforce in 1987–88, 10 percent in 1999–2000, and again 6 percent in 2011–12. The total number of regular public school teachers working more than half time increased at each time point between 1987–88 and 2011–12, from 2.2 million to 3.2 million, a 47-percent increase in the teacher workforce (table 1). Between 1987–88 and 2007–08, the number of newly hired teachers increased, but then decreased between 2007–08 and 2011–12.

Figure 1. Percentage distribution of newly hired and continuing public and private school teachers in grades K–12 in the United States: Selected years 1987–88 through 2011–12



NOTE: Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12 and Charter School Teacher Data File, 1999–2000.

Private Sector: Newly Hired and Continuing Teachers

The total number of regular private school teachers who work more than half time increased between 1987–88 and 2011–12. In the private sector, newly hired teachers represent between 11 and 17 percent of all teachers, a larger share of teachers than in the public sector between 1987–88 and 2011–12.

At each survey administration between 1987–88 and 2007–08, 16 or 17 percent of private school teachers were newly hired. Unlike the rise in the public sector, there was no significant increase in newly hired private school teachers between 1987–88 and 2007–08. However, the private sector did show a decline in new hires between 2007–08 and 2011–12, falling from 16 percent to 11 percent.

Table 1. Percentage distribution of newly hired and continuing public and private school teachers in grades K–12 in the United States: Selected years 1987–88 through 2011–12

Status of teachers	1987–88		1999–2000		2007–08		2011–12	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
U.S. public teachers	2,182,000	100.0	2,815,000	100.0	3,196,000	100.0	3,205,000	100.0
New hires	136,500	6.3	277,500	9.9	318,000	10.0	195,900	6.1
Continuing	2,045,000	93.7	2,537,000	90.1	2,878,000	90.0	3,009,000	93.9
U.S. private teachers	293,000	100.0	404,000	100.0	432,000	100.0	412,000	100.0
New hires	49,600	17.0	68,600	17.0	67,300	15.6	43,500	10.6
Continuing	243,000	83.0	335,000	83.0	365,000	84.4	368,000	89.4

NOTE: The United States includes the 50 states and the District of Columbia. Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12, and Charter School Teacher Data File, 1999–2000.

Public Sector: Sources of Newly Hired Teachers

Newly hired teachers include those who are newly prepared, delayed entrants, transfers, or re-entrants. Definitions of these subgroups appear in the introduction. Among the four sources, newly prepared and delayed entrant teachers are considered first-time teachers. Table 2 provides data from the four administrations for each source of newly hired teachers, indicating the changing distribution over time of newly hired teachers across each of the four sources for public and private school teachers.

Table 2. Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by source: Selected years 1987–88 through 2011–12

Source	Public				Private			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. new hires	136,000	278,000	318,000	196,000	50,000	69,000	67,000	44,000
Total percent	100	100	100	100	100	100	100	100
First-time teachers	29.8	42.7	43.9	41.2	23.8	33.3	34.4	34.0
Newly prepared	21.0	28.5	29.6	28.1	14.1	19.0	16.3	21.2
Delayed entrants	8.8	14.2	14.3	13.1	9.6	14.4	18.1	12.7
Transfers	38.0	39.7	41.5	37.0	39.7	36.8	36.2	46.3
Within state and sector	23.0	26.7	28.8	26.6	21.2	14.7	13.6	6.1
Across state, within sector	8.0	9.0	8.2	6.6	8.0	6.7	7.3	5.8
Across sector	7.1	4.0	4.6	3.7	10.5	15.4	15.3	34.5
Reentrants	32.2	17.6	14.5	21.9	36.5	29.9	29.3	19.7

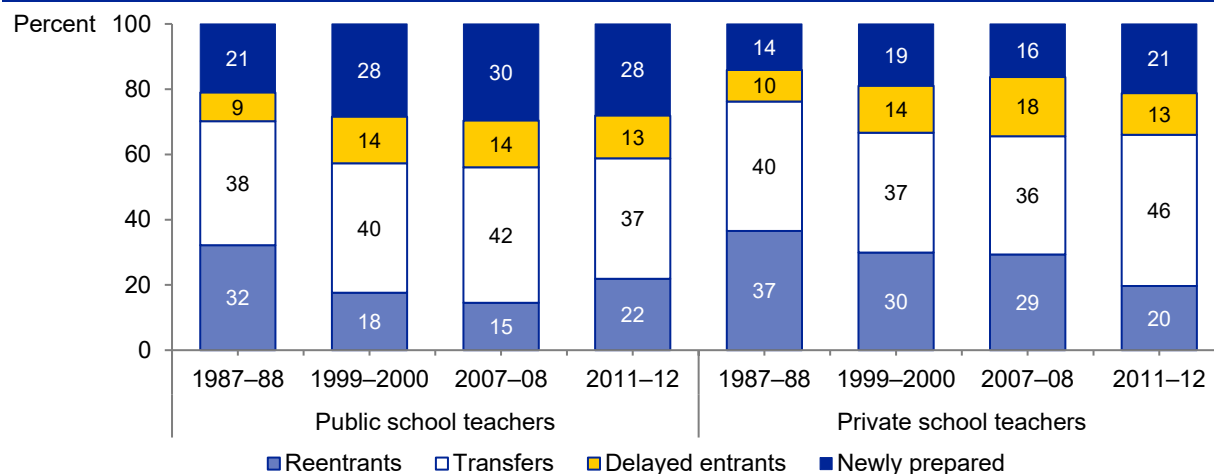
! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

NOTE: The United States includes the 50 states and the District of Columbia. Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

First-time teachers are those who have no previous teaching experience except their current year of teaching. The percentage of first-time teachers increased from 30 percent to 43 percent between 1987–88 and 1999–2000. No measurable increases were observed in the subsequent survey administrations. Within this group of first-time teachers, the percentages of both newly prepared teachers and delayed entrants was higher in 1999–2000 compared to the percentage in 1987–88. Twenty-eight percent of newly hired teachers were newly prepared, and 13 percent were delayed entrants in 2011–12. These changes among newly prepared and delayed entrant teachers, as well as other sources (discussed below), are illustrated in figure 2.

Figure 2. Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by source: Selected years 1987–88 through 2011–12



NOTE: Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12 and Charter School Teacher Data File, 1999–2000.

Although no measurable differences were found across time in the percentage of newly hired teachers who were transfers, there was some change within the individual transfer sources across administrations. The percentage of teachers transferring from one public school to another within the same state was greater in 1999–2000 (27 percent) and 2007–08 (29 percent) than in 1987–88 (23 percent). The percentage of public school transfers moving from one state to another was lower in 2011–12 (7 percent) than in 1999–2000 (9 percent), but differences between other administrations were not significant. The percentage of teachers transferring across sector (from private school teaching to public school teaching) was highest in 1987–88 (7 percent) and then declined between 4 and 5 percent in the subsequent administrations.

At 15 percent, the percentage of newly hired teachers re-entering public school teaching was lowest in 2007–08 relative to the other three administrations. Rates ranged between 18 and 32 percent in other years and were 22 percent by 2011–12.

Private Sector: Sources of Newly Hired Teachers

As with public school teachers, the percentage of first-time private school teachers increased between 1987–88 and 1999–2000: from 24 percent to 33 percent. There were no measurable increases across the subsequent administrations, 1999–2000, 2007–08, and 2011–12, with the percentage of first-time teachers remaining between 33 and 34 percent. There were few measurable differences in the proportion of newly hired who were newly prepared teachers over the four time points.

The percentage of newly hired private school teachers who were delayed entrants increased between 1987–88 and 2007–08 and then fell from 18 to 13 percent between 2007–08 and 2011–12.

As was found for public schools, there was no measurable change in the percentage of transfer teachers overall. Within transfer sources, the percentage of teachers transferring from one private school to another within the same state was lower in 1999–2000, 2007–08, and 2011–12 compared to 1987–88. Conversely, the percentage of newly hired private school teachers transferring from public schools to private schools increased from 11 percent in 1987–88 to 34 percent in 2011–12, with significant growth between 1987–88 and 1999–2000 and then again between 2007–08 and 2011–12. Compared to public school teachers, more private school teachers transferred across sector at each time point. For example, 34 percent of private school teachers transferred from a public school to a private school in 2011–12 compared to 4 percent of public school teachers who transferred from a private school to a public school.

Finally, the percentage of individuals re-entering a teaching career at a private school was highest in 1987–88 relative to subsequent time points. The percentage of private school re-entrants dropped from 37 percent in 1987–88 to 30 percent in 1999–2000 and again to 20 percent in 2011–12.

Demographic Characteristics

Table 3 shows the demographic characteristics of newly hired public and private school teachers between 1987–88 and 2011–12 by each of the four sources. These characteristics are discussed below.

Sex

Females accounted for more than 70 percent of newly hired public school teachers at every time point between 1987–88 and 2011–12, ranging from 74 to 78 percent. With the exception of a decrease from 78 to 74 percent between 1987–88 and 1999–2000 among all newly hired teachers, the percentage did not change significantly for any source of newly hired teachers in any year.

In 2011–12, 75 percent of all newly hired private school teachers were female, a figure not measurably different from that in 1987–88. There were no statistical differences in the percentage of female teachers by source at any time point between 1987–88 and 2011–12.

Table 3. Newly hired public and private school teachers in grades K–12 in the United States, by source and selected demographic characteristics: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	136,000	278,000	318,000	196,000	28,700	79,000	94,200	55,000	11,900	39,500	45,600	25,700
Female (percent)	77.6	74.2	75.3	74.5	78.4	73.3	78.0	75.6	72.7	77.5	73.4	71.7
Race/ethnicity (percent)												
White, non-Hispanic	90.3	83.1	80.1	80.4	91.3	79.7	77.9	85.4	87.7	77.8	77.7	69.8
Black, non-Hispanic	4.7	8.3	8.1	7.2	3.1!	8.5	7.2	4.9!	7.0	14.2	7.7	7.9 !
Hispanic	3.2	6.3	7.9	9.0	4.0	9.0	10.3	7.7 !	2.9 !	6.1	11.7 !	17.8 !
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	1.8	2.3	2.0	1.9!	1.6	2.8	2.5 !	1.0 !	‡	1.9	0.5 !	‡
Two or more races, non-Hispanic	†	†	1.9	1.4	†	†	2.2 !	0.9 !	†	†	2.3 !	‡
Average age (years)	33.2	33.4	33.6	32.9	26.9	27.5	27.8	26.3	30.2	32.3	32.4	30.3
Income/salary (in constant dollars)												
Base year salary	\$39,500	\$41,200	\$42,600	\$40,900	\$34,800	\$37,900	\$39,200	\$36,800	\$34,600	\$37,100	\$39,300	\$38,600
Total year-round income	\$43,200	\$45,900	\$46,700	\$45,100	\$38,500	\$42,900	\$42,700	\$40,700	\$39,000	\$43,500	\$46,100	\$44,500
U.S. private new hires	49,600	68,600	67,300	43,500	7,000	13,000	11,000	9,300	4,800	9,800	12,200	5,500
Female (percent)	79.7	75.9	75.2	74.6	78.2	76.7	79.6	69.9	72.3	70.7	68.4	82.1
Race/ethnicity (percent)												
White, non-Hispanic	93.0	87.6	83.6	84.9	97.0	88.6	84.2	75.1	89.8	85.9	85.2	82.6
Black, non-Hispanic	2.4	3.9	5.4	4.1	‡	1.2 !	‡	6.7 !	‡	6.5	6.9 !	‡
Hispanic	3.2 !	6.0	7.6	6.2	‡	7.8	5.3 !	‡	‡	4.0	‡	10.3 !
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	1.4	2.5	3.0	2.8 !	‡	2.4	‡	‡	3.0 !	3.6 !	‡	#
Two or more races, non-Hispanic	†	†	0.5 !	1.9 !	†	†	‡	‡	†	†	#	‡
Average age (years)	34.6	34.8	36.4	34.1	24.5	25.8	26.2	25.6	31.0	32.2	33.3	34.2
Income/salary (in constant dollars)												
Base year salary	\$26,700	\$30,000	\$31,900	\$32,700	\$24,800	\$27,900	\$28,500	\$27,900	\$23,000	\$27,800	\$26,000	\$23,300
Total year-round income	\$30,800	\$34,200	\$36,100	\$38,200	\$29,100	\$32,200	\$33,200	\$33,300	\$29,200	\$34,000	\$30,800	\$28,400

See notes at end of table.

Table 3. Newly hired public and private school teachers in grades K–12 in the United States, by sources and selected demographic characteristics: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	51,900	110,000	132,000	72,400	44,000	48,900	46,200	42,800
Female (percent)	76.4	72.3	73.1	73.1	79.9	77.3	78.2	77.2
Race/ethnicity (percent)								
White, non-Hispanic	90.3	85.8	82.4	84.5	90.5	86.6	80.4	73.6
Black, non-Hispanic	5.0	6.2	9.1	8.6	4.8	7.7	7.8	7.5
Hispanic	2.8	5.7	5.5	4.5	3.1	3.5	6.3!	13.1
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	1.9	2.2	1.6!	‡	1.6	2.2	‡	2.8!
Two or more races, non-Hispanic	†	†	‡	0.8!	†	†	‡	2.9!
Average age (years)	34.3	35.5	35.7	34.8	36.8	39.4	40.3	39.5
Income/salary (in constant dollars)								
Base year salary	\$42,300	\$44,000	\$45,200	\$43,100	\$40,500	\$43,600	\$45,200	\$43,700
Total year-round income	\$45,700	\$47,600	\$48,800	\$46,600	\$44,400	\$48,700	\$49,000	\$48,700
U.S. private new hires	19,700	25,200	24,400	20,200	18,100	20,500	19,700	8,600
Female (percent)	80.4	76.3	72.9	71.6	81.5	77.6	79.8	81.8
Race/ethnicity (percent)								
White, non-Hispanic	94.1	87.1	84.1	90.3	91.0	88.4	81.6	84.4
Black, non-Hispanic	1.4!	6.1	3.5!	3.0!	4.3!	1.5	7.6	4.8!
Hispanic	3.7!	4.9	8.4	‡	3.1!	7.3	9.4	7.8!
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	0.8!	2.0!	3.6!	‡	1.5!	2.8	1.4!	‡
Two or more races, non-Hispanic	†	†	‡	‡	†	†	#	‡
Average age (years)	36.2	36.7	38.4	35.8	37.9	39.4	41.5	39.0
Income/salary (in constant dollars)								
Base year salary	\$28,800	\$32,400	\$36,500	\$36,800	\$26,000	\$29,400	\$31,700	\$34,000
Total year-round income	\$32,400	\$35,800	\$39,300	\$40,900	\$30,200	\$33,600	\$37,100	\$43,400

† Not applicable.

Rounds to zero.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡ Reporting standards not met. Either there are too few cases for a reliable estimate or the CV is 50 percent or greater.

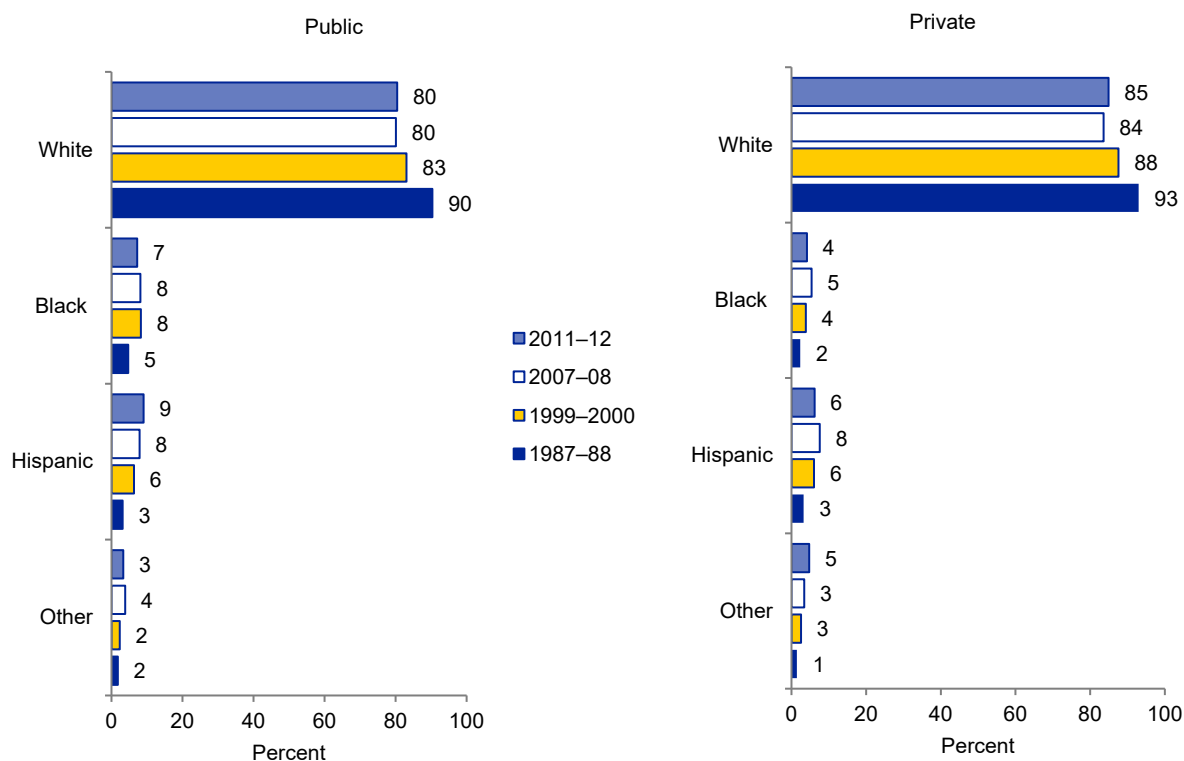
NOTE: The United States includes the 50 states and the District of Columbia. Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school, and include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Prior to 2007–08, teachers did not report more than one race/ethnicity. This row is included to reflect the appropriate distribution of teachers' identifications. Annual income and salary are in constant 2012 dollars; teachers who reported a salary of zero are included. Detail may not sum to totals because of rounding and because some data are not shown.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Race and Ethnicity

More than 75 percent of newly hired teachers in the public sector were White, non-Hispanic across the four time periods 1987–88 to 2011–12, with the highest proportion, 90 percent in 1987–88 (see figure 3). The percentage of White, non-Hispanic teachers showed a similar pattern of decrease among delayed entrants, transfers, and re-entrants. Among delayed entrant and re-entrant teachers, the percentage of Hispanic teachers increased between 1987–88 and 2011–12.

Figure 3. Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by race/ethnicity: Selected years 1987–88 through 2011–12



NOTE: Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Race categories exclude Hispanic origin unless specified. Other includes American Indian/Alaska Native; Asian; Native Hawaiian or Other Pacific Islander; or Two or more races. Prior to 2007–08, teachers did not report more than one race/ethnicity.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12 and Charter School Teacher Data File, 1999–2000.

The overall pattern was the same in the private sector, with the percentage of newly hired teachers who were White, non-Hispanic dropping from 93 percent in 1987–88 to 85 percent in 2011–12. However, the pattern for delayed entrant, transfer, and re-entrant private school teachers differed from that found in public schools. Between 1987–88 and 2011–12, there was not a statistically different change in the percentage of White, non-Hispanic teachers in any of these three sources.

Age

At 33 years, the average age of newly hired public and private school teachers in 2011–12 was similar to that in the three prior administrations, with an average age of 33, 33, and 34 years, respectively. There were differences in the age distribution by source. In 2011–12, as might be expected, newly prepared teachers in public and private schools had the youngest average age at 26 years. At 40 years, public school re-entrants had the oldest average age in 2011–12 relative to other sources. Among private school teachers in 2011–12, there were no measurable differences in mean age among delayed entrants, transfers, and re-entrants.

Income

Controlling for inflation, base salaries in the public sector were higher in 1999–2000 and 2007–08 compared to \$39,500 in 1987–88; however, base salaries in 1999–2000 and 2007–08 were not significantly different from 2011–12 when the base salary was approximately \$40,900. The increase in base salary until 1999–2000, with relatively little subsequent change, is also true for public school teachers' total salary. First-time teachers (the newly prepared and delayed entrants) had lower base salaries than more experienced teachers (transfers and re-entrants) across the four time points considered in this report. Newly prepared and transfer public school teachers experienced a decline in total salary between 2007–08 and 2011–12.

For the private sector, the average base salary in 1987–88 was \$26,700, which increased to \$31,900 in 2007–08. There was no additional statistically significant increase after 2007–08, with an average base year salary in 2011–12 of \$32,700. A similar trend is evident among total salaries in the private sector, although there was no additional increase between 1999–2000 and 2007–08. Across the sources of private school teachers, the total salaries of newly prepared, transfer, and re-entrant teachers increased between 1987–88 and 2007–08. There were no significant changes over the four time points in delayed entrants' total income. Delayed entrant teachers in 2011–12 had lower base salaries than re-entrants or transfers, with delayed entrants earning almost \$11,000 less per year than re-entrants.

In 2011–12, newly prepared teachers, delayed entrants, and transfers in the public sector had higher average base salaries than their private counterparts by as much as \$15,000 among delayed entrants. There was no measurable difference between public and private sector salaries for newly hired re-entrants.

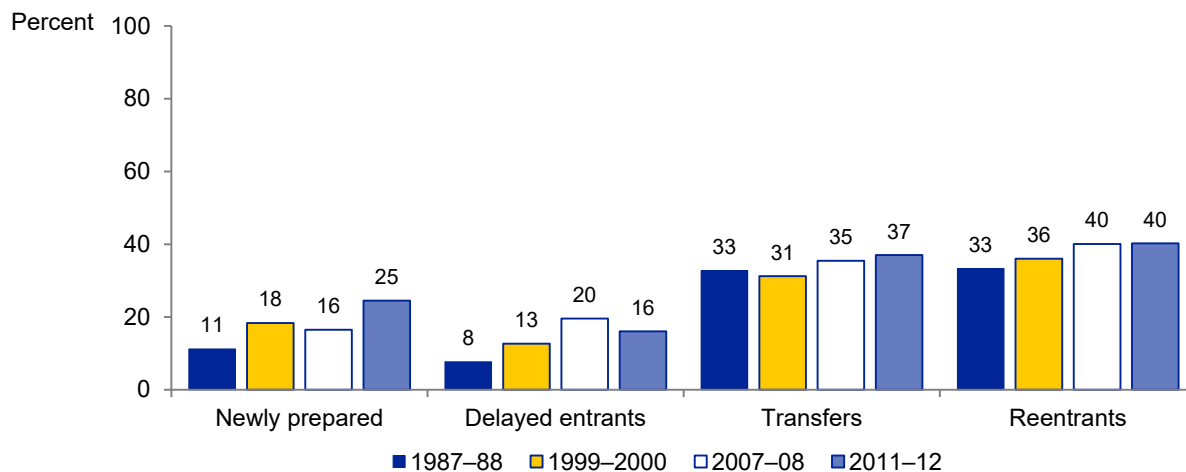
Experience and Qualifications

This section shows the experience and qualifications of newly hired teachers between 1987–88 and 2011–12 by each of the four sources: newly prepared, delayed entrants, transfers, and re-entrants. Table 4 focuses on education and experience among newly hired public and private school teachers. Tables 5 and 6 show, respectively, newly hired public and private school teachers' main subject taught and in-field qualifications.

Highest Degree

Figure 4 shows that of all newly hired public school teachers in 2011–12, 31 percent held a master's degree as their highest degree earned. The percentage of teachers with a master's degree did not show a significant change between 1999–2000 and 2007–08 or between 2007–08 and 2011–12. However, the percentage increased from 26 to 31 percent between 1987–88 and 2011–12. At all four time points, experienced teachers (transfers and re-entrants) in the public sector were more likely to have a master's degree than were first-time teachers (newly prepared and delayed entrants). However, the percentage of newly prepared teachers with a master's degree increased from 11 percent in 1987–88, with nearly a quarter of newly prepared teachers entering the workforce with a master's degree in 2011–12.

Figure 4. Percentage of newly hired public school teachers with a master's degree in grades K–12 in the United States, by source: Selected years 1987–88 through 2011–12



NOTE: Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12 and Charter School Teacher Data File, 1999–2000.

In the private sector, the overall percentage of newly hired teachers with a master's degree as their highest degree rose from about 25 percent in 1987–88 to 34 percent in 2011–12, as shown in table 4. In 2011–12, the percentage of newly hired teachers with a master's degree was comparable to teachers in the public sector. More newly prepared teachers in the private sector entered the workforce with a master's degree in 2011–12 than in 1987–88, mirroring the change seen in the public sector.

Prior to 2011–12, few newly hired teachers in the public sector (less than 1 percent) were teaching with less than a bachelor's degree; however, this percentage rose to approximately 4 percent in 2011–12. This increase was observed in three of the four categories of newly hired teachers (newly prepared, transfers, and re-entrant). In the private sector, approximately 2 percent of newly hired teachers in 1987–88 had less than a bachelor's degree. That percentage was approximately 5 percent in 1999–2000, with no subsequent measurable changes through 2011–12.

Table 4. Newly hired public and private school teachers in grades K–12 in the United States, by source, highest degree earned, and average years of teaching experience: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	136,000	278,000	318,000	196,000	28,700	79,000	94,200	55,000	11,900	39,500	45,600	25,700
Highest level of educational attainment (percent)												
Less than a bachelor's degree	0.3 !	0.5	0.5 !	3.6	‡	0.5	‡	2.7	2.4 !	0.4 !	0.8 !	‡
Bachelor's degree	68.9	70.2	67.2	58.7	87.6	78.4	81.2	70.7	87.7	85.1	78.4	79.9
Master's degree	26.2	25.8	28.2	31.5	11.2	18.4	16.5	24.5	7.7	12.7	19.6	16.0
Higher than a master's degree	4.5	3.5	4.1	6.2	‡	2.7 !	1.8 !	2.1 !	‡	1.8	1.2 !	‡
Percentage with alternative certification	—	12.9	22.5	21.3	—	9.5	17.3	15.7	—	17.4	48.1	45.3
Average teaching experience (years)	6.2	5.3	5.1	5.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
U.S. private new hires	49,600	68,600	67,300	43,500	7,000	13,000	11,000	9,300	4,800	9,800	12,200	5,500
Highest level of educational attainment (percent)												
Less than a bachelor's degree	1.6	5.5	4.7	4.0 !	‡	5.6	‡	‡	‡	‡	‡	‡
Bachelor's degree	70.5	67.9	65.0	54.2	92.3	79.2	75.5	58.7	81.3	79.5	79.1	75.5
Master's degree	24.8	22.4	25.7	34.4	6.4 !	12.7	19.7	35.8	15.2	17.1	13.7	17.4 !
Higher than a master's degree	3.2	4.1	4.5 !	7.4	‡	2.5 !	‡	‡	0.4 !	2.1 !	‡	‡
Percentage with alternative certification	—	5.5	12.0	15.0	—	5.0	13.5	13.3 !	—	4.9	13.2	17.2 !
Average teaching experience (years)	7.6	6.1	7.0	6.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

See notes at end of table.

Table 4. Newly hired public and private school teachers in grades K–12 in the United States, by source, highest degree earned, and average years of teaching experience: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	51,900	110,100	132,100	72,400	43,900	48,900	46,200	42,800
Highest level of educational attainment (percent)								
Less than a bachelor's degree	‡	0.7 !	‡	4.7 !	0.0	‡	‡	3.4
Bachelor's degree	62.4	64.7	58.4	49.4	59.2	57.4	53.1	46.4
Master's degree	32.7	31.2	35.5	37.0	33.4	36.0	40.1	40.3
Higher than a master's degree	4.6	3.4	5.9	8.9	7.4	6.3	6.4	9.9
Percentage with alternative certification	—	13.6	20.2	19.2	—	13.1	14.4	17.8
Average teaching experience (years)	8.6	8.1	7.7	7.8	8.1	9.1	10.1	8.7
U.S. private new hires	19,700	25,200	24,400	20,200	18,100	20,500	19,700	8,600
Highest level of educational attainment (percent)								
Less than a bachelor's degree	2.1 !	4.8	3.7 !	3.3 !	‡	8.3	5.9	7.9!
Bachelor's degree	64.6	64.4	58.0	52.2	65.5	59.5	59.3	40.1
Master's degree	31.0	26.9	32.4	37.1	27.6	25.7	28.3	37.6
Higher than a master's degree	2.3 !	3.9	5.9 !	7.3 !	5.8	6.5	‡	‡
Percentage with alternative certification	—	6.5	12.3	18.7	—	4.9	10.0	6.6!
Average teaching experience (years)	10.6	9.0	10.2	8.6	8.7	8.2	10.1	9.3

— Not available.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡ Reporting standards not met. Either there are too few cases for a reliable estimate or the CV is 50 percent or greater.

NOTE: The United States includes the 50 states and the District of Columbia. Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. The survey wording on alternative certification changed after 1999–2000 from a response option to a single question on whether teachers entered teaching through an alternative certification route. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Alternate Certification

Table 4 shows an increase from 13 to 23 percent in the percentage of newly hired public school teachers who held an alternative certification between 1999–2000 and 2007–08, with no statistically significant change between 2007–08 and 2011–12.¹¹ This same pattern of an increase between 1999–2000 and 2007–08 with no significant subsequent change is also true for newly hired private school teachers. However, with the exception of 2011–12, more newly hired public school teachers received alternative certification compared to newly hired private school teachers in 1999–2000 and 2007–08.

Similar patterns in the rate of alternative certification were observed for newly prepared, delayed entrants, and transfers. Public school delayed entrants in 2011–12 held the highest percentage of alternative certifications (45 percent) compared to other sources. Unlike their public sector counterparts, fewer than 30 percent of newly hired delayed entrant teachers in the private sector had an alternative certification.

Years of Experience

Among public sector teachers overall, the average years of experience among newly hired teachers was higher in 1987–88 compared to 2011–12, with a change from 6 to 5 years. There was no statistically significant change in the average years of experience for transfers and re-entrants between the years 1987–88 and 2011–12.

In the private sector, teachers were found to have an average of between 6 and 8 years of experience during 1987–88 to 2011–12. There was no statistically significant difference in average years of experience between transfers and re-entrants; however, the average years of experience for transfer teachers in private schools declined by 2 years, from 11 to 9 years of experience, between 1987–88 and 2011–12.

¹¹ Information on alternative certification was not collected in 1987–88; therefore, findings focus on 1999–2000 and subsequent years. As noted earlier, the question wording on alternative certification changed following the 1999–2000 survey. In 1999–2000, teachers were asked whether they earned their regular or standard state certification through a bachelor’s degree program, a 5th-year program, an alternative program before or after beginning teaching, through continuing professional development, or other. In 2007–08 and 2011–12, teachers were asked whether they entered teaching through an alternative certification program, with “yes” or “no” as response options. Comparisons over time should be approached with caution as changes in question wording may affect results.

Public Sector: Main Assignment Fields

Table 5 shows the percentage of new hires who report a particular main assignment in which they teach the most classes.¹² The three fields with the greatest share of newly hired public school teachers remained the same across the four administrations: general elementary (35 to 48 percent), English (13 to 15 percent), and mathematics (10 to 16 percent). The other fields accounted for between 1 and 10 percent of newly hired teachers. Among all new hires shown in table 5, the percentage of general elementary teachers was lower in subsequent administrations after 1987–88, from 48 percent in 1987–88 to 35 percent in 2011–12. An increased share of newly hired teachers in mathematics partly offset the decrease in general elementary teachers. Compared to 1987–88, the percentage of newly hired teachers with a main assignment in mathematics was higher in 2011–12, with a change from 10 to 16 percent. The percentage of newly hired public school teachers whose main assignment was science exhibited no statistically significant change when comparing 1987–88 and 2011–12 estimates, nor did the percentages teaching English. The only other fields that exhibited higher percentages of newly hired teachers in 2011–12 than in 1987–88 were social sciences and languages.

¹² As noted in the chapter on data and measures, the main assignment fields listed in table 6 are not comprehensive and exclude teachers from assignments with small sample sizes, such as ESL, special education, and CTE.

Table 5. Percentage distribution of newly hired public school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Main assignment												
General elementary, Pre-K, K	47.9	41.5	38.1	35.5	48.2	40.1	45.7	38.8	46.9	55.7	36.3	30.7
English	13.0	14.2	14.7	14.2	11.0	16.2	13.5	12.5	10.7	15.4	16.9	18.8
Mathematics	10.3	11.1	13.7	16.5	13.0	9.8	11.4	17.8	8.5 !	5.9	12.8	14.8
Science	7.9	9.9	9.7	10.0	9.5	10.7	8.8	10.2	8.9	9.6	9.7	10.2 !
Social science	4.6	7.0	7.9	7.1	4.5	8.4	6.4	6.5	7.4 !	5.3	12.3 !	7.2
Foreign languages	3.5	4.7	3.4	5.9	3.0	2.4	2.8	4.8	3.6 !	3.3 !	2.5 !	5.2 !
Art/arts and crafts	2.7	1.9	2.4	2.0	1.6 !	1.7 !	2.2 !	2.2 !	7.7 !	0.9 !	‡	‡
Music	5.3	4.3	3.4	4.0	5.1	4.4	3.1 !	4.2	0.7 !	‡	1.9 !	‡
Health education	4.9	5.0	5.7	4.8	4.2	5.9	3.6	3.0 !	5.4 !	2.5	4.8 !	6.1 !
Dance/drama or theater	†	0.4 !	‡	‡	†	‡	‡	‡	†	‡	‡	‡
In-field qualifications												
Major with certification	63.8	55.3	57.1	58.2	67.8	55.7	62.5	62.1	47.3	37.0	31.0	45.6
Certified only	19.4	17.4	13.3	16.4	15.9	14.6	10.0	14.0	15.2	14.8	7.8	16.4
Major without certification	10.7	15.9	16.3	11.1	10.8	19.5	17.7	12.9	24.3	24.2	30.2	16.3
Neither major nor certification	6.1	11.4	13.3	14.3	5.5	10.2	9.8	10.9	13.1	24.0	31.0	21.6

See notes at end of table.

Table 5. Percentage distribution of newly hired public school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Main assignment								
General elementary, Pre-K, K	46.7	37.3	34.3	32.9	49.3	41.4	34.3	38.5
English	13.8	13.1	14.1	15.7	14.0	12.1	17.3	10.8
Mathematics	9.9	14.6	15.5	16.8	9.4	10.1	14.4	15.1
Science	7.0	10.3	10.3	11.5	7.4	8.2	10.1	6.8 !
Social science	4.5	7.0	9.0	6.4	4.0	5.6	3.8 !	9.0 !
Foreign languages	4.0	6.4	3.5 !	4.7	3.2	6.4	5.2	9.9 !
Art/arts and crafts	2.8 !	1.9	1.8 !	1.5 !	2.2 !	2.9 !	5.0 !	‡
Music	4.8	4.1	4.2	4.6	7.2	7.5	2.9 !	‡
Health education	6.7	5.3	7.0	5.8 !	3.3	4.7	7.0 !	4.9 !
Dance/drama or theater	†	0.1 !	‡	‡	†	‡	#	#
In-field qualifications								
Major with certification	65.8	61.3	61.3	61.6	62.9	57.1	56.8	54.5
Certified only	20.9	19.5	17.1	18.0	21.5	19.8	14.9	16.9
Major without certification	9.1	11.2	10.9	6.7	8.6	12.9	16.2	13.2 !
Neither major nor certification	4.2	8.0	10.7	13.7	7.0	10.2	12.2	15.4

† Not applicable.

Rounds to zero.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡ Reporting standards not met. Either there are too few cases for a reliable estimate or the CV is 50 percent or greater.

NOTE: The United States includes the 50 states and the District of Columbia. Teachers include regular full- or part-time teachers that worked more than half time and teachers who reported a main assignment in 1 of the 10 fields listed in the table. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Detail may not sum to totals because of rounding. Estimates on change over time within major and certification should be treated with caution. In 1987–88 and 1999–2000, teachers self-reported certification in their main assignment. As of 2003–04, certification was determined by matching certification area with a teacher's main assignment during data analysis. Detail may not sum to totals because of rounding and because some data are not shown.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

The decrease in general elementary education teachers and increase in mathematics teachers seen among all newly hired teachers was not present systematically within all four groups of public school new hires. For example, there were no statistically significant changes between 1987–88 and 2011–12 in the percentage of teachers in any main assignment among newly prepared or re-entrant teachers.

Among delayed entrants, only the percentage of teachers with a general elementary main assignment declined between 1987–88 and 2011–12. In this same time period, the pattern among transfer teachers is similar to that of all public school teachers, with a decline in the percentage of general elementary education teachers and an increase in the percentage of mathematics teachers. Mirroring the change among all new hires, the percentage of transfers with a mathematics main assignment was higher in 2011–12 compared to 1987–88, with a change from 10 to 17 percent. There was no measurable change among mathematics teachers in the other sources of newly hired teachers.

At any one time point, there was relatively little variation in the distribution of main assignments across the sources of newly hired teachers. For example, in 2011–12, there was no measurable difference in the percentage of teachers in each main assignment category when comparing newly prepared teachers, delayed entrant teachers, transfers, or re-entrants.

Public Sector: In-Field Qualifications

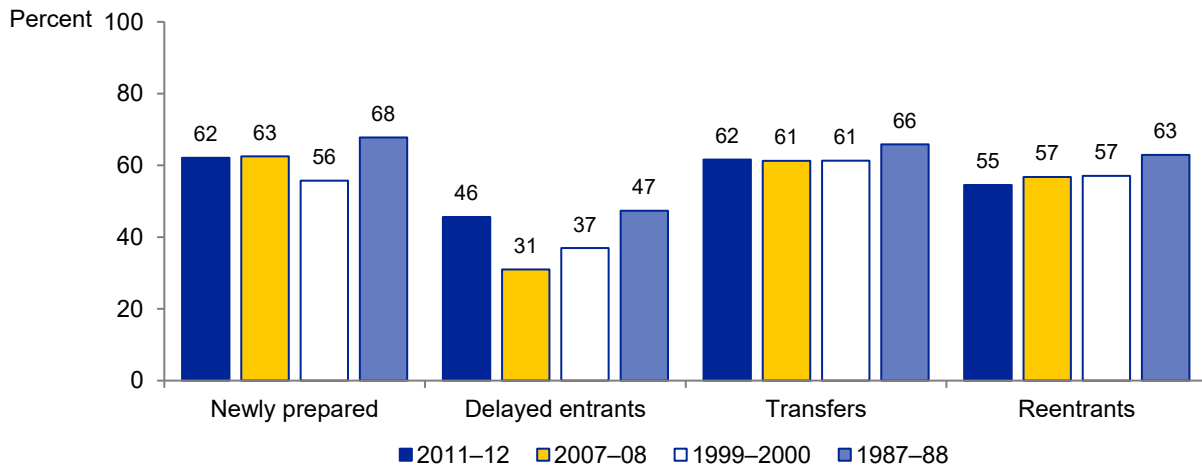
In-field qualifications reflect efforts to recruit public school teachers who are highly qualified as defined in Elementary and Secondary Education Act of 1965, as amended in 2001. Table 5 presents information on the extent to which newly hired teachers have a major or certification in their main assignment. These in-field qualifications are defined in more detail in the technical notes in appendix B. A crosswalk of how majors and certification topics are matched with main assignment appears in appendix C.

One methodological issue of note is a change in the measurement of in-field certification over SASS administrations. In 1987–88 and 1999–2000, teachers self-reported certification in their main assignment. As of 2003–04, certification was determined by matching certification area with a teacher’s main assignment during data analysis. As a result, data for certification area in 1987–88 and 1999–2000 are not comparable with those in later years.

Among all newly hired public school teachers, the percentage with a major and certification in their main assignment was lower in 1999–2000 than in 1987–88, as

shown in figure 5. The percentage of newly hired public school teachers reporting neither a major nor certification in their main assignment increased from 6 percent to 11 percent across these two survey years. Among newly hired teachers, there was no measurable change between 2007–08 and 2011–12 in the percentage of teachers with major and certification or the percentage of teachers with neither major nor certification.

Figure 5. Percentage of newly hired public school teachers in grades K–12 in the United States with in-field major and certification, by source: Selected years 1987–88 through 2011–12



NOTE: Teachers include regular full- or part-time teachers that worked more than half time and teachers who reported a main assignment in one of 10 fields: (1) general elementary, pre-K, K; (2) English; (3) mathematics; (4) science; (5) social science; (6) foreign languages; (7) art/arts and crafts; (8) music; (9) health education; (10) dance/drama or theater. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Estimates on change over time within major and certification should be treated with caution. In 1987–88 and 1999–2000, teachers self-reported certification in their main assignment. As of 2003–04, certification was determined by matching certification area with a teacher’s main assignment during data analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12 and Charter School Teacher Data File, 1999–2000.

Table 5 also shows teachers’ qualifications within each of the four sources of newly hired teachers over time. Among public school newly prepared teachers, the percentage of teachers with both a major and certification decreased between 1987–88 and 1999–2000. Among newly prepared, delayed entrant, and transfer public school teachers, the percentage with neither a major nor certification increased between 1987–88 and 1999–2000. Comparing changes within the four sources of newly hired teachers between 2007–08 and 2011–12, the percentage of delayed entrant teachers with a major and certification increased from 31 percent to 46 percent.

There were no measurable changes in the percentage of teachers with neither a major nor certification within any source between 2007–08 and 2011–12. Finally, comparing across sources of newly hired teachers in 2011–12, delayed entrants, at 46 percent, had lower percentages of teachers with a major and certification in comparison to transfers and newly prepared teachers at 62 percent each.

Private Sector: Main Assignment Fields

Although more than half (52 percent) of all newly hired private school teachers had a main assignment in general elementary education in 1987–88, that number decreased to 36 percent in 2011–12, as shown in table 6. With the exception of an increase from 10 to 14 percent among English teachers from 1999–2000 to 2007–08, there were no measurable changes between time points for all newly hired private schools teachers whose main assignments were in English, mathematics, science, social sciences, health education, or music. In other fields, the percentages between 1987–88 and 2011–12 were not detectably different, though there were some changes between other time points. For example, among all newly hired foreign languages teachers, there was an increase between 1999–2000 and 2007–08. There was an increase between 1987–88 and 1999–2000 in the percentage of all newly hired teachers whose main assignment was arts and crafts.

Like the overall change among newly hired private school teachers, smaller percentages of newly prepared and delayed entrant teachers had elementary education as their main assignment in 2011–12 compared to 1987–88. There was no measurable change in the percentage of transfer or re-entrant general elementary teachers between 1987–88 and 2011–12. Among private school English teachers in each category of new hires, only re-entrants showed a measurable change between 1987–88 and 2011–12. There was no measurable change in the percentage of mathematics or science private school teachers in each consecutive administration of the survey, or between 1987–88 and 2011–12 in any group of newly hired private school teachers. The number of private school social science teachers increased between 1987–88 and 2011–12 among transfers and re-entrants, with no measurable change between those years among newly prepared private school teachers or delayed entrants.

Table 6. Percentage distribution of newly hired private school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Main assignment												
General elementary, Pre-K, K	51.6	48.1	37.0	36.2	56.2	45.8	45.0	29.3	51.8	48.5	28.4	25.9
English	12.6	9.5	14.2	12.6	9.6 !	7.4	14.3	‡	11.1 !	9.8	16.3 !	23.3
Mathematics	9.8	10.0	10.8	11.8	8.9	13.4	13.8	15.7 !	‡	11.0	12.5 !	6.4 !
Science	7.7	9.5	11.5	9.7 !	11.9	10.5	6.4 !	8.4 !	7.3 !	12.9	‡	‡
Social science	6.2	7.6	6.4	5.4 !	5.0 !	9.4	7.8 !	16.6 !	‡	4.7	8.0 !	7.8 !
Foreign languages	5.1	4.3	9.2	9.3	3.5 !	3.0 !	5.0 !	‡	‡	4.1 !	10.8 !	‡
Art/arts and crafts	1.3 !	3.0	2.6	‡	‡	2.9 !	‡	‡	‡	1.9 !	6.4 !	‡
Music	2.9	3.3	3.6	6.9 !	3.1 !	1.9 !	3.1 !	‡	‡	4.5	3.4 !	‡
Health education	2.8	4.2	4.6	5.9 !	‡	5.8	‡	‡	‡	‡	‡	‡
Dance/drama or theater	†	‡	‡	‡	†	#	#	‡	†	1.3 !	#	#
In-field qualifications												
Major with certification	36.3	31.1	25.5	37.0	40.8	30.3	28.6	25.5	21.4	23.4	8.5 !	19.1 !
Certified only	14.6	7.3	5.2	6.7	5.1 !	4.9	4.7 !	‡	11.3 !	‡	‡	‡
Major only	26.5	31.4	31.5	30.2	35.3	38.7	30.2	43.8	23.7 !	34.1	36.7	29.4
Neither major nor certification	22.6	30.3	37.8	26.2	18.8	26.0	36.6	24.2 !	43.7	40.9	53.6	47.3

See notes at end of table.

Table 6. Percentage distribution of newly hired private school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Main assignment								
General elementary, Pre-K, K	51.9	47.8	34.2	40.5	49.5	49.8	41.2	40.0
English	11.2	9.9	15.9	13.6 !	15.7	10.4	10.8 !	6.4 !
Mathematics	8.0	10.1	9.3	9.6 !	11.3	7.1	10.0 !	‡
Science	6.2	9.4	13.9	‡	7.9 !	7.3	12.8	6.5 !
Social science	6.5 !	7.8	7.2	‡	6.0 !	7.7	3.6 !	1.7 !
Foreign languages	8.5 !	3.2	8.0	10.4	2.4 !	6.7	12.0 !	‡
Art/arts and crafts	‡	2.3	‡	#	2.8 !	4.5	‡	‡
Music	‡	3.4	3.9 !	6.1 !	3.1 !	3.4 !	3.4 !	‡
Health education	5.0 !	6.0	5.9 !	‡	1.4 !	2.3	3.7 !	6.9 !
Dance/drama or theater	†	#	‡	#	†	‡	#	‡
In-field qualifications								
Major with certification	36.5	38.9	33.0	49.1	38.2	25.7	25.1	32.9
Certified only	17.6	9.6	7.2	5.8 !	15.9	8.8	5.4 !	‡
Major only	22.8	26.5	28.8	23.6	27.7	31.3	32.3	30.8
Neither major nor certification	23.1	25.1	31.0	21.4	18.1	34.2	37.2	26.0

† Not applicable.

Rounds to zero.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡ Reporting standards not met. Either there are too few cases for a reliable estimate or the CV is 50 percent or greater.

NOTE: The United States includes the 50 states and the District of Columbia. Teachers include regular full- or part-time teachers that worked more than half time and teachers that reported a main assignment in 1 of the 10 fields listed in the table. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Detail may not sum to totals because of rounding. Estimates on change over time within major and certification should be treated with caution. In 1987–88 and 1999–2000, teachers self-reported certification in their main assignment. As of 2003–04, certification was determined by matching certification area with a teacher's main assignment during data analysis. Detail may not sum to totals because of rounding and because some data are not shown.

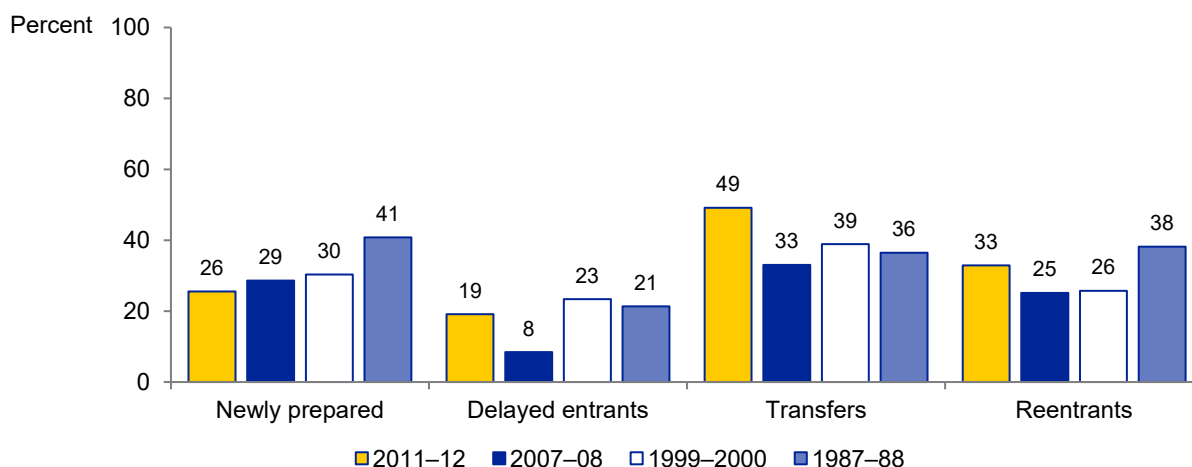
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12.

Within sources in 2011–12, there was relatively little variation in the distribution of main assignments across new hire categories for private school teachers with the exception of English. In 2011–12, of delayed entrant private school teachers, 23 percent taught English as their main assignment compared to 6 percent of re-entrants.

Private Sector: In-Field Qualifications

Newly hired teachers may not receive a main teaching assignment in the field for which they have trained. Figure 6 shows the extent to which private school newly hired teachers held a major and certification in their main assignment across four time points between 1987–88 and 2011–12.¹³ The percentage of newly hired private school teachers with a major and certification in their main teaching assignment fell from 36 percent in 1987–88 to 31 percent in 1999–2000. In 2011–12, the percentage of private school teachers with a major and certification was 37 percent, marking an increase from 26 percent in 2007–08.

Figure 6. Percentage of newly hired private school teachers in grades K–12 in the United States with in-field major and certification, by source: Selected years 1987–88 through 2011–12



NOTE: Teachers include regular full- or part-time teachers that worked more than half time and teachers who reported a main assignment in one of 10 fields: (1) general elementary, pre-K, K; (2) English; (3) mathematics; (4) science; (5) social science; (6) foreign languages; (7) art/arts and crafts; (8) music; (9) health education; (10) dance/drama or theater. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Estimates on change over time within major and certification should be treated with caution. In 1987–88 and 1999–2000, teachers self-reported certification in their main assignment. As of 2003–04, certification was determined by matching certification area with a teacher’s main assignment during data analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12 and Charter School Teacher Data File, 1999–2000.

¹³ Private schools may not require teachers to hold state certification for employment.

As illustrated in table 6, private school teachers holding only certification fell from 15 percent in 1987–88 to 7 percent in 1999–2000, with no additional change in this percentage between 2007–08 and 2011–12. No differences over time were detected for the percentages holding only a major, and those with neither a major nor certification increased from 23 percent in 1987–88 to 30 percent in 1999–2000 before falling from 38 percent to 26 percent between 2007–08 and 2011–12.

As noted above for public school teachers, changes in the wording of survey questions reduce the comparability of estimates of in-field certification between the 1999–2000 SASS administration and earlier and administrations after 1999–2000 because of changes in survey content.

Comparing within specific sources of newly hired private school teachers, the percentage of newly prepared and re-entrant private school teachers with a major and certification decreased between 1987–88 and 1999–2000, with no measurable subsequent changes. Among private school transfers, the percentage with a major and certification increased between 2007–08 and 2011–12, with no measurable changes across the two earlier administrations. Across the four sources of newly hired private school teachers in 2011–12, approximately 49 percent of transfer teachers held both a major and certification in the subject area of their main teaching assignment, compared to 19 percent of delayed entrants and 26 percent of newly prepared teachers.

Prior Year Activities and Occupational Categories

By definition, a teacher’s activity in the previous year also defines the teacher’s source. For example, first-time teachers cannot report working in a teaching field as a previous activity. Because of this, no comparisons are made between the previous year’s activities reported by the different sources of teachers. While the previous section focused on the training and qualifications of newly hired teachers, table 7 shows the different paid and unpaid past experiences of newly hired teachers. A teacher’s main activity during the previous school year was categorized into one of four groups: teaching, working but not teaching, attending college, caring for others, or “other.” Prior teaching experiences and work activities were analyzed with additional subcategories. Previous teaching experience was categorized as teaching in another sector, teaching in the same sector but a different school system, teaching preschool, or teaching at the postsecondary level.

Table 7. Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by source and prior year activity: Selected years 1987–88 through 2011–12

Characteristics	Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Public new hires	28,700	79,000	94,200	55,000	11,900	39,500	45,600	25,700
Teaching (percent)	0.9 !	1.0	0.8 !	‡	4.4 !	9.1	3.9	2.0 !
Public, other system	‡	0.5 !	‡	‡	#	#	#	#
Private	‡	#	#	‡	#	#	#	#
Postsecondary	‡	0.4 !	‡	‡	4.4 !	1.8	2.0 !	1.0 !
Preschool	†	‡	#	‡	†	7.3 !	1.9 !	‡
Working, nonteaching	1.5 !	4.9	4.6	4.7 !	50.4	56.8	68.8	74.6
In education	1.0 !	2.6 !	2.5	2.9 !	16.1	22.2	31.3	49.5
Outside education	‡	2.3 !	2.1 !	‡	34.4	34.6	37.5	25.1
College	95.4	87.6	93.1	91.8	#	#	#	#
Caring for family members	‡	‡	‡	‡	11.2	3.6 !	3.2 !	‡
Other	2.0 !	6.5	‡	‡	33.9	30.5	24.1	22.1
Private new hires	7,000	13,000	11,000	9,300	4,800	9,800	12,200	5,500
Teaching (percent)	‡	1.7 !	‡	‡	‡	10.8	9.7 !	13.6 !
Public	#	‡	#	#	#	#	#	#
Private, other system	‡	‡	‡	‡	#	#	#	#
Postsecondary	#	‡	‡	‡	‡	5.0 !	‡	8.3
Preschool	†	#	‡	‡	†	5.8 !	3.3 !	‡
Working, nonteaching	4.2 !	2.2 !	8.4 !	‡	59.3	59.2	51.5	60.7
In education	‡	‡	‡	‡	9.2 !	19.5	19.1	30.4
Outside education	‡	1.9 !	‡	‡	50.1	39.7	32.4	30.3
College	92.1	93.8	85.4	90.8	#	#	#	#
Caring for family members	‡	#	#	#	‡	5.2 !	9.0 !	‡
Other	2.6 !	2.2 !	4.4 !	‡	24.7	24.8	29.8	21.9 !

See notes at end of table.

Table 7. Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by source and prior year activity: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Public new hires	51,900	110,000	132,000	72,400	43,900	48,900	46,200	42,800
Teaching (percent)	100.0	100.0	100.0	100.0	2.6	7.0	4.0 !	6.5
Public, other system	81.5	90.0	89.0	89.9	#	#	#	#
Private	18.5	10.0	11.0	10.1	#	#	#	#
Postsecondary	#	#	#	#	2.6	3.5	‡	4.7!
Preschool	†	#	#	#	†	3.5	1.4 !	1.8!
Working, nonteaching	#	#	#	#	27.3	36.4	43.6	40.6
In education	#	#	#	#	9.8	20.1	22.9	31.8
Outside education	#	#	#	#	17.5	16.3	20.7	8.8
College	#	#	#	#	18.2	11.9	4.3	6.9
Caring for family members	#	#	#	#	27.9	12.1	13.8	17.5
Other	#	#	#	#	24.0	32.5	34.3	28.5
Private new hires	19,700	25,200	24,400	20,200	18,100	20,500	19,700	8,600
Teaching (percent)	100.0	100.0	100.0	100.0	‡	6.2	12.1 !	‡
Public	26.5	58.2	57.7	25.6	#	#	#	#
Private, other system	73.5	41.8	42.3	74.4	#	#	#	#
Postsecondary	#	#	#	#	‡	2.7 !	‡	‡
Preschool	†	#	#	#	†	3.5 !	7.4 !	‡
Working, nonteaching	#	#	#	#	29.3	31.8	34.6	33.8
In education	#	#	#	#	8.6	12.6	17.3 !	22.1
Outside education	#	#	#	#	20.7	19.2	17.3	11.7!
College	#	#	#	#	20.3	13.3	6.7 !	5.7!
Caring for family members	#	#	#	#	28.7	17.0	12.2	22.4!
Other	#	#	#	#	20.1	31.6	34.4	25.7

† Not applicable.

Rounds to zero.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡ Reporting standards not met. Either there are too few cases for a reliable estimate or the CV is 50 percent or greater.

NOTE: The United States includes the 50 states and the District of Columbia. Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

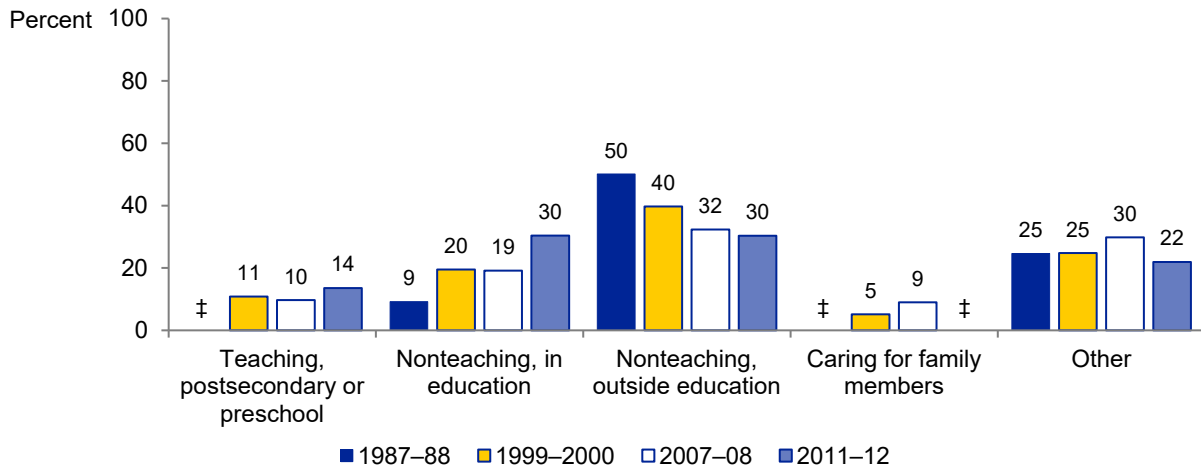
Newly Prepared Teachers: Prior Year Activities

From 1987–88 to 2011–12, the majority of newly prepared public and private school teachers reported attending school or college as their prior year activity, with percentages ranging from 85 to 95 percent. Over the four time points highlighted in this report, less than 15 percent of newly prepared public and private school teachers reported working in a nonteaching field in the previous school year, with percentages ranging from 1 to 8 percent.

Delayed Entrants: Prior Year Activities

Among the delayed entrant teachers in public schools, the most common prior year activity was working in nonteaching fields. The percentage of public school delayed entrant teachers working in nonteaching fields increased from 50 to 75 percent between 1987–88 and 2011–12, including an increase from 57 to 69 percent between 1999–2000 and 2007–08. The second most commonly reported prior year activity for public school delayed entrant teacher was “other” (ranging from 22 to 34 percent, depending on the year). In a similar trend to that for public school delayed entrant teachers, a larger percentage of private school delayed entrant teachers were working in a nonteaching field (either in education or outside of education) the prior year compared to teaching, caring for family, or other efforts during each SASS administration (figure 7).

Figure 7. Percentage distribution of delayed-entrant private school teachers in grades K–12 in the United States, by prior year activity: Selected years 1987–88 through 2011–12



‡ Reporting standards not met. Either there are too few cases for a reliable estimate or the CV is 50 percent or greater.

NOTE: Teachers include regular full- or part-time teachers who worked more than half time. Newly hired teachers reported the current survey year as the year they began teaching at the school. They include first-year teachers who earned their highest degree the year before, first-year teachers who earned their highest degree more than 1 year before but had been in a different profession, teachers who had been in a different school system the year before, and teachers who left teaching but returned. In 2011–12, additional instructions were added for substitute or itinerant teachers on how to classify their main activity in the previous school year. Other prior year activities include military service, unemployed and seeking work, retired, and other nonspecified positions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, selected years 1987–88 through 2011–12 and Charter School Teacher Data File, 1999–2000.

Transfers: Prior Year Activities

By definition, 100 percent of public and private school transfers reported they worked in a teaching field in the previous year. Of public school transfer teachers, more than three quarters worked in a public school during the previous year across the four time points.

Among private school transfers, 26 percent came from public schools in both 1987–88 and 2011–12. In 1999–2000 and 2007–08, the percentage of private school transfers working in public schools the previous year was higher at 58 percent. In 1987–88 and 2011–12, more private school transfers hailed from other private schools than from public schools. In 1999–2000 and 2007–08, more private school transfers migrated from public schools in the previous year compared to those transfers coming from another private school.

Re-entrants: Prior Year Activity

Re-entrant teachers could report the following prior year activities: teaching outside of kindergarten through 12th grade education, working in a nonteaching field, attending college, caring for family members, or other activities. Among public school re-entrants, the percentage teaching outside of kindergarten through 12th grade increased between 1987–88 and 1999–2000 from 3 to 7 percent, but there were no statistically significant changes in subsequent years.

A larger percentage of public school re-entrants worked in nonteaching environments in 2011–12 compared to 1987–88, with an increase from 27 to 41 percent. The percentage working the year before was higher than the percentage attending college or caring for family members across the four time points considered here with the exception of the 1987–88 school year. In 1987–88, there was no detectable difference in the percentage working and the percentage caring for family members (27 and 28 percent, respectively). Finally, the percentage of public school re-entrants attending college the previous year decreased from 18 percent in 1987–88 to 7 percent in 2011–12, and the percentage caring for family decreased from 28 percent in 1987–88 to 18 percent in 2011–12.

Among private school re-entrants, there was relatively little change across previous activities between 1987–88 and 2011–12. For re-entrants teaching outside of kindergarten through 12th grade, sampling error did not allow for calculations. There were no statistically significant increases in the percentage working in nonteaching fields, caring for family, or in other activities between 1987–88 and 2011–12. However, the percentage of re-entrants attending college the previous year declined from 20 percent in 1987–88 to 6 percent in 2011–12. In 2011–12, 34 percent of private school re-entrants worked in nonteaching fields the previous year, which is higher than the 6 percent attending school and the 22 percent caring for family.

Summary and Limitations

This report provides a descriptive picture of the sources of the nation's newly hired teachers. Findings provide further information on the current and historical characteristics of the U.S. labor market for teachers.

Trends in the Type and Number of Newly Hired Teachers

The total number of teachers working in public and private schools increased between 1987–88 and 2011–12 (table 1). Despite an increase to more than 10 percent from 1990–2000 and 2007–08, the percentage of teachers who were newly hired in 2011–12 was the same as that in 1987–88: 6 percent. Among private school teachers, there was no measurable difference in the number of private school new hires between 1987–88 and 2011–12. The percentage of newly hired private school teachers was lower in 2011–12 (11 percent) than in the three previous administrations (1987–88, 1999–2000, and 2007–08), where it ranged from 16 to 17 percent.

Among the sources of newly hired teachers, newly prepared and re-entrant teachers showed changes over time. Among newly hired public school teachers, the percentage of first-time teachers increased from 30 to 43 percent between 1987–88 and 1999–2000, with no measurable changes in subsequent administrations (table 2). The percentage of re-entrant teachers decreased from 32 to 22 percent between 1987–88 and 2011–12. Among newly hired private school teachers, the first-time teachers increased from 24 percent in 1987–88 to 33 percent in 1999–2000. The percentage of private school re-entrants declined from 37 percent in 1987–88 to 20 percent in 2011–12.

Newly Hired Teacher Demographics, Experience, and Qualifications

The percentage of female public and private school teachers did not change measurably between 1987–88 and 2011–12 (table 3). Females accounted for more than 70 percent of newly hired public and private school teachers at each of the four time points between 1987–88 and 2011–12, and the overall percentage was not different between 1987–88 and 2011–12. White, non-Hispanic teachers accounted

for more than 75 percent of newly hired teachers in public and private schools at all four time periods in this report. Overall, the percentage of White, non-Hispanic teachers declined between 1987–88 and 2011–12. Between 1987–88 and 2011–12, the percentage of White, non-Hispanic teachers decreased from 90 to 80 percent in public schools with no measurable changes in any other year. Between 1987–88 and 2011–12 the percentage of White, non-Hispanic teachers decreased from 93 to 85 percent in private schools with no measurable change between 2007–08 and 2011–12. Among public school delayed entrant and re-entrant teachers, the percentage of Hispanic teachers increased between 1987–88 and 2011–12.

Controlling for inflation, average base salaries among public school teachers increased by approximately \$3,000 between 1987–88 and 2007–08, while average base salaries among private school teachers increased by approximately \$5,000 between 1987–88 and 2007–08. The average base-year salaries were not measurably changed for either sector between 1999–2000 and 2011–12. In 2011–12, newly prepared teachers, delayed entrants, and transfers in the public sector had higher base-year salaries than their private counterparts, by as much as \$15,000 among delayed entrants. The difference between public and private sector salaries for newly hired re-entrants was not statistically significant.

The education levels of all newly hired teachers fluctuated between 1987–88 and 2011–12. The percentage of newly hired public and private school teachers whose highest degree was a master’s degree increased between 1987–88 and 2011–12 (table 4). However, there was no measurable change in the percentage with a master’s degree during the intervening years.

The report highlights the main assignments of newly hired teachers in public and private schools. The three fields with the greatest share of newly hired public school teachers remained the same across all four time points (table 5). The most frequent assignments were general elementary (35 percent in 2011–12 to 48 percent in 1987–88); English (from 13 percent in 1987–88 to 15 percent in 2007–08); and mathematics (10 percent in 1987–88 to 16 percent in 2011–12). In private schools, general elementary education teachers accounted for the highest percentage of main assignments across all four time points, beginning at 52 percent in 1987–88 and declining to 36 percent in 2011–12 (table 6).

Given changes to questionnaire design, caution should be exercised in comparing in-field major and certification between 1987–88 and subsequent years. Prior to 1999–2000, teachers self-reported certification in their main assignment; after 1999–2000 certification was determined during analysis.

It is difficult to assess movement in certification between 1987–88 and 1999–2000. However, since 1999–2000, there has been little measurable change in the percentages of newly hired teachers with both a major and certification in the subject area of their main teaching assignment. That said, the percentage of newly hired public school teachers fell from 64 percent to 55 percent between 1987–88 and 1999–2000, with no measurable changes in major and certification qualifications between the subsequent administrations (table 5). The percentage of newly hired private school teachers with a major and a certification in their main teaching assignment increased from 26 percent in 2007–08 to 37 percent in 2011–12 (table 6).

Teachers' qualifications also vary according to source. In 2011–12, public school transfers and newly prepared teachers had the highest percentage of teachers with a major and certification in their main assignment field at 62 percent each compared to delayed entrants with 46 percent (table 5). Among private school teachers, more transfers held a major and certification compared to newly prepared and delayed entrant teachers.

Prior Year Activities of Newly Hired Teachers

A teacher's activity in the previous year also defines the teacher's source. Since 1987–88, more than three-quarters of newly prepared public and private school teachers reported attending school or college as their prior year activity (table 7). Among delayed entrants in both sectors, more worked in nonteaching fields the prior year compared to teaching, caring for family, or other activities. Since 1999–2000, between 57 and 75 percent of public school teachers and between 52 and 61 percent of private school teachers were delayed entrant teachers worked in nonteaching fields in the prior year. At all four time points, more than 75 percent of public school transfers also worked in a public school the previous year. The pattern of previous school sector shifted among private school transfers. In 1987–88 and 2011–12, almost three-quarters of private school transfers had taught at another private school in the previous year. However, in 1999–2000 and 2007–08, greater percentages of private school transfers came from the public sector than from a private school. Between 1999–2000 and 2011–12, a higher percentage of public school re-entrants (41 percent in 2011–12) worked in nonteaching environments compared to those who attended college or cared for family members.

Limitations

Readers should be aware of the limitations in the analysis of this report (e.g., generalizing to all teachers) because this report does not include transfers within a

school district or teachers who worked in their current school in the previous year. The population discussed in this report represents newly hired teachers, which does not include district-level transfers or teachers who worked in the school the previous year. The report population represents between 52 and 88 percent of all regular full- or part-time teachers who reported being new hires at the school during the current survey year. The majority of teachers excluded reported themselves as newly hired and teaching in the same school the previous year, making it difficult to understand their previous activities. Additional information appears in table B-2.

Readers should also be aware there were changes in survey design over the SASS administrations used in this report. The changes included the addition of new response options to the prior year activity and to racial/ethnic identification options; refined categories to define main assignment field, major, and certification; and adjustments to the way teachers reported their full- and part-time years of experience in primary and secondary education. There were also modifications to sampling approaches regarding the Bureau of Indian Education. See appendix B for details. Two other specific changes are discussed below.

First, in a key question on prior year activity, the questionnaire changed between 2007–08 and 2011–12. In 2011–12, instructions were given specifically to substitute and itinerant teachers on how to report the previous year’s main activity. In previous years, respondents were given no instructions on how to answer the question. After the implementation of the new instructions, there was a measurable change in the distribution of the response categories for the question on prior year activity. This change may account for some portion of the decline in newly hired teachers between 2007–08 and 2011–12.

Second, prior to 2003–04, respondents self-reported whether they were certified in their main assignment. In the 2003–04 administration and the two subsequent administrations, analysts matched teachers’ certification areas with their reported main assignments. This survey change introduced potential biases when assessing change over time in teachers’ qualifications. This is discussed in greater detail in appendix B and in previous NCES reports (Hill and Stearns 2015).

Last, given the small sample sizes of newly hired teachers for several variables, it is difficult to make informative comparisons between groups for some characteristics. The findings provide an overview of the teacher sources and their characteristics, but sample sizes do not always allow stable comparisons between groups or across years.

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Appendix A—Standard Error Tables

Table A-1. Standard errors for Table 1: Percentage distribution of newly hired and continuing public and private school teachers in grades K–12 in the United States: Selected years 1987–88 through 2011–12

Status of teachers	1987–88		1999–2000		2007–2008		2011–12	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
U.S. public teachers	13,770	†	20,110	†	42,180	†	38,410	†
New hires	3,270	0.14	6,060	0.21	14,110	0.40	8,110	0.23
Continuing	12,930	0.14	19,960	0.21	37,560	0.40	35,650	0.23
U.S. private teachers	7,880	†	9,580	†	8,780	†	11,020	†
New hires	2,300	0.66	2,480	0.45	3,000	0.58	4,870	1.20
Continuing	6,930	0.66	8,140	0.45	7,510	0.58	11,800	1.20

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Table A-2. Standard errors for Table 2: Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by source: Selected years 1987–88 through 2011–12

Source	Public				Private			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. new hires	3,270	6,060	14,110	8,110	2,300	2,480	3,000	4,870
Total percent	†	†	†	†	†	†	†	†
First-time teachers	1.02	1.15	1.56	1.98	1.33	1.17	1.76	6.11
Newly prepared	0.85	1.02	1.56	1.73	1.16	1.00	1.45	4.89
Delayed entrants	0.74	1.03	1.21	1.43	0.75	0.92	1.46	2.04
Transfers	1.32	1.28	1.78	1.92	1.80	1.38	2.05	5.18
Within state and sector	1.09	1.06	1.57	1.79	1.96	1.14	1.32	2.69
Across state, within sector	0.65	0.66	0.84	1.03	1.13	0.70	1.31	1.42
Across sector	0.78	0.52	0.74	0.76	1.31	1.20	1.46	4.17
Reentrants	1.12	0.82	1.23	1.98	2.08	1.49	2.25	2.96

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Table A-3. Standard errors for Table 3: Newly hired public and private school teachers in grades K–12 in the United States, by source and selected demographic characteristics: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	3,270	6,060	14,110	8,110	1,230	3,400	6,340	3,930	1,090	3,100	4,730	3,080
Female (percent)	1.22	0.99	1.16	1.75	2.25	1.92	2.68	2.53	3.56	2.30	4.70	4.83
Race/ethnicity (percent)												
White, non-Hispanic	0.75	0.96	1.77	1.75	1.46	1.76	2.92	2.78	2.19	3.06	4.29	6.88
Black, non-Hispanic	0.63	0.75	0.97	1.10	1.32	1.17	1.88	1.73	1.66	2.70	1.72	3.00
Hispanic	0.48	0.66	1.26	1.49	0.93	1.48	2.01	2.47	0.91	1.75	4.44	6.54
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	0.31	0.35	0.48	0.67	0.46	0.75	0.79	0.47	†	0.42	0.25	†
Two or more races, non-Hispanic	†	†	0.48	0.39	†	†	0.78	0.30	†	†	1.11	†
Average age	0.21	0.26	0.30	0.58	0.34	0.35	0.77	0.35	0.56	0.60	0.84	0.95
Income/salary (in constant dollars)												
Base year salary	350	250	420	680	380	300	420	630	660	480	710	1,050
Total year-round income	400	290	510	700	500	410	470	750	900	800	900	1,370
U.S. private new hires	2,300	2,480	3,000	4,870	650	830	1,170	2,730	440	690	1,030	1,160
Female (percent)	2.23	1.31	1.53	3.35	3.47	2.23	3.76	6.76	8.01	3.35	5.07	5.35
Race/ethnicity (percent)												
White, non-Hispanic	1.12	0.94	1.54	2.34	1.56	1.82	3.04	8.50	5.73	2.35	5.26	5.87
Black, non-Hispanic	0.61	0.65	0.99	1.17	†	0.44	†	3.26	†	1.73	3.05	†
Hispanic	1.31	0.77	1.15	1.78	†	1.79	1.72	†	†	1.18	†	4.32
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	0.43	0.37	0.67	1.29	†	0.70	†	†	1.17	1.09	†	#
Two or more races, non-Hispanic	†	†	0.22	0.85	†	†	†	†	†	†	†	†
Average age (years)	0.55	0.34	0.56	1.16	0.33	0.40	0.53	1.15	1.36	0.66	0.94	2.36
Income/salary (in constant dollars)												
Base year salary	490	380	720	1,560	560	640	1,040	1,430	860	680	1,380	2,330
Total year round income	540	430	900	3,040	720	720	1,550	1,990	2,240	960	1,690	2,220

See notes at end of table.

Table A-3. Standard errors for Table 3: Newly hired public and private school teachers in grades K–12 in the United States, by source and selected demographic characteristics: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	2,220	4,150	8,350	4,430	1,840	2,420	3,630	4,780
Female (percent)	1.68	1.62	2.22	2.92	1.79	2.00	3.00	3.47
Race/ethnicity (percent)								
White, non-Hispanic	1.22	1.46	2.34	2.69	1.23	1.84	3.11	3.24
Black, non-Hispanic	1.07	0.96	1.56	2.18	1.05	1.57	2.10	2.03
Hispanic	0.66	0.91	1.55	1.15	0.70	0.88	1.92	3.27
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	0.47	0.60	0.51	†	0.47	0.46	†	1.02
Two or more races, non-Hispanic	†	†	†	0.31	†	†	†	1.40
Average age (years)	0.28	0.38	0.49	0.61	0.33	0.60	0.87	1.54
Income/salary (in constant dollars)								
Base year salary	470	420	770	600	660	750	1,010	2,170
Total year-round income	550	500	880	640	730	830	1,340	2,370
U.S. private new hires	1,220	1,270	1,900	2,180	1,390	1,360	1,610	1,250
Female (percent)	3.35	2.44	3.19	6.04	2.58	2.13	3.11	7.39
Race/ethnicity (percent)								
White, non-Hispanic	1.94	1.88	2.52	2.61	1.51	1.61	3.09	4.89
Black, non-Hispanic	0.45	1.61	1.35	1.32	1.64	0.43	2.02	1.99
Hispanic	1.80	1.07	1.81	†	1.28	1.50	2.25	3.24
Asian/Native Hawaiian/Pacific Islander, non-Hispanic	0.34	0.67	1.27	†	0.71	0.66	0.66	†
Two or more races, non-Hispanic	†	†	†	†	†	†	†	†
Average age (years)	0.55	0.66	0.78	1.16	1.21	0.49	1.13	2.04
Income/salary (in constant dollars)								
Base year salary	980	470	860	1,500	830	950	1,540	4,860
Total year-round income	790	590	970	2,170	960	1,040	1,630	11,450

† Not applicable.

Rounds to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Table A-4. Standard errors for Table 4: Newly hired public and private school teachers in grades K–12 in the United States, by source, highest degree earned, and average years of teaching experience: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	3,270	6,060	14,110	8,110	1,230	3,400	6,340	3,930	1,090	3,100	4,730	3,080
Highest level of educational attainment (percent)												
Less than a bachelor's degree	0.11	0.12	0.17	0.87	†	0.15	†	0.65	1.01	0.19	0.29	†
Bachelor's degree	0.96	0.99	1.66	1.90	1.98	1.83	2.95	3.34	2.22	2.05	3.78	4.57
Master's degree	0.89	0.92	1.51	2.07	1.82	1.72	2.66	3.36	1.86	1.97	3.82	4.24
Higher than a master's degree	0.48	0.42	0.56	0.89	†	0.96	0.78	1.02	†	0.53	0.51	†
Percentage with alternative certification	†	0.81	1.39	1.88	†	1.18	2.45	2.29	†	2.47	4.79	5.33
Average teaching experience (years)	0.15	0.16	0.18	0.29	†	†	†	†	†	†	†	†
U.S. private new hires	2,300	2,480	3,000	4,870	650	830	1,170	2,730	440	690	1,030	1,160
Highest level of educational attainment (percent)												
Less than a bachelor's degree	0.42	0.86	0.90	1.48	†	1.47	†	†	†	†	†	†
Bachelor's degree	2.10	1.49	1.85	4.52	2.06	2.37	4.16	9.09	5.14	3.00	4.65	7.89
Master's degree	2.06	1.25	1.61	4.26	2.28	1.76	3.38	7.21	4.43	2.87	3.21	5.90
Higher than a master's degree	0.71	0.67	1.51	2.18	†	0.98	†	†	0.21	0.74	†	†
Percentage with alternative certification	†	0.59	1.49	2.75	†	1.42	3.72	4.67	†	1.03	3.43	5.54
Average teaching experience (years)	0.53	0.22	0.38	0.88	†	†	†	†	†	†	†	†

See notes at end of table.

Table A-4. Standard errors for Table 4: Newly hired public and private school teachers in grades K–12 in the United States, by source, highest degree earned, and average years of teaching experience: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
U.S. public new hires	2,220	4,150	8,350	4,430	1,840	2,420	3,630	4,780
Highest level of educational attainment (percent)								
Less than a bachelor's degree	†	0.27	†	1.86	0.00	†	†	1.43
Bachelor's degree	1.77	1.73	2.73	3.21	1.72	2.64	4.15	5.29
Master's degree	1.67	1.68	2.67	3.55	1.67	2.67	4.12	5.39
Higher than a master's degree	0.72	0.74	1.10	2.00	1.19	1.12	1.37	2.40
Percentage with alternative certification	†	1.41	2.37	2.57	†	1.60	2.84	3.23
Average teaching experience (years)	0.24	0.26	0.38	0.45	0.24	0.50	0.70	0.73
U.S. private new hires	1,220	1,270	1,900	2,180	1,390	1,360	1,610	1,250
Highest level of educational attainment (percent)								
Less than a bachelor's degree	0.72	1.29	1.24	1.47	†	2.03	1.74	3.37
Bachelor's degree	3.94	2.50	3.03	6.24	3.61	2.87	4.75	6.74
Master's degree	4.16	2.43	3.12	6.02	3.87	2.41	3.71	8.23
Higher than a master's degree	1.01	0.85	2.16	2.24	1.64	1.70	†	†
Percentage with alternative certification	†	1.01	2.57	5.01	†	1.17	2.90	2.69
Average teaching experience (years)	0.52	0.45	0.72	0.82	1.36	0.38	0.93	2.13

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Table A-5. Standard errors for Table 5: Percentage distribution of newly hired public school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Main assignment												
General elementary, Pre–K, K	1.33	1.68	2.03	2.64	2.74	2.56	3.60	4.18	3.83	3.84	5.22	5.74
English	0.82	0.82	1.19	1.12	1.84	1.66	1.97	1.92	3.02	2.49	3.51	4.38
Mathematics	0.68	0.68	1.53	1.45	1.89	1.43	1.80	2.64	2.62	1.10	3.30	3.56
Science	0.65	0.72	1.10	1.40	1.35	1.22	1.58	2.29	1.86	1.24	2.07	3.81
Social science	0.61	0.52	0.78	1.07	0.98	1.13	1.03	1.58	2.29	1.23	3.85	1.78
Foreign Languages	0.34	0.49	0.50	0.88	0.62	0.48	0.71	1.22	1.68	1.02	0.81	2.34
Art/arts and crafts	0.53	0.30	0.50	0.46	0.67	0.53	0.79	0.81	3.18	0.37	†	†
Music	0.64	0.52	0.63	0.72	1.44	1.08	1.04	1.15	0.26	†	0.82	†
Health Education	0.66	0.48	0.75	0.97	1.21	1.12	0.81	0.95	2.09	0.62	1.69	2.16
Dance/drama or theater	†	0.14	†	†	†	†	†	†	†	†	†	†
In-field qualifications												
Major with certification	1.30	1.14	2.25	2.48	2.22	2.38	3.33	4.05	4.32	3.46	4.05	5.35
Certified only	1.00	0.93	1.34	1.76	1.70	1.71	1.91	2.40	3.19	3.58	2.79	4.12
Major without certification	0.93	1.01	1.40	1.40	1.96	1.96	2.53	2.21	3.32	2.91	5.59	3.30
Neither major nor certification	0.70	0.78	1.37	1.84	1.30	1.52	1.92	2.30	2.15	3.42	4.48	5.64

See notes at end of table.

Table A-5. Standard errors for Table 5: Percentage distribution of newly hired public school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Main assignment								
General elementary, Pre–K, K	2.14	2.20	3.80	4.12	2.30	3.22	3.72	5.20
English	1.40	1.27	1.80	2.22	1.70	1.64	2.63	1.83
Mathematics	1.17	1.26	2.73	2.15	1.19	1.36	3.64	2.88
Science	0.89	1.34	2.16	2.11	1.18	1.58	2.59	2.16
Social science	0.99	0.67	1.31	1.32	0.98	0.83	1.38	3.19
Foreign Languages	0.71	0.91	1.17	1.17	0.61	1.67	1.33	3.07
Art/arts and crafts	0.94	0.42	0.63	0.58	0.73	0.91	1.70	†
Music	0.87	0.83	0.96	1.16	1.38	1.42	0.92	†
Health Education	1.36	0.81	1.28	2.06	0.75	1.29	2.76	1.86
Dance/drama or theater	†	0.04	†	†	†	†	†	†
In-field qualifications								
Major with certification	1.99	2.02	3.72	4.15	2.69	2.85	4.36	5.53
Certified only	1.49	1.50	2.34	2.68	2.11	2.34	3.53	3.60
Major without certification	1.66	1.40	1.78	1.56	1.13	1.75	2.89	4.29
Neither major nor certification	0.73	1.16	2.68	3.27	1.30	1.86	2.95	3.95

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Table A-6. Standard errors for Table 6: Percentage distribution of newly hired private school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12

Characteristics	Total				Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Field of main assignment												
General elementary, Pre–K, K	2.38	1.36	2.12	3.55	5.53	3.24	4.57	7.83	9.66	4.10	3.55	7.01
English	1.47	0.82	1.58	2.58	3.21	1.21	4.08	†	5.02	2.29	5.23	6.94
Mathematics	1.58	0.95	1.30	3.37	2.61	2.41	3.29	5.17	†	2.62	3.88	2.59
Science	1.33	0.72	1.73	3.25	2.89	1.82	2.41	3.83	2.62	2.46	†	†
Social science	1.26	0.80	1.10	1.88	1.83	1.65	2.71	5.92	†	1.19	2.93	3.63
Foreign Languages	1.36	0.63	1.84	2.00	1.22	1.02	2.44	†	†	1.56	4.42	†
Art/arts and crafts	0.48	0.50	0.72	†	†	0.92	†	†	†	0.84	2.85	†
Music	0.71	0.52	0.81	2.58	1.37	0.79	1.47	†	†	1.22	1.40	†
Health Education	0.70	0.69	1.01	2.73	†	1.55	†	†	†	†	†	†
Dance/drama or theater	†	†	†	†	†	†	†	†	†	0.49	†	†
In-field qualifications												
Major with certification	2.13	1.23	1.89	4.25	4.17	2.42	3.84	6.84	4.24	3.47	2.88	6.80
Certified only	1.50	0.94	1.10	2.19	1.61	0.98	1.89	†	4.77	†	†	†
Major only	2.23	1.41	2.20	3.78	4.31	3.28	5.05	8.11	8.65	3.52	4.92	7.34
Neither major nor certification	2.24	1.44	2.39	3.35	3.62	2.59	4.49	7.74	11.04	4.15	4.38	8.71

See notes at end of table.

Table A-6. Standard errors for Table 6: Percentage distribution of newly hired private school teachers in grades K–12 in the United States, by source, main assignment, and in-field qualifications: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Field of main assignment								
General elementary, Pre–K, K	3.87	2.34	2.90	6.20	4.14	3.04	4.51	8.09
English	2.21	1.28	2.68	4.44	2.94	2.02	4.75	2.91
Mathematics	1.66	1.76	2.02	4.60	2.62	1.28	3.10	†
Science	1.47	1.21	2.54	†	2.68	1.32	3.71	2.59
Social science	2.44	1.43	1.85	†	1.96	1.82	1.35	0.78
Foreign Languages	2.93	0.85	2.33	2.83	0.94	1.20	4.18	†
Art/arts and crafts	†	0.64	†	†	1.19	1.29	†	†
Music	†	0.83	1.41	2.61	1.06	1.18	1.17	†
Health Education	1.74	1.62	2.20	†	0.53	0.67	1.46	3.11
Dance/drama or theater	†	†	†	†	†	†	†	†
In-field qualifications								
Major with certification	3.31	2.48	3.22	6.91	4.22	2.14	4.32	7.41
Certified only	2.82	1.43	1.82	1.86	3.04	2.22	2.33	†
Major only	2.94	2.33	2.93	5.13	5.20	2.95	4.52	9.15
Neither major nor certification	3.76	2.39	3.03	5.92	3.34	2.70	5.64	5.84

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12.

Table A-7. Standard errors for Table 7: Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by source and prior year activity: Selected years 1987–88 through 2011–12

Characteristics	Newly prepared				Delayed entrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Public new hires	1,230	3,400	6,340	3,930	1,090	3,100	4,730	3,080
Teaching	0.38	0.26	0.37	†	1.42	2.28	1.14	0.66
Public, other system	†	0.18	†	†	†	†	†	†
Private	†	†	†	†	†	†	†	†
Postsecondary	†	0.17	†	†	1.42	0.44	0.79	0.37
Preschool	†	†	†	†	†	2.26	0.74	†
Working, nonteaching	0.57	1.15	0.83	1.50	3.57	2.82	4.14	4.29
In education	0.42	0.89	0.57	0.89	2.80	2.40	4.54	5.82
Outside education	†	0.72	0.62	†	3.34	3.18	4.68	4.81
College	0.98	1.62	1.39	2.12	†	†	†	†
Caring for family members	†	†	†	†	2.63	1.09	0.98	†
Other	0.81	1.05	†	†	4.02	2.72	3.97	4.17
Private new hires	650	830	1,170	2,730	440	690	1,030	1,160
Teaching total	†	0.74	†	†	†	2.43	3.50	4.54
Public	†	†	†	†	†	†	†	†
Private, other system	†	†	†	†	†	†	†	†
Postsecondary	†	†	†	†	†	1.51	†	3.62
Preschool	†	0.00	†	†	†	2.16	1.54	†
Working, nonteaching	1.82	0.73	3.00	†	8.09	3.58	5.51	9.58
In education	†	†	†	†	3.14	2.85	3.72	7.94
Outside education	†	0.70	†	†	7.78	3.65	4.44	7.80
College	2.20	1.36	3.28	4.19	†	†	†	†
Caring for family members	†	†	†	†	†	1.86	2.92	†
Other	0.99	0.72	1.76	†	4.20	3.11	5.86	8.37

See notes at end of table.

Table A-7. Standard errors for Table 7: Percentage distribution of newly hired public and private school teachers in grades K–12 in the United States, by source and prior year activity: Selected years 1987–88 through 2011–12—Continued

Characteristics	Transfers				Reentrants			
	1987–88	1999–2000	2007–08	2011–12	1987–88	1999–2000	2007–08	2011–12
Public new hires	2,220	4,150	8,350	4,430	1,840	2,420	3,630	4,780
Teaching	†	†	†	†	0.68	1.08	1.62	1.88
Public, other system	1.81	1.21	1.69	2.06	†	†	†	†
Private	1.81	1.21	1.69	2.06	†	†	†	†
Postsecondary	†	†	†	†	0.68	0.51	†	1.55
Preschool	†	†	†	†	†	1.01	0.63	0.88
Working, nonteaching	†	†	†	†	1.63	2.56	4.17	5.83
In education	†	†	†	†	0.98	2.23	3.66	6.47
Outside education	†	†	†	†	1.15	1.82	3.50	2.29
College	†	†	†	†	1.74	1.94	1.22	1.82
Caring for family members	†	†	†	†	2.16	2.19	2.77	3.57
Other	†	†	†	†	1.74	2.29	3.70	4.27
Private new hires	1,220	1,270	1,900	2,180	1,390	1,360	1,610	1,250
Teaching total	†	†	†	†	†	1.38	5.24	†
Public	3.23	2.65	3.57	5.12	†	†	†	†
Private, other system	3.23	2.65	3.57	5.12	†	†	†	†
Postsecondary	†	†	†	†	†	0.96	†	†
Preschool	†	†	†	†	†	1.07	3.03	†
Working, nonteaching	†	†	†	†	3.65	2.79	6.19	6.88
In education	†	†	†	†	2.17	1.76	5.50	5.52
Outside education	†	†	†	†	2.74	2.54	3.09	4.66
College	†	†	†	†	3.05	1.72	2.34	2.19
Caring for family members	†	†	†	†	3.20	2.33	2.81	8.93
Other	†	†	†	†	4.26	2.63	4.54	6.39

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

Appendix B—Technical Notes and Methodology

Overview of the Schools and Staffing Survey

The data used in this report come from four administrations of the Schools and Staffing Survey (SASS): 1987–88, 1999–2000, 2007–08, and 2011–12. SASS is sponsored by the National Center for Education Statistics (NCES) of the Institute of Education Sciences within the U.S. Department of Education and is conducted by the U.S. Census Bureau. SASS is a nationally representative sample survey of public¹ and private K–12 schools, principals, and teachers in the 50 States and the District of Columbia. School districts associated with public schools and library media centers in public schools are also part of SASS. Conducted seven times, SASS data covers school years 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, 2007–08, and 2011–12. For general information on SASS, visit <http://nces.ed.gov/surveys/sass>.

Supplemental analyses of all seven administrations were conducted to estimate regularity in trends over time for newly hired teachers and their education levels, salary, qualifications, and race/ethnicity. With the exception of race/ethnicity and increases in the number and percent of new teachers, few significant results were found indicating frequent fluctuation in newly hired teachers' sources and characteristics, rather than a constant directional trend. Broughman and Rollefson (2000) include data from 1987–88, 1990–91, and 1993–94. The 2003–04 SASS data were excluded because in most cases the new-hire categories in 2003–04 showed a consistent trend relative to 1999–2000 and 2007–08, while 2007–08 to 2011–12 showed a marked decline. Full inclusion of the data would have made the report more complex while not affecting the results discussed here.

For additional information on the specific SASS-related topics discussed in this appendix, consult the survey documentation for the relevant survey administration, as follows:

- *1988 Schools and Staffing Survey Sample Design and Estimation* (Kaufman 1991);
 - *1999–2000 Schools and Staffing Survey Data User's Manual* (Tourkin et al. 2004);
 - *Documentation for the 2007–08 Schools and Staffing Survey* (Tourkin et al. 2010);
- and

¹ Public schools include traditional public and charter schools.

- *Documentation for the 2011–12 Schools and Staffing Survey* (Chambers et al. forthcoming).

Teacher Questionnaire (Forms SASS–4A and SASS–4B)

The data in this report come from the Public and Private School Teacher Questionnaires, which are largely similar in content and wording. The data for 1999–2000 public schools also draw on the Public Charter School Teacher Questionnaire (Form 4D). These questionnaires were designed to obtain information on topics such as classroom organization, teaching assignment, education and training, certification, workload, and perceptions and attitudes about teaching. Questionnaires from all SASS administrations are available online at <http://nces.ed.gov/surveys/sass/questionnaire.asp>.

SASS Teacher–Level Estimates and Target Population

SASS is designed to produce national, regional, and state estimates for public and private elementary and secondary schools and their related components. Data from the SASS Teacher Questionnaire are designed to support comparisons of public and private school teachers with different levels of experience (1 year of experience, 3 years or less of experience, or more than 3 years of experience) at the state level. Comparisons by race/ethnicity and full- or part-time status are supported at the national level.

Sample Selection

Public schools. The starting point for the SASS public school sampling frame was the Common Core of Data Nonfiscal School Universe Data File. The SASS sample is a stratified probability-proportionate-to-size (PPS) sample, and all public schools underwent multiple levels of stratification. The sample was allocated so that national-, regional-, and state-level elementary, secondary, and combined public school estimates could be made. The sample was allocated to each state by grade range (elementary, secondary, and combined for charters;² primary, middle, high, and combined for traditional public schools) and school type (traditional public versus public charter). Within each stratum, all public schools were selected systematically using a PPS algorithm based on the school’s teacher count.

After adding, deleting, and collapsing school records, the sampling frames and subsequent samples for each administration of data used in this report are listed below:

² Charter schools were specifically identified for special sampling procedures in 1999–2000.

- 1987–88: Sampling frame of about 79,000 traditional public schools resulting in a total public school sample of about 9,300 traditional public schools;
- 1999–2000: Sampling frame of about 85,000 traditional public schools resulting in a sample of about 9,300 traditional public schools, plus 1,122 public charter schools sampled with certainty;
- 2007–08: Sampling frame of about 94,400 traditional public schools and 3,800 public charter schools resulting in a sample of about 8,900 traditional schools and 370 public charter schools; and
- 2011–12: Sampling frame of 90,530 traditional public schools and 5,080 public charter schools resulting in a total public school sample of about 10,250 traditional public schools and 750 public charter schools.

Public school teachers. In 2011–12, teachers in SASS were defined as staff who teach regularly scheduled classes to students in any of grades K–12. Teacher rosters (Teacher Listing Forms) were collected from sampled schools, primarily by mail, and compiled at the Census Bureau. Sampling of teachers was conducted on an ongoing basis throughout the roster collection period. The Census Bureau first stratified teachers into four levels: beginning teachers (in their 1st year of teaching); early-career teachers (in their 2nd or 3rd years of teaching); mid-career teachers (in their 4th through 19th years of teaching); and experienced teachers (in their 20th or later years of teaching).³ Teachers within a school were sorted by the teacher stratum code, the subject matter taught, and the teacher line number code, which identified an individual within the teacher list. Within each teacher stratum in each school, teachers were selected systematically with equal probability.

Sampling rates for teachers varied between the strata listed above. The maximum number of teachers per school was set at 20 to limit the number of cases in which a large proportion of a school’s teachers were sampled. The nonresponse rate to the Teacher Listing Form for eligible public schools ranged from 4 percent in 1987–88 to 20 percent in 2011–12. Within each teacher stratum in each school, teachers were selected systematically with equal probability. The samples of public school teachers for each administration of data used in this report are as follows:

- 1987–88: About 56,200 teachers from public schools;
- 1999–2000: About 61,300 teachers from public schools;
- 2007–08: About 48,400 teachers from public schools; and
- 2011–12: About 51,100 teachers from public schools.

Charter schools. Charter schools were first sampled for SASS during the 1999–2000 school year. During this school year a universe of charter schools was created and all

³ In the 2007–08 administration, beginning and early-career teachers were oversampled to improve the survey estimates for this subpopulation.

schools on the list were sampled with certainty. For the 2007–08 and 2011–12 administrations, charter schools were sampled as part of the public school collection using the same PPS methods as those for traditional schools.

Bureau of Indian Education (BIE) schools. SASS began collecting data from BIE schools at its inception in 1987–88 and started sampling BIE schools separately in 1990–91. This collection was discontinued in 2011–12. There were no BIE schools or teachers sampled for the 2011–12 SASS.

Private schools. The starting point for SASS private school sampling frame was the Private School Universe Survey (PSS), supplemented with private school organizations and state lists collected by the Census Bureau. Schools that were identified via a source other than the PSS were considered area frame schools and were sampled with certainty. The private school sample then was treated in the same manner as the public school sample, using a stratified PPS sample. The sample was allocated so that national- and regional-level private school estimates could be made. The sample was allocated to each region by grade range (primary, secondary, and combined). Schools also were stratified by religious affiliation.

After adding, deleting, and collapsing school records, the sampling frames and subsequent samples for each administration of data used in this report are as follows:

- 1987–88: Sampling frame of about 23,600 private schools resulting in a total private school sample of about 3,500 schools;
- 1999–2000: Sampling frame of about 29,400 private schools resulting in a total private school sample of about 3,600 schools;
- 2007–08: Sampling frame of about 28,400 private schools resulting in a total private school sample of about 2,800 schools; and
- 2011–12: Sampling frame of about 28,500 private schools resulting in a total private school sample of about 3,000 schools.

Private school teachers. Private school teachers were defined, like public school teachers, as staff who teach regularly scheduled classes to students in any of the grades K–12.

Sampling rates for teachers varied between the strata listed above. The maximum number of teachers per school was set at 20 to limit the number of cases in which a large proportion of a school’s teachers were sampled. The nonresponse rate to the Teacher Listing Form for eligible private schools ranged from 12 percent in 1987–88 to 28 percent in 2011–12. For these schools, no teachers were selected. Within each teacher stratum in each school, teachers were selected systematically with equal probability.

The samples of private school teachers for each administration of data used in this report are as follows:

- 1987–88: About 11,500 teachers from private schools;
- 1999–2000: About 10,800 teachers from private schools;
- 2007–08: About 8,200 teachers from private schools; and
- 2011–12: About 7,000 teachers from private schools.

Data Collection Procedures

SASS was collected as a self-administered, mail-based survey with telephone, and in later years, field follow-up. For precise details on mailing procedures and follow-up activities, please refer to the survey documentation for each survey administration.

Data Processing and Imputation

The Census Bureau performed the data processing. Each questionnaire was coded according to its status (a completed interview, a noninterview, or an out-of-scope case). Cases with data entries were classified as completed interviews. Cases without data or cases where the respondent refused to complete the survey were classified as non-interviews. A computer pre-edit program generated a list of cases where problems occurred as defined by edit specifications. When necessary, the Census Bureau followed up to collect data on key items from schools.

After the completion of range, consistency, and blanking edits, the records were put through another edit to make a final determination of whether the case was eligible for the survey, and if so, whether there were sufficient data for the case to be classified as an interview. A final interview status recode value was assigned to each case as a result of the edit.

SASS used four methods to impute values for questionnaire items that respondents did not answer: (1) using data from other items on the questionnaire, (2) extracting data from a related component of SASS, (3) extracting data from the sampling frame (Common Core of Data or PSS), and (4) extracting data from the record of a sampled case with similar characteristics using a modified “hot deck” imputation calling on direct values and ratios.

Response Rates

Unit response rates. The unit response rate indicates the percentage of sampled cases that met the definition of a complete interview. The weighted SASS unit response rate was produced by dividing the base-weighted number of respondents who completed questionnaires by the base-weighted number of eligible sampled cases.

Overall response rates. The overall response rate represents the response rate to the survey, taking into consideration each of its stages. For teachers, the overall response rate is calculated as the product of the response rate to two stages: the Teacher Listing Form and the Teacher Questionnaire.

The overall response rates for each public and private teacher questionnaire in each administration of data are as follows:

- 1987–88: Among public school teachers, the weighted overall response rate was 86.4 percent; among private school teachers, the weighted overall response rate was 79.1 percent.
- 1999–2000: Among traditional public school teachers, the weighted overall response rate for teachers was 83.1 percent; among private school teachers, the weighted overall response rate was 77.2 percent; and among public charter schools, the weighted overall response rate was 78.6 percent.
- 2007–08: Among public school teachers, the weighted overall response rate was 72.4 percent; among private school teachers, the weighted overall response rate was 65.9 percent.
- 2011–12: Among public school teachers, the weighted overall response rate was 61.8 percent; among private school teachers, the weighted overall response rate was 50.1 percent.

Item response rates. The item response rate indicates the percentage of eligible respondents who answered a given survey question or item. The weighted SASS item response rate is calculated by dividing the base-weighted number of respondents who provided an answer to an item by the base-weighted number of respondents eligible to answer that item.

The response rate for four of the variables used in this report fell below NCES’s standards. These items include the field that best describes previous occupation in the field of education (1987–88 administration, response rate less than 80 percent); the field that best describes previous occupation in a field outside of education (1999–2000 administration, response rate less than 75 percent); teaching full or part time in any grades K–12; teaching in addition to main activity for 2010–11 position classification (2011–12 administration, response rate 81.2 percent and 79.1 percent, respectively).

Nonresponse Bias Analysis

Because the *NCES Statistical Standards* (4–4) require analysis of nonresponse bias for any survey stage with a base-weighted response rate of less than 85 percent, all SASS files were evaluated for potential bias. The base-weighted response rate for the

Teacher Listing Form and the teacher survey for public school and private school teachers, by year, appear in table B-1.

Table B-1. SASS teacher survey populations, by unweighted, base-weighted, and base-weighted overall response rates: Selected years 1987–88 through 2011–12

Survey administration year	Survey population	Unweighted unit response rate	Base-weighted unit response rate	Base-weighted overall response rate ¹
1987–88	Public school Teacher Listing Form	—	—	†
	Public school teacher	—	—	86.4
	Private school Teacher Listing Form	—	—	†
	Private school teacher	—	—	79.1
1999–2000	Public school Teacher Listing Form	93.1	92.2	†
	Public school teacher	81.2	83.1	76.6
	Private school Teacher Listing Form	85.8	87.0	†
	Private school teacher	74.9	77.2	67.2
2007–08	Public school Teacher Listing Form	86.7	86.2	†
	Public school teacher	84.0	84.0	72.4
	Private school Teacher Listing Form	83.3	85.1	†
	Private school teacher	77.2	77.5	66.0
2011–12	Public school Teacher Listing Form	82.4	79.6	†
	Public school teacher	76.8	77.7	61.8
	Private school Teacher Listing Form	77.2	71.6	†
	Private school teacher	67.6	69.9	50.1

— Not available.

† Not applicable.

¹ The base-weighted overall response rate is estimated using the base-weighted questionnaire response rate times the base-weighted response rate for the school Teacher Listing Form.

NOTE: To obtain base-weighted response rates, unweighted response rates are weighted using the inverse of the probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *User's Manual for the 2011–12 Schools and Staffing Survey, Volume 1: Overview*.

For the public school Teacher Listing Form and public school teacher files, national-level estimates were first evaluated within charter and noncharter schools. Next, the base-weighted⁴ unit response rate was calculated by state strata. If the base-weighted response rate for any state stratum was less than 85 percent, a detailed comparison of respondents to the frame population was conducted by examining several characteristics. For public school teachers, these characteristics were teaching subject, community type, and school level. Similar analyses were performed on private school teacher files, on the characteristic of school size, specifically, schools with fewer than five teachers.

For the Teacher Listing Form, a difference between the frame and respondent population was considered noteworthy if the difference was statistically significant and the following three conditions were met:

- The relative difference between the frame and respondent population was greater than 10 percent;
- The absolute difference was greater than 1 percentage point; and
- The cell for each subpopulation contained at least 30 interviews.

For further information on unit or item response rates and nonresponse bias analysis, see *User's Manual, 1987–88 Schools and Staffing Survey* (Kaufman 1991), *1999–2000 Schools and Staffing Survey Data File User's Manual* (Tourkin et al. 2004), *Documentation for the 2007–08 Schools and Staffing Survey* (Tourkin et al. 2010), and *Documentation for the 2011–12 Schools and Staffing Survey* (Chambers et al. forthcoming).

Weighting

The general purpose of weighting is to scale up the sample estimates to represent the target survey population. For SASS, a base weight (e.g., the inverse of the sampled teacher's probability of selection) is used as the starting point. Next, a series of nonresponse adjustment factors are calculated and applied based on a weighting cell adjustment. Weighting cells are developed using tree search algorithms. These cells are selected to be homogeneous in response propensity within cells and heterogeneous in response propensity across cells. The adjustment is the inverse of the weighted response rate within each cell, and each respondent in the cell receives this adjustment. Nonrespondents are given a weight of zero: the respondents are reweighted to represent the nonrespondents. Finally, a ratio adjustment factor is

⁴ Unit nonresponse bias analysis was conducted using the base weight, defined as the product of the initial base weight (the inverse of the probability of selection) and the sampling adjustment factor. The sampling adjustment factor is an adjustment that accounts for circumstances that affect the school's probability of selection that are identified after the data collection has begun, such as a merger, duplication, or incorrect building-level collapsing (for example, a junior high school and a senior high school merge to become a junior/senior high school).

calculated and applied to the sample to adjust the sample totals to the frame totals. The product of these factors is the final weight for each SASS respondent; this variable appears as TCHWGT in the 1987–88 data file and TFNLWGT in the 1999–2000, 2007–08, and 2011–12 data files. The teacher final weight was used for all analyses in this report. For further information on weighting, see the relevant survey documentation for each administration of SASS data used in this report.

Variance Estimation

In surveys with complex sample designs, such as SASS, direct estimates of sampling errors that assume a simple random sample typically underestimate the variability in the estimates. The SASS sample design and estimations include procedures that deviate from the assumption of simple random sampling, such as stratifying the school sample, oversampling new teachers, and sampling with differential probabilities.

One method of calculating sampling errors of complex sample designs is replication. Replication methods involve constructing a number of subsamples (i.e., replicates) from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic.

Each SASS data file includes a set of replicate weights designed to produce variance estimates. The set of replicate weights for each file should be applied to the respondents in that file.

Reliability of Data

SASS estimates are based on samples. The sample estimates may differ somewhat from the values that would be obtained from the universe of respondents using the same questionnaire, instructions, and field representatives. The difference occurs because a sample survey estimate is subject to two types of errors: sampling and nonsampling error. Sampling error occurs because data are collected from a sample of teachers instead of all teachers and estimates based on the sample may differ from the values that would be obtained from the universe of respondents using the same questionnaire, instructions, and field representatives. Estimates of the magnitude of sampling error are part of the variance estimation process described above.

Nonsampling errors are attributed to many sources, including definitional difficulties, the inability or unwillingness of respondents to provide correct information, differences in the interpretation of questions, an inability to recall information, errors made in collection (e.g., in recording or coding the data), errors made in processing the data, and errors made in estimating values for missing data. Quality control and

edit procedures were used to reduce errors made by respondents, coders, and interviewers.

Tests of Significance

The tests of significance used in this analysis are based on Student's t statistics. The formula used to compute Student's t statistic is as follows:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}}$$

where E_1 and E_2 are the first and second estimates being compared, and se_1 and se_2 are the corresponding standard errors. All t test comparisons assume independent samples. No corrections are made for multiple comparisons. The computation of standard errors can be done easily with one of the following software programs: WesVar Complex Sample Software, SAS version 9 and higher, SUDAAN (written within a SAS statistical package), Stata 10, or AM Statistical Software.⁵ All differences cited in the text of this report are statistically significant at the $p < .05$ level.

Report Sample

All newly hired teachers reported that they started working at the school in the academic year of the survey administration.⁶ In 2011–12, teachers could report the school year when they began working (e.g., 2007–08). In prior administrations of the survey, teachers only reported the single year in which they started work (e.g., 2008 or 2009). To match the 2011–12 responses, all newly hired teachers in the report sample could report the academic year of the survey in each administration. There is no way to identify whether teachers began in the spring or fall of the year they report. Newly hired teachers were limited to regular teachers (e.g., not substitute teachers) working full or part time but more than half time.

Several cases that fit the above two criteria were also dropped from the analyses. These cases are categorized into three groups. First, 7–24 percent of full-/part-time, newly hired teachers in 1987–88, 1999–2000, 2007–08, and 2011–12 reported their main activity in the prior year was “working in this school.” Given the challenges of assigning a certain analytical meaning to newly hired teachers at a school who also

⁵ For information on each of these software programs, see their respective websites: http://www.westat.com/expertise/information_systems/wesvar, http://www.sas.com/en_us/software/sas9.html, <http://www.rti.org/SUDAAN>, <http://www.stata.com>, and <http://www.am.air.org>.

⁶ The teacher questionnaire asks, “In what school year did you begin teaching at THIS school?” The question includes instructions not to include time spent as a student teacher.

worked in the school the previous year, a portion of cases (7 to 24 percent at each time point) were dropped from the sample.⁷ Second, a small percentage of cases (2 percent or less) were missing data on the year they graduated from college or received their highest in the second year of the survey administration rather than the first (e.g., graduated in 1988 and reported first year of teaching as 1987–88). Finally, some teachers were dropped from the sample because they reported being a newly hired teacher with only 1 year of teaching experience⁸ but also having worked as a primary or secondary teacher in the prior year. Among public school teachers, those teachers who transferred from within the district or school system were also excluded from the report sample. Twenty to 30 percent of new teachers in public schools were not considered to be newly hired based on this definition. This report does not include transfers that moved to a new school within the same school district or system because many systems operate under a district model, where all schools in the system receive uniform recommendations for curriculum and teacher allocation. Table B-2 shows the weighted percentage of newly hired full-time/part-time teachers represented in the report for public and private schools.

Table B-2. Percentage distribution of teachers reporting the survey year as when they began teaching at the current school, by newly hired status and excluded cases: Selected years 1987–88 through 2011–12

Report sample	1987–88	1999–2000	2007–08	2011–12
Public school teachers reporting first year in new school	263,000	408,000	465,000	369,000
Percent of new teachers considered newly hired	51.8	68.0	68.5	53.1
Excluded (percent):				
Prior activity: Working in this school	24.1	10.1	7.4	15.5
District transfers	22.9	19.7	22.3	29.8
Missing data on education or graduated in spring of survey administration	1.3	2.2	1.9	1.7
Private school teachers reporting first year in new school	64,000	79,000	76,000	52,000
Percent of new teachers considered newly hired	77.6	86.3	88.2	84.1
Excluded (percent):				
Prior activity: Working in this school	20.7	9.7	8.0	12.5
Missing data on education or graduated in spring of survey administration	1.7	4.0	3.8	3.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, Public and Private School Teacher Data Files, 1987–88, 1999–2000, 2007–08, 2011–12, and Charter School Teacher Data File, 1999–2000.

⁷ To avoid misrepresenting the total number of full-/part-time teachers in the SASS data, the teachers who were dropped were moved to “continuing” teachers in table 1.

⁸ The teacher questionnaire instructs teachers to count their current year of experience when estimating total teaching experience.

The “main activity” teachers report in the previous year is used to identify a newly hired teacher’s source. The questionnaire wording change in 2011–12 is highlighted here, though there are slight changes to question response options in earlier administrations. In 2011–12, the survey instructions provided an additional prompt directed to substitute and itinerant teachers, as follows: “*If you were a substitute or itinerant teacher please mark (X) the box which best applies to your MAIN activity LAST school year.*” In 2007–08 and prior years, no instructions were offered for the question on main activity last school year other than to “*mark (X) the box.*” With the addition of the instructions to substitute teachers in 2011–12, the weighted percentage of newly hired full-time/part-time teachers responding that they taught in the same school the previous year increased from 7 percent in 2007–08 to 15 percent in 2011–12, meaning a larger number of teachers were excluded from the newly hired sample in 2011–12 relative to 2007–08. This potentially inflates an existing decrease in the number of newly hired teachers between those two administrations. However, the 15 percent of public school teachers who reported they were beginning their first year in the school (newly hired) but taught in the same school the previous year in 2011–12 is a decrease from the 24 percent who provided the same answers in 1987–88.

Report Subpopulations

Sources of Newly Hired Teachers

Four variables describe the sources of newly hired teachers: newly prepared, delayed entrants, transfers, and re-entrants. Newly hired teachers are those who report being hired at their current school in the same academic year as the survey administration. As a result, this definition excluded any teachers who reported working in the SAME school in the previous year as their prior year activity. The source for these newly hired teachers was determined based on three factors: the total years of teaching experience, the maximum year for the highest degree earned, and the teacher’s main activity in the prior year.

To remain consistent with the definitions established by Broughman and Rollefson (2000), this report does not include transfers moving to a new school within the same school district or system (intradistrict transfers) as newly hired teachers. There are several factors that make intradistrict transfers a unique group of teachers relative to other types of transfers. First, intradistrict transfers often enter new schools through shortened application, hiring, and onboarding processes, which are less costly to school districts. Second, intradistrict transfers may be voluntary teacher requests or involuntary based on district needs and union policies. Finally, the literature that addresses intradistrict transfers often assesses these moves in relation to attrition, school equity, and teacher performance (Goldhaber, Gross, and Player 2011), rather than a source of new teachers entering the workforce.

Newly Prepared: This measure is calculated using total years of experience equal to 1, the maximum year for highest degree equals the fall of the survey year (e.g., 2011 for the 2011–12 survey), or the prior year activity was attending college.

Delayed Entrants: This measure is calculated using total years of experience equal to 1, the maximum year for highest degree occurs prior to the fall of a given survey year (e.g., 2010 for the 2011–12 survey) and the prior year activity as anything other than attending college or primary or secondary teaching.

Transfers: This measure is calculated using total years of experience greater than 1 and the prior year activity as teaching in a different school system in the same state, teaching in another state, or teaching in a school in a different sector.

Re-entrants: This measure is calculated using total years of experience greater than 1, and the prior year activity as anything other than primary or secondary teaching.

Sector

This report focuses on newly hired public and private school teachers. Public school teachers include both traditional public school and public charter school teachers in 1999–2000, 2007–08, and 2011–12. Charter schools were not sampled in the 1987–88 SASS administration. In 1999–2000, the universe of charter schools and their teachers was collected separately from the sample of traditional public schools. For the purpose of this report’s analyses, public and charter school data were combined for the 1999–2000 administration.

Measures

This section provides an overview of the measures used to identify newly hired teachers’ characteristics and qualifications.

Teacher Characteristics: Sex, Age, Income, and Race/Ethnicity

In each SASS administration, teachers report their year of birth and whether they identify as male or female. To determine age, the teacher’s birth year is subtracted from the fall of the survey administration (e.g., 1987 or 2007). Base-year income is reported by the teacher in each administration. This figure was adjusted to 2012 constant dollars with the Consumer Price Index.

Teachers’ ethnicity was determined in coding procedures. Teachers reporting their ethnicity as Hispanic were coded as Hispanic regardless of what race they may have also reported. Because of small sample sizes, individuals identifying as Asian, Native Hawaiian or other Pacific Islander, American Indian, or Alaska Native were

categorized together. In 2007–08 and 2011–12, any individual not reporting Hispanic ethnicity but reporting more than one race was categorized as having more than one race. Keeping Two or more races as a row item enables the reader to estimate the small percentage of respondents who may have identified with this option in previous administrations. Teachers missing race/ethnicity data were excluded from the race/ethnicity-specific analyses.

Teacher Qualifications: Highest Degree, Experience, Main Assignment Field, and In-Field Qualifications

The following categories were created to determine highest degree: less than bachelor's degree, bachelor's degree; master's degree; or higher than a master's degree. Bachelor's degree or less includes teachers who reported an associate's degree, technical degree, or no bachelor's degree. A degree higher than a master's degree includes an education specialist diploma, first professional degree, or Ph.D.

Teachers' total years of experience is the sum of full- and part-time teaching experience. It is possible that the total years of experience can exceed the number of years a teacher reports teaching because, for example, a teacher may be working part time and full time simultaneously. A composite variable is available in the 2011–12 administration that adjusts for total years of experience and possible years of experience. Unfortunately, in the 1999–2000 administration, the questionnaire did not ask teachers when they began teaching at the elementary or secondary level. Rather than making the adjustment for possible years teaching on some measures of total years of experience but not others, this report provides a sum of years of experience for each administration. Weighted differences in the mean years of experience for each administration are minimal, with the only change occurring in 1987–88, where average years of experience adjusted for possible years teaching is 7.3, compared to 7.7 average years of experience with full and part time totaled.

Tables 5 and 6 report the qualifications of newly hired teachers with respect to their main teaching assignments. These tables are constructed using the teacher questionnaire item: “This school year, what is your MAIN teaching assignment field at THIS school? (Your main assignment is the field in which you teach the most classes.)” Each teacher had one reported main assignment field. This report identifies 10 teaching fields, as follows: general elementary education/prekindergarten/ kindergarten, English, mathematics, science, social science, foreign languages, art/arts and crafts, music, dance/drama or theater, and health education. The reported fields are generally the certification fields and the core subjects of Elementary and Secondary Education Act (ESEA). These 10 fields are matched across each teacher's reported major field of study and certification area to determine in-field qualifications.

In several fields where matches across main assignment, major, and certification could not be made definitively, teachers with main assignments in these fields were excluded from the analysis in tables 5 and 6 but not from other tables in the report. Because of analytical constraints, the fields of teachers reporting their main assignment as English as a Second Language (ESL), career and technical education (CTE), special education, and those reporting other assignments were excluded. The excluded teachers represent a relatively small sample of newly hired teachers. For example, ESL teachers represented 2 percent or less of all newly hired teachers.

In some of these excluded fields, certification requirements may vary from those included in this report. While special education is reported as a main assignment among 3 to 5 percent of newly hired private school teachers and 12 to 17 percent of newly hired public school teachers, it is not included because of different certification and in-field requirements in both core content and pedagogy. ESEA requirements state that special education teachers must hold certification in both a special education area and the core subject in which they teach. This means a newly hired special education teacher would report multiple certifications. Teachers of CTE subjects often lack any postsecondary degree and may be state certified by virtue of a postsecondary vocational certificate or vocational work experience. Teachers of foreign languages are assigned to this field rather than a specific language they may report as their major and/or certification area.

There are important changes across administrations as to how certification is measured in the SASS Teacher Questionnaires. In the school year 1999–2000 Teacher Questionnaire, respondents reported whether they were certified in their main teaching assignment. The question relied on teachers’ self-reporting to match their main assignments to certifications held. In an effort to improve reliability, these items were revised in school year 2003–04. Separate questions were asked about main teaching assignment and certification. Respondents were first asked to identify the subject code for their main assignments and in a later section of the survey to identify subject codes for all subjects covered by the certification(s) they held. As a result, the determination of whether teachers were certified in their main assignments was left to the analyst. Since school year 2003–04, researchers have been able to match the course taught with certification areas rather than having to rely on teachers’ self-matching. Because of differences in measurement and changes in the analyses, readers are cautioned to keep this difference in mind when comparing estimates on this topic after 1999–2000 to estimates from 1999–2000 and earlier.

Prior Year Activity

Table 7 describes each newly hired teacher’s activities in the year prior to the first year in the current school. Prior activity was analyzed for all newly hired teachers and

categorized into one of the following groups: teaching, working but not teaching, attending college, caring for others, or other. Prior teaching and working but not teaching activities were analyzed with further breakdowns. Previous teaching experience was categorized as teaching in another sector, teaching in the same sector but a different school system, teaching preschool, or teaching at the postsecondary level.

Appendix C—Glossary of Variables Used in This Report

This appendix includes the variables used to create the measures described in this report. The entries are in alphabetical order by the label used in the report tables. The variables used to create each row are included for each respective administration. All variable descriptions can be applied to the public and private school surveys unless differences between survey question responses are noted.

Age. Year of birth was subtracted from the fall of the survey year.

- 1987–88: TSC322;
- 1999–2000: T0360;
- 2007–08: T0360; and
- 2011–12: T0534.

Alternate certification. Teachers who entered teaching through an alternate certification program are those who participated in a program designed to expedite the transition of nonteachers into a teacher career.

- 1987–88: Not available;
- 1999–2000: T0104, T0106;
- 2007–08: T0153; and
- 2011–12: T0311.

Delayed entrants. Delayed entrants report beginning at the school in the survey year, having 1 year of teaching experience (counting the current year), and their main activity in the previous year was not working as a teacher at another school.

- 1987–88: TSC031 (began teaching at this school in 87 or 88); sum of TSC023, TSC024, TSC025, TSC026=1 (total experience); TSC290>4, but not 6;
- 1999–2000: T0064 (began teaching at this school in 99 or 00); sum of T0065, T0066, T0068, T0069=1 (total experience); T0059>6;
- 2007–08: T0036 (began teaching at this school in 07 or 08); sum of T0038, T0039, T0041, T0042=1 (total experience); T0030>6; and
- 2011–12: T0030 (began teaching at this school in 11-12); sum of T0043, T0044, T0047=1 (total experience); T0031>6.

Highest degree earned. There are four categories: less than a bachelor’s degree, bachelor’s degree, master’s degree, and higher than a master’s degree. Less than a bachelor’s degree includes any teacher reporting an associate’s degree or no degree. Bachelor’s degree includes any teacher with at least one bachelor’s degree but no higher degree. Master’s degree includes any teacher with at least one master’s degree but no degree higher. Higher than a master’s degree includes any teacher with a doctorate or professional degree (Ph.D., Ed.D., M.D., J.D., D.D.S), a Certificate of Advanced Graduate Studies, or an educational specialist or professional diploma (at least 1 year beyond a master’s level).

- 1987–88: TSC044, TSC048, TSC052, TSC056, TSC060, TSC064, TSC068;
- 1999–2000: T0072, T0081, T0088, T0091, T0094, T0097, T0100;
- 2007–08: T0113, T0123, T0129, T0132, T0135, T0138, T0141; and
- 2011–12: T0163, T0170, T0187, T0190, T0193, T0196, T0199.

Income (base-year salary and total year-round salary). Base-year salary was self-reported by teachers. Using the Consumer Price Index, adjustments were made to the salaries provided in the 1987–88, 1999–2000, and 2007–08 surveys to 2012 constant dollars. Total year-round salary was obtained from a composite variable (EARNALL), with the exception of 1987–88, where teachers self-reported total year-round income.

- 1987–88: TSC307, TSC310;
- 1999–2000: T0347, EARNALL;
- 2007–08: T0343, EARNALL; and
- 2011–12: T0508, EARNALL.

Main assignment. There are 10 main assignment fields used in this report. These are general elementary education/prekindergarten/kindergarten, English, mathematics, science, social science, foreign languages, art/arts and crafts, music, dance/drama or theater, and health education.

- 1987–88: TSC075;
- 1999–2000: T0102;
- 2007–08: T0067; and
- 2011–12: T0090.

Using exhibit C-1, readers are able to crosswalk the majors and certification areas that were matched to the subjects that teachers instructed (i.e., the “in-field” qualifications for each subject). The subjects and corresponding “in-field” qualifications included in this report are closely aligned with prior NCEES publications (Baldi, Warner-Griffin, and Tadler 2015; Hill and Stearns 2015). See exhibit C-1.

Exhibit C-1. Crosswalk of main assignment, major fields, and certification areas, by subject area and survey year

Subject area	Administration	Main assignment	Major field	Certification area
General Elementary, Pre-K, K	1987–88	Prekindergarten (01) Kindergarten (02) Elementary (03)	Elementary education (51) Pre-elementary/early Childhood education (52)	Self-reported
	1999–2000	Prekindergarten (01) Kindergarten (02) Elementary (03)	Early childhood education or pre-elementary education (01) Prekindergarten (02) Kindergarten (03) Elementary education (04)	Self-reported
	2007–08	Early childhood or pre-K, general (101) Elementary grades, general (102)	Early childhood or pre-K, general (101) Elementary grades, general (102)	Early childhood or pre-K, general (101) Elementary grades, general (102)
	2011–12	Early childhood or pre-K, general (101) Elementary grades, general (102)	Early childhood or pre-K, general (101) Elementary grades, general (102)	Early childhood or pre-K, general (101) Elementary grades, general (102)
English	1987–88	English/Language arts (09) Reading (18)	Communications (16) Letters (English, literature, speech, classics) (24) English education (59) Reading education (66)	Self-reported
	1999–2000	English or language arts (23) Journalism (24) Reading (25)	English/language arts education (12) Reading education (20) English literature or composition (49) Communications or journalism (50)	Self-reported
	2007–08	Communications (151) Composition (152) English (153) Journalism (154) Language Arts (155) Reading (158) Speech (159)	Communications (151) Composition (152) English (153) Journalism (154) Language Arts (155) Linguistics (156) Literature or literary criticism (157) Reading (158) Speech (159)	Communications (151) Composition (152) English (153) Journalism (154) Language Arts (155) Reading (158) Speech (159)
	2011–12	Communications (151) Composition (152) English (153) Journalism (154) Language Arts (155) Reading (158) Speech (159)	Communications (151) Composition (152) English (153) Journalism (154) Language Arts (155) Linguistics (156) Literature or literary criticism (157) Reading (158) Speech (159)	Communications (151) Composition (152) English (153) Journalism (154) Language Arts (155) Reading (158) Speech (159)

Exhibit C-1. Crosswalk of main assignment, major fields, and certification areas, by subject area and survey year—Continued

Subject area	Administration	Main assignment	Major field	Certification area
Mathematics	1987–88	Mathematics (16) Computer science (08)	Computer and information sciences (17) Engineering (18) Mathematics (26) Mathematics education (63)	Self-reported
	1999–2000	Mathematics (16) Computer science (09)	Mathematics education (17) Mathematics (57) Statistics (58) Computer science (68) Engineering (69)	Self-reported
	2007–08	Algebra I(191) Algebra II (192) Algebra III (193) Basic and general mathematics (194) Business and applied math (195) Calculus and pre-calculus (196) Computer science (197) Geometry (198) Pre-algebra (199) Statistics and probability (200) Trigonometry (201)	Mathematics (190) Computer science (197) Engineering (214)	Mathematics (190) Computer science (197)
	2011–12	Algebra I(191) Algebra II (192) Algebra III (193) Basic and general mathematics (194) Business and applied math (195) Calculus and pre-calculus (196) Computer science (197) Geometry (198) Pre-algebra (199) Statistics and probability (200) Trigonometry (201)	Mathematics (190) Computer science (197) Engineering (214)	Mathematics (190) Computer science (197)
	1987–88	Biology (21) Chemistry (22) Earth science/geology (23) Physics (24) General and all other science (25)	Biological/life science (14) Chemistry (33) Physics (34) Geology/earth science (35) Other physical sciences (36) Science education (67)	Self-reported
Science	1987–88	Biology (21) Chemistry (22) Earth science/geology (23) Physics (24) General and all other science (25)	Biological/life science (14) Chemistry (33) Physics (34) Geology/earth science (35) Other physical sciences (36) Science education (67)	Self-reported

Exhibit C-1. Crosswalk of main assignment, major fields, and certification areas, by subject area and survey year—Continued

Subject area	Administration	Main assignment	Major field	Certification area	
Science	1999–2000	Biology (32)	Biology/Life science (59)	Self-reported	
		Chemistry (33)	Chemistry (60)		
		Earth/space science/geology (34)	Geology/Earth science (61)		
	2007–08	General science (35)	Physics (62)		
		Physical science (36)	Other natural sciences (63)		
		Physics (37)	Science education (22)		
		Other natural sciences (38)			
		Science, general (210)	Biology or life sciences (211)		Science, general (210)
		Biology or life science (211)	Chemistry (212)		Biology or life sciences (211)
2011–12	Chemistry (212)	Earth sciences (213)	Chemistry (212)		
	Earth science (213)	Physics (217)	Earth sciences (213)		
	Integrated science (215)	Other natural sciences (218)	Physical sciences (216)		
	Physical sciences (216)		Physics (217)		
	Physics (217)		Other natural sciences (218)		
	Science, general (210)	Biology or life sciences (211)	Science, general (210)		
Social Science	1987–88	Biology or life science (211)	Chemistry (212)	Biology or life sciences (211)	
		Chemistry (212)	Earth sciences (213)	Chemistry (212)	
		Earth science (213)	Physics (217)	Earth sciences (213)	
		Integrated science (215)	Other natural sciences (218)	Physical sciences (216)	
		Physical sciences (216)		Physics (217)	
		Physics (217)		Other natural sciences (218)	
		1999–2000	Social studies/social science (20)	Area and ethnic studies (13)	Self-reported
			American Indian/Native American studies (04)	Law (23)	
		Social Science	1999–2000	Social studies or social sciences (including history) (22)	Psychology (30)
	Public affairs and services (31)				
	Economics (37)				
	History (38)				
	Political science and government (39)				
	Sociology (40)				
	Other social sciences (41)				
	Social studies/social sciences education (68)				
	Indian education (Native American) (16)				
	American Indian/Native American studies (65)				
	Other area or ethnic studies (81)				
	Economics (82)				
	History (83)				
	Political science and government (84)				
	Psychology (85)				
	Sociology (86)				
	Other social sciences (87)				
	Social studies/social science education (23)				

Exhibit C-1. Crosswalk of main assignment, major fields, and certification areas, by subject area and survey year—Continued

Subject area	Administration	Main assignment	Major field	Certification area
Social Science	2007–08	Social studies, general (220) Anthropology (221) Economics (225) Geography (226) Government or civics (227) History (228) Native American studies (231) Psychology (233) Sociology (234)	Anthropology (221) Area or ethnic studies (excluding Native American Studies) (222) Criminal justice (223) Cultural studies (224) Economics (225) Geography (226) Government or civics (227) History (228) International studies (229) Law (230) Native American studies (231) Political science (232) Psychology (233) Sociology (234) Other social sciences (235)	Social studies, general (220) Anthropology (221) Economics (225) Geography (226) Government or civics (227) History (228) Native American studies (231) Psychology (233) Sociology (234) Other social sciences (235)
	2011–12	Social studies, general (220) Anthropology (221) Economics (225) Geography (226) Government or civics (227) History (228) Native American studies (231) Psychology (233) Sociology (234)	Social studies, general (220) Anthropology (221) Area or ethnic studies (excluding Native American Studies) (222) Criminal justice (223) Cultural studies (224) Economics (225) Geography (226) Government or civics (227) History (228) International studies (229) Law (230) Native American studies (231) Political science (232) Psychology (233) Sociology (234) Other social sciences (235)	Social studies, general (220) Anthropology (221) Economics (225) Geography (226) Government or civics (227) History (228) Native American studies (231) Psychology (233) Sociology (234) Other social sciences (235)
Foreign Languages	1987–88	Bilingual education (06) Foreign language (11)	Foreign languages (20) Foreign languages education (60)	Self-reported
	1999–2000	Bilingual education (08) French (26) German (27) Latin (28) Russian (29) Spanish (30) Other foreign languages (31)	French (51) German (52) Latin (53) Russian (54) Spanish (55) Other languages (56)	Self-reported
	2007–08	French (171) German (172) Latin (173) Spanish (174) Other foreign language (175)	French (171) German (172) Latin (173) Spanish (174) Other foreign language (175)	French (171) German (172) Latin (173) Spanish (174) Other foreign language (175)

Exhibit C-1. Crosswalk of main assignment, major fields, and certification areas, by subject area and survey year—Continued

Subject area	Administration	Main assignment	Major field	Certification area
Foreign Languages	2011–12	French (171)	French (171)	French (171)
		German (172)	German (172)	German (172)
		Latin (173)	Latin (173)	Latin (173)
		Spanish (174)	Spanish (174)	Spanish (174)
		Other foreign language (175)	Other foreign language (175)	Other foreign language (175)
Art/Arts and Crafts	1987–88	Art (04)	Fine and applied arts (19) Art education (55)	Self-reported
	1999–2000	Art (06)	Art education (07) Art, fine and applied (45)	Self-reported
	2007–08	Art or arts and crafts (141)	Art or arts and crafts (141) Art history (142)	Art or arts and crafts (141)
	2011–12	Art or arts and crafts (141)	Art or arts and crafts (141) Art history (142)	Art or arts and crafts (141)
Music	1987–88	Music (17)	Music education (64)	Self-reported
	1999–2000	Music (18)	Music education (18) Music (47)	Self-reported
	2007–08	Music (145)	Music (145)	Music (145)
	2011–12	Music (145)	Music (145)	Music (145)
Dance/Drama or Theater	1987–88	N/A	N/A	Self-reported
	1999–2000	Dance (10) Drama/Theater (11)	Drama or theater (46) Other visual/performing arts (48)	Self-reported
	2007–08	Dance (143) Drama or theater (144)	Dance (143) Drama or theater (144)	Dance (143) Drama or theater (144)
	2011–12	Dance (143) Drama or theater (144)	Dance (143) Drama or theater (144)	Dance (143) Drama or theater (144)
Health Education	1987–88	Health, physical education (13)	Health education (21) Physical education/health education (65)	Self-reported
	1999–2000	Health education (15) Physical education (20)	Health education (15) Physical education (19)	Self-reported
	2007–08	Health education (181) Physical education (182)	Health education (181) Physical education (182)	Health education (181) Physical education (182)
	2011–12	Health education (181) Physical education (182)	Health education (181) Physical education (182)	Health education (181) Physical education (182)

Newly prepared teachers. Newly prepared teachers report beginning at the school in the survey year, 1 year of teaching experience (counting the current year), and either (1) earned their highest degree in the previous year or (2) report their main activity in the previous year was attending school.

- 1987–88: TSC031 (began teaching at this school in 87 or 88); sum of TSC023, TSC024, TSC025, TSC026 = 1 (total experience); TSC290 = 6 or the maximum of TSC042, TSC046, TSC050, TSC054, TSC058, TSC062, TSC066, TSC070 = 1987;
- 1999–2000: T0064 (began teaching at this school in 99 or 00); sum of T0065, T0066, T0068, T0069 = 1 (total experience); T0059 = 6 or the maximum of T0071, T0082, T0086, T0089, T0092, T0095, T0098, T0101 = 1999;
- 2007–08: T0036 (began teaching at this school in 07 or 08); sum of T0038, T0039, T0041, T0042 = 1 (total experience); T0030 = 6 or the maximum of T0111, T0121, T0126, T0128, T0131, T0134, T0137, T0140, T0143 = 2007; and
- 2011–12: T0030 (began teaching at this school in 2011–2012); sum of T0043, T0044, T0047 = 1 (total experience); T0031 = 6 or the maximum of T0161, T0172, T0183, T0186, T0189, T0192, T0195, T0198, T0201 = 2011.

Prior year activity. This question was used to identify a newly hired teacher’s source and provide data for table 7. For this table, five broad categories and six subcategories were created. The broad categories and subcategories follow: teaching (including teaching in another system or sector, postsecondary teaching, and preschool teaching), working in a nonteaching position (including a position in the field of education or a position outside the field of education), student at a college or university, caring for family members or on leave, and other activities (including military service, unemployed and seeking work, retired, and other nonspecified positions).

- 1987–88: A combination of two survey questions was used to determine the previous year’s activity for teachers in this administration. For consistencies with the questions used in subsequent SASS administrations, TSC290 was used in addition to TSC032 to determine additional characteristics for teachers who worked in a school the previous year;
- 1999–2000: T0059;
- 2007–08: T0030; and
- 2011–12: T0031.

Race/ethnicity. Hispanic; White, non-Hispanic; Black, non-Hispanic; Asian/Native Hawaiian/other Pacific Islander/American Indian/Alaska Native, non-Hispanic; and in 2007–08 and 2011–12, individuals reporting Two or more races, non-Hispanic.

- 1987–88: TSC321, TSC320;
- 1999–2000: T0359, T0357;
- 2007–08: T0353, T0354–T0358; and
- 2011–12: T0527, T0528–T0532.

Re-entrants. Re-entrants reported beginning at the school in the survey year, more than 1 year of teaching experience (counting the current year), and their main activity in the previous year was not working as a teacher at another school.

- 1987–88: TSC031 (began teaching at this school in 87 or 88); sum of TSC023, TSC024, TSC025, TSC026 > 1 (total experience); TSC290 > 4;
- 1999–2000: T0064 (began teaching at this school in 99 or 00); sum of T0065, T0066, T0068, T0069 > 1 (total experience); T0059 > 6;
- 2007–08: T0036 (began teaching at this school in 07 or 08); sum of T0038, T0039, T0041, T0042 > 1 (total experience); T0030 > 6; and
- 2011–12: T0030 (began teaching at this school in 2011–2012); sum of T0043, T0044, T0047 > 1 (total experience); T0031 > 6.

Sector. Sector notes whether teachers worked in either public or private schools. Teachers were administered separate surveys depending on whether the school was public or private. Public school teachers include both traditional public school and public charter school teachers in 1999–2000, 2007–08, and 2011–12. In the 1987–88 SASS administration, charter schools were not sampled. In 1999–2000, the universe of charter schools and their teachers was collected separately from the sample of traditional public schools. For the purpose of these analyses, public and charter school data were combined for the 1999–2000 administration.

Sex. Categories of male or female were reported in the following variables:

- 1987–88: TSC319;
- 1999–2000: T0356;
- 2007–08: T0352; and
- 2011–12: T0525.

Sources of newly hired teachers. There are four categories: newly prepared teachers, delayed entrants, transfers, and re-entrants. These categories are described more fully in the report and appendix B.

- 1987–88: TSC290, total years of experience, prior year activity;
- 1999–2000: T0059, total years of experience, prior year activity;
- 2007–08: T0030, total years of experience, prior year activity; and
- 2011–12: T0031, total years of experience, prior year activity.

Total years of experience. The sum of all reported full-time teaching years and part-time teaching years in the private and public school sectors.

- 1987–88: TSC023, TSC024, TSC025, TSC026;
- 1999–2000: T0065, T0066, T0068, T0069;
- 2007–08: T0038, T0039, T0041, T0042; and
- 2011–12: T0043, T0044, T0047.

Transfers. There are three types of transfers: across state and within sector, transfer across sector, and transfers within state and sector.

- 1987–88: This survey required the use of two survey questions (question 37a and question 11) to identify those teachers who are transfers (TSC290) and those transferring across states (TSC032). Because of differences in the private school survey, survey question responses changed.
- 1999–2000: The separate survey for charter schools included an option for those who taught in another charter school in the same state as in the previous year. These are included as a within state and sector transfer (T0059).
- 2007–08: T0030.
- 2011–12: T0031.