

Teacher Attrition and Mobility

Results From the 2008-09 Teacher Follow-up Survey



Teacher Attrition and Mobility:

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First Look

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Introduction

The Teacher Follow-up Survey (TFS) is a follow-up of a sample of the elementary and secondary school teachers who participated in the previous year's Schools and Staffing Survey (SASS). The TFS sample includes teachers who leave teaching in the year after the SASS data collection and those who continue to teach.

The objective of TFS is to provide information about teacher mobility and attrition among elementary and secondary school teachers who teach in grades K–12 in the 50 states and the District of Columbia. In pursuit of this objective, TFS examines the characteristics of those who stay in the teaching profession and those who leave, including retirees. By collecting information on respondents' attitudes about the teaching profession and job satisfaction (along with demographic data), TFS can address questions such as the following:

- What percentage of teachers leaves the profession between one year and the next?
- What factors contribute to teachers' decisions to move to another school or to leave the profession?
- How many teachers move from one school to another?
- Where do teachers go when they move or leave?

TFS also allows comparisons of the characteristics and opinions of teachers who remain at the same school the following year with those of teachers who either move to a different school or leave the profession.

TFS has been conducted six times: in the 1988–89, 1991–92, 1994–95, 2000–01, 2004–05, and 2008–09 school years (after the SASS administrations in the 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, and 2007–08 school years, respectively). Conducted by the U.S. Census Bureau, TFS is sponsored by the National Center for Education Statistics (NCES) of the Institute of Education Sciences within the U.S. Department of Education.

The 2008–09 TFS was completed by about 4,750 current and former teachers. Of these respondents, about 2,600 were still teaching at the same school in the 2008–09 school year as in the previous year (“stayers”); 890 were still teaching in 2008–09, but at a different school than in the previous year (“movers”); and 1,260 had left the teaching profession in the previous year (“leavers”). Note that these are unweighted counts of respondents. By design, movers and leavers were sampled at higher rates than stayers. More information about the survey design can be found in the *Documentation for the 2008–09 Teacher Follow-up Survey* (Cox et al. forthcoming).

Because all of the teachers in the TFS sample had been respondents to the SASS Teacher Survey in the previous school year, some questions (e.g., on age, sex, race/ethnicity) are not repeated in the TFS questionnaire. For this reason, some of the data in this report are drawn from the 2007–08 SASS. These SASS data are termed “base-year” data because the SASS responding teachers form the base for the teachers who are selected for TFS.

Because the purpose of this report is to introduce new NCES data through the presentation of tables containing descriptive information, only selected findings are presented. These findings have been chosen to demonstrate the range of information available from the TFS rather than to discuss all of the observed differences; they are not meant to emphasize any particular issue.

More information about TFS can be found at <http://nces.ed.gov/surveys/sass>.

Selected Findings

- Of the 3,380,300 public school teachers who were teaching during the 2007-08 school year, 84.5 percent remained at the same school (“stayers”), 7.6 percent moved to a different school (“movers”), and 8.0 percent left the profession (“leavers”) during the following year. Among the 487,300 private school teachers who were teaching during the 2007-08 school year, 79.2 percent were stayers, 4.9 percent were movers, and 15.9 percent were leavers (table 1).
- Among public school teachers with 1–3 years of experience, 77.3 percent stayed in their base-year school, 13.7 percent moved to another school, and 9.1 percent left teaching in 2008–09 (table 2).
- Among private school teachers with 1–3 years of experience, 72.2 percent stayed in their base-year school, 7.2 percent moved to another school, and 20.6 percent left teaching in 2008–09 (table 3).
- Among public school teacher movers with 4 or more years of teaching experience, 55.3 percent moved from one public school to another public school in the same district and 42.3 percent moved from one public school district to another public school district between 2007–08 and 2008–09 (table 4). Among private school teacher movers with 4 or more years of teaching experience, 35.3 percent moved from a private school to a public school and 64.7 percent moved from one private school to another private school between 2007–08 and 2008–09.
- About 26.2 percent of public school teacher movers changed schools in 2008–09 because of personal life factors, compared to 16.0 percent of private teacher movers (table 5).
- About 5.3 percent of public school teacher leavers left teaching in 2008–09 because their contract was not renewed, compared to 13.0 percent of private school teacher leavers (table 6).
- Among teachers who left teaching in 2008–09, about 8.9 percent of public school teachers, compared to 17.4 percent of private school teachers, were working in an occupation outside the field of education, including military service (table 7).
- Of teachers who left teaching in 2008–09, about 40.8 percent of public school teachers, compared to 15.5 percent of private school teachers, reported opportunities for learning from colleagues were better in their current position than in teaching (table 8).

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Estimate Tables

Table 1. Number and percentage distribution of teacher stayers, movers, and leavers, by sector: selected years 1988–89 through 2008–09

Sector and year	Number				Percent		
	Total base year teachers ¹	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Public							
1988–89	2,386,500	2,065,800	188,400	132,300	86.5	7.9	5.6
1991–92	2,553,500	2,237,300	185,700	130,500	87.6	7.3	5.1
1994–95	2,555,800	2,205,300	182,900	167,600	86.3	7.2	6.6
2000–01	2,994,700	2,542,200	231,000	221,400	84.9	7.7	7.4
2004–05	3,214,900	2,684,200	261,100	269,600	83.5	8.1	8.4
2008–09	3,380,300	2,854,900	255,700	269,800	84.5	7.6	8.0
Private							
1988–89	311,900	242,500	29,700	39,700	77.8	9.5	12.7
1991–92	353,800	287,100	23,200	43,500	81.1	6.6	12.3
1994–95	376,900	310,100	21,700	45,000	82.3	5.8	11.9
2000–01	448,600	354,800	37,600	56,200	79.1	8.4	12.5
2004–05	465,300	374,600	27,600	63,100	80.5	5.9	13.6
2008–09	487,300	386,000	24,000	77,300	79.2	4.9	15.9

¹Base year refers to the year in which the Schools and Staffing Survey (SASS) was administered. The SASS is always administered a year prior to the Teacher Follow-up Survey (TFS). The total number of base year teachers for any year is slightly lower than in previously published counts, as all teachers who responded to SASS but were ineligible for the TFS (e.g., because they died or moved out of the country) were removed from the weighted count of base year teachers.

NOTE: "Stayers" are teachers who were teaching in the same school in the current school year as in the base year. "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year. "Leavers" are teachers who left the teaching profession after the base year. Total numbers are rounded to the nearest 100. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2008–09; *Teacher Attrition and Mobility: Results from the 2004–05 Teacher Follow-up Survey*, U.S. Department of Education, National Center for Education Statistics (NCES 2007-307).

Table 2. Number and percentage distribution of public school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2008–09

Teacher or school characteristic in base year ¹	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	3,380,300	2,854,900	255,670	269,800	84.5	7.6	8.0
School classification							
Traditional public	3,309,200	2,800,700	247,600	260,900	84.6	7.5	7.9
Public charter	71,100	54,200	8,100 !	8,900	76.2	11.4	12.5
Full-time teaching experience							
No full-time teaching experience	36,500 !	27,600 !	5,000 !	3,800	75.8	‡	10.5 !
1–3 years	580,500	448,500	79,440	52,600	77.3	13.7	9.1
4–9 years	965,800	812,300	76,720	76,800	84.1	7.9	7.9
10–19 years	940,200	848,700	51,650	39,900	90.3	5.5	4.2
20 years or more	857,300	717,700	42,860	96,700	83.7	5.0	11.3
Age							
Less than 30 years	575,100	437,700	84,380	53,100	76.1	14.7	9.2
30–39 years	865,500	730,300	62,890	72,300	84.4	7.3	8.4
40–49 years	812,700	727,900	53,410	31,400	89.6	6.6	3.9
50 or more years	1,126,900	958,900	54,980	113,000	85.1	4.9	10.0
Base salary							
Less than \$30,000	183,900	157,700	13,140	13,100	85.8	7.1	7.1
\$30,000–\$39,999	761,500	626,100	75,940	59,400	82.2	10.0	7.8
\$40,000–\$49,999	1,119,300	936,900	87,750	94,600	83.7	7.8	8.5
\$50,000 or more	1,315,700	1,134,200	78,830	102,600	86.2	6.0	7.8
Sex							
Male	762,000	642,900	59,210	59,900	84.4	7.8	7.9
Female	2,618,300	2,212,000	196,460	209,900	84.5	7.5	8.0
Race/ethnicity							
White, non-Hispanic	2,807,300	2,385,400	195,890	226,000	85.0	7.0	8.0
Black, non-Hispanic	257,800	207,600	26,900	23,300	80.5	10.4	9.0
Hispanic, regardless of race	232,200	194,500	24,800	12,900 !	83.8	10.7	5.6 !
Asian/Pacific Islander, non-Hispanic	45,400 !	36,400 !	5,400 !	3,700 !	80.1	‡	8.0 !
American Indian/Alaska Native, non-Hispanic	‡	‡	‡	‡	82.5 !	‡	‡
Two or more races, non-Hispanic	25,900 !	21,400 !	1,870 !	2,700 !	82.5	‡	‡
Main assignment field							
Early childhood/general elementary	1,102,000	958,900	81,130	61,900	87.0	7.4	5.6
Special education	396,500	309,100	38,790	48,600	78.0	9.8	12.3
Arts/music	212,800	188,100	15,890	8,800	88.4	7.5	4.1
English/language arts	418,800	342,700	32,210	43,900	81.8	7.7	10.5
Mathematics	276,200	236,400	18,470	21,300	85.6	6.7	7.7
Natural sciences	198,600	166,700	14,100	17,800 !	83.9	7.1	9.0 !
Social sciences	214,100	180,300	17,560 !	16,300	84.2	8.2 !	7.6
Other	561,300	472,700	37,510	51,100	84.2	6.7	9.1

See notes at end of table.

Table 2. Number and percentage distribution of public school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2008–09—Continued

Teacher or school characteristic in base year ¹	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Teaching status							
Full time	3,077,600	2,621,600	232,060	223,900	85.2	7.5	7.3
Part time	302,700	233,200	23,600	45,900	77.0	7.8	15.2
Certification type²							
Regular or standard state certificate or advanced professional certificate	2,945,500	2,508,600	204,310	232,700	85.2	6.9	7.9
Certificate issued after satisfying all requirements except the completion of a probationary period	151,400	120,600	21,640 !	‡	79.7	14.3 !	‡
Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained	162,800	136,400	13,900	12,600 !	83.7	8.5	7.7 !
Certificate issued to persons who must complete a certification program in order to continue	74,500	58,300	11,720	4,500 !	78.2	15.7	6.0 !
None of the above certifications in this state	46,100	31,100 !	‡	‡	67.5	‡	‡
Community type							
City	950,000	802,700	75,680	71,600	84.5	8.0	7.5
Suburban	1,117,600	941,600	83,420	92,600	84.3	7.5	8.3
Town	456,800	387,900	34,890	34,000 !	84.9	7.6	7.5 !
Rural	855,900	722,700	61,680	71,600	84.4	7.2	8.4
School level							
Elementary	2,210,900	1,875,100	169,750	166,000	84.8	7.7	7.5
Secondary	1,032,400	868,200	73,220	91,000	84.1	7.1	8.8
Combined	137,000	111,600	12,700	12,700	81.4	9.3	9.3 !
School enrollment							
Less than 200	209,200	168,300	21,580	19,300 !	80.5	10.3	9.2 !
200–499	1,030,000	854,300	87,540	88,200	82.9	8.5	8.6
500–749	804,000	704,800	56,160	43,000	87.7	7.0	5.3
750 or more	1,337,100	1,127,500	90,400	119,200	84.3	6.8	8.9
Percent of K–12 students who were approved for free or reduced-price lunches							
0–34	1,435,400	1,240,800	85,030	109,500	86.4	5.9	7.6
35–49	513,600	416,100	44,860	52,700	81.0	8.7	10.3
50–74	739,800	611,400	56,790	71,600	82.6	7.7	9.7
75 or more	630,300	533,000	64,840	32,400	84.6	10.3	5.1
School did not participate in free or reduced-price lunch program	61,300 !	53,500 !	4,150 !	‡	87.4	6.8 !	‡

! Interpret data with caution. The standard error for this estimate is equal to 30 percent or more of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

¹ Base year refers to 2007–08.

² Certification categories refer to in-state requirements only.

NOTE: "Stayers" are teachers who were teaching in the same school in the current school year as in the base year (2007–08). "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year (2007–08). "Leavers" are teachers who left the teaching profession after the base year (2007–08). 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 (SASS), "Public School Teacher Data File," 2007–08; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2008–09.

Table 3. Number and percentage distribution of private school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2008–09

Teacher or school characteristic in base year ¹	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	487,270	386,020	23,970	77,280	79.2	4.9	15.9
Full-time teaching experience							
No full-time teaching experience	36,290	25,020	1,370 !	9,900 !	68.9	3.8 !	27.3 !
1–3 years	102,150	73,760	7,340	21,040	72.2	7.2	20.6
4–9 years	127,630	99,350	9,230	19,050	77.8	7.2	14.9
10–19 years	104,790	87,820	2,740 !	14,230	83.8	2.6 !	13.6
20 years or more	116,410	100,070	3,280	13,060	86.0	2.8 !	11.2
Age							
Less than 30 years	79,000	54,430	7,930	16,650	68.9	10.0	21.1
30–39 years	124,870	96,070	6,090	22,710	76.9	4.9	18.2
40–49 years	99,220	83,070	5,340	10,810	83.7	5.4	10.9
50 or more years	184,170	152,450	4,600	27,120	82.8	2.5	14.7
Base salary							
Less than \$30,000	195,140	146,520	9,490	39,130	75.1	4.9	20.1
\$30,000–\$39,999	123,670	94,650	8,130	20,880	76.5	6.6	16.9
\$40,000–\$49,999	92,570	79,260	3,910	9,400 !	85.6	4.2	10.2
\$50,000 or more	75,880	65,580	2,430	7,870 !	86.4	3.2 !	10.4 !
Sex							
Male	126,280	101,040	7,140	18,100	80.0	5.7	14.3
Female	360,990	284,980	16,820	59,180	78.9	4.7	16.4
Race/ethnicity							
White, non-Hispanic	424,620	342,680	19,630	62,300	80.7	4.6	14.7
Black, non-Hispanic	15,410	10,350	1,320 !	3,740 !	67.2	8.6 !	24.2 !
Hispanic, regardless of race	31,270	21,640	‡	7,410 !	69.2	‡	23.7
Asian/Pacific Islander, non-Hispanic	9,880 !	5,800 !	‡	‡	58.7 !	‡	‡
American Indian/Alaska Native, non-Hispanic	‡	‡	‡	‡	‡	‡	‡
Two or more races, non-Hispanic	5,330 !	5,330 !	#	#	100.0	#	#
Main assignment field							
Early childhood/general elementary	161,630	128,800	10,470	22,370	79.7	6.5	13.8
Special education	15,660	9,840	1,510 !	‡	62.9	‡	27.5 !
Arts/music	37,880	33,280	‡	3,390	87.9	‡	9.0
English/language arts	56,750	45,710	1,670 !	9,370	80.5	2.9 !	16.5
Mathematics	41,030	34,980	‡	5,220 !	85.3	‡	12.7 !
Natural sciences	39,200	31,600	1,880 !	5,720 !	80.6	4.8 !	14.6 !
Social sciences	37,760	31,460	1,630 !	4,680	83.3	‡	12.4 !
Other	97,360	70,360	4,780	22,220	72.3	4.9	22.8
Teaching status							
Full time	394,790	323,620	20,610	50,560	82.0	5.2	12.8
Part time	92,480	62,400	3,350 !	26,730	67.5	3.6 !	28.9

See notes at end of table.

Table 3. Number and percentage distribution of private school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year:
2008–09—Continued

Teacher or school characteristic in base year ¹	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Certification type²							
Regular or full certification by an accrediting or certifying body other than the state	84,900	66,500	6,250	12,140	78.3	7.4	14.3
Regular or standard state certificate or advanced professional certificate	195,030	165,550	7,270	22,200	84.9	3.7	11.4
Certificate issued after satisfying all requirements except the completion of a probationary period	7,890 †	6,270 †	830 †	‡	79.6	‡	‡
Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained	‡	‡	‡	‡	73.5	‡	‡
Certificate issued to persons who must complete a certification program in order to continue	‡	‡	‡	620 †	87.8	‡	‡
None of the above certifications in this state	188,580	138,890	8,890	40,800	73.6	4.7	21.6
Community type							
City	216,720	170,370	11,240	35,120	78.6	5.2	16.2
Suburban	173,020	136,770	8,270	27,980	79.1	4.8	16.2
Town	28,580	23,470	2,150	2,960	82.1	7.5 †	10.3
Rural	68,950	55,400	2,310 †	11,230	80.4	3.4 †	16.3
School level							
Elementary	214,210	169,100	13,790	31,330	78.9	6.4	14.6
Secondary	74,630	61,440	4,070 †	9,120	82.3	5.4 †	12.2
Combined	198,420	155,480	6,110	36,830	78.4	3.1	18.6
School enrollment							
Less than 200	182,500	131,780	11,520	39,190	72.2	6.3	21.5
200–499	174,540	145,320	7,630	21,590	83.3	4.4	12.4
500–749	72,390	62,760	2,720	6,920 †	86.7	3.8	9.6 †
750 or more	57,840	46,160	2,090 †	9,590	79.8	‡	16.6
Percent of K–12 students who were approved for free or reduced-price lunches							
0–34	93,690	74,030	4,160	15,500	79.0	4.4	16.5
35–49	19,470	15,530	‡	3,150 †	79.7	‡	16.2 †
50–74	11,190	8,540 †	1,410 †	1,240 †	76.3	‡	11.1 †
75 or more	15,560	12,510 †	‡	‡	80.4	‡	‡
School did not participate in free or reduced-price lunch program	347,360	275,410	16,970	54,970	79.3	4.9	15.8

Rounds to zero.

† Interpret data with caution. The standard error for this estimate is equal to 30 percent or more of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

¹ Base year refers to 2007–08.

² Certification categories refer to in-state requirements only.

NOTE: "Stayers" are teachers who were teaching in the same school in the current school year as in the base year (2007–08). "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year (2007–08). "Leavers" are teachers who left the teaching profession after the base year (2007–08). 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 (SASS), "Private School Teacher Data File," 2007–08; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2008–09.

Table 4. Percentage distribution of public and private school teacher movers who moved across schools, school districts, and sectors, by sector, years of experience, and type of move: 2007–08 through 2008–09

Type of move	All public	Public		All private	Private	
		1-3 years of experience	4 or more years of experience		1-3 years of experience	4 or more years of experience
Total	100.0	100.0	100.0	100.0	100.0	100.0
Moved from one public school to another public school in the same school district	51.8	43.4	55.3	†	†	†
Moved from one public school district to another public school district	45.5	53.5	42.3	†	†	†
Moved from a public school to a private school	2.6	3.2 !	2.4 !	†	†	†
Moved from a private school to a public school	†	†	†	40.4	53.1	35.3
Moved from one private school to another private school	†	†	†	59.6	46.9	64.7

† Not applicable.

! Interpret data with caution. The standard error for this estimate is equal to 30 percent or more of the estimate's value.

NOTE: "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year (2007–08). "Public" and "Private" in the columns refer to the base year (2007–08). There are 74,790 public school movers and 6,910 private school movers with 1–3 years of teaching experience, and 180,870 public school movers and 17,050 private school movers with 4 or more years of teaching experience. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2008–09.

Table 5. Percentage distribution of public and private school teacher movers who changed schools because their contract was not renewed or who rated various reasons as the most important in their decision to move from their base year school: 2008–09

Reason for moving	Public	Private
Contract was not renewed	10.7	12.7
Reasons for moving, other than contract was not renewed		
Personal life factors	26.2	16.0
Assignment and credential factors	7.5	‡
Salary and other job benefits	4.0 !	23.2
Classroom factors	1.8 !	‡
School factors	16.1	18.9
Student performance factors	1.6 !	‡
Other factors	32.0	24.3

! Interpret data with caution. The standard error for this estimate is equal to 30 percent or more of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

NOTE: "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year (2007–08). "Public" and "Private" in the columns refer to the base year (2007–08). Respondents were asked to choose the most important reason out of various reasons in their decision to move from their base year (2007–08) school. "Other factors" includes teachers who did not indicate their most important reason for moving.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2008–09.

Table 6. Percentage distribution of public and private school teacher leavers who left teaching because their contract was not renewed or who rated various reasons as the most important in their decision to leave the position of a K–12 teacher: 2008–09

Reason for leaving	Public	Private
Contract was not renewed	5.3	13.0
Reasons for leaving, other than contract was not renewed		
Personal life factors	42.9	27.8
Assignment and credential factors	1.2 !	1.6 !
Salary and other job benefits	4.0 !	10.7 !
Other career factors	14.8	22.8
Classroom factors	‡	‡
School factors	9.8	12.1
Student performance factors	3.5	‡
Other factors	17.1	10.3

! Interpret data with caution. The standard error for this estimate is equal to 30 percent or more of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

NOTE: "Leavers" are teachers who left the teaching profession after the base year (2007–08). "Public" and "Private" in the columns refer to the base year (2007–08). Respondents were asked to choose the most important reason out of various reasons in their decision to leave their base year (2007–08) school. "Other factors" includes teachers who did not indicate their most important reason for leaving.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2008–09.

Table 7. Total number and percentage distribution of public and private school teacher leavers, by their current occupational and industry status: 2008–09

Occupational and industry status	Public		Private	
	Number	Percent	Number	Percent
Main occupational status of all leavers				
Total	269,760	100.0	77,280	100.0
Working for a school or school district in a position in the field of K–12 education, but not as a K–12 classroom teacher	70,970	26.3	19,690	25.5
Working in a position in the field of pre–K or postsecondary education	5,480 !	2.0 !	‡	‡
Working in an occupation outside the field of education, including military service	23,910	8.9	13,470	17.4
Student at a college or university	14,840 !	5.5 !	3,680	4.8
Caring for family members	20,300 !	7.5 !	8,910	11.5
Retired	74,880	27.8	9,740	12.6
Disabled	‡	‡	‡	‡
Unemployed and seeking work	15,280	5.7	4,730	6.1
Other	41,300	15.3	11,820	15.3
Industry status of leavers whose main occupational status was working in a position in the field of pre–K or postsecondary education or working in an occupation outside the education field, including military service				
Total	29,380	100.0	16,270	100.0
Employee of a private company, non–profit, business, or individual for wages, salary, or commission	12,410	42.2	11,130	68.4
State, federal, or local government employee	13,600 !	46.3	2,060 !	12.6 !
Self-employed in own business, professional practice, or farm	2,980 !	10.1 !	3,080 !	18.9 !
Working without pay in a family business, farm, or volunteer job	‡	‡	#	#

Rounds to zero.

! Interpret data with caution. The standard error for this estimate is equal to 30 percent or more of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

NOTE: "Leavers" are teachers who left the teaching profession after the base year (2007–08). "Public" and "Private" in the columns refer to the base year (2007–08). 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, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2008–09.

Table 8. Percentage distribution of working public and private school teacher leavers who rated various aspects of their current occupation as better in teaching, better in current position, or not better or worse: 2008–09

Aspects of current occupation	Public			Private		
	Better in teaching	Better in current position	Not better or worse	Better in teaching	Better in current position	Not better or worse
Salary	25.8	47.3	26.9	37.4	45.4	17.2 !
Benefits	29.9	24.4	45.7	13.5 †	28.4	58.1
Opportunities for professional advancement or promotion	19.1 †	47.0	33.9	12.0 †	30.3	57.7
Opportunities for professional development	24.8	37.7	37.5	19.5	24.4	56.1
Opportunities for learning from colleagues	19.7 †	40.8	39.4	21.4	15.5	63.1
Social relationships with colleagues	22.2	31.9	45.9	26.2	19.2	54.6
Recognition and support from administrators/managers	13.2 †	49.9	36.9	15.4 †	21.5	63.1
Safety of environment	10.1 †	38.2	51.6	‡	14.7	76.4
Influence over workplace policies and practices	‡	40.7	46.5	13.7 †	43.1	43.2
Autonomy or control over own work	16.5 †	52.9	30.6	21.0 †	49.0	29.9 †
Professional prestige	20.4 †	45.9	33.7	27.7 †	36.1	36.2
Procedures for performance evaluation	14.6 †	28.9	56.6	12.7 †	13.9	73.4
Manageability of workload	13.0 †	45.2	41.7	13.3 †	58.5	28.1
Ability to balance personal life and work	9.8 †	56.3	33.9	15.6 †	62.7	21.7 †
Availability of resources and materials/equipment for doing your job	‡	43.4	46.7	6.0 †	25.9	68.0
General work conditions	9.4 †	37.0	53.6	‡	23.5	69.0
Job security	28.2	19.4 †	52.3	23.8	21.7	54.5
Intellectual challenge	22.5 †	45.2	32.3	27.2	27.0	45.8
Sense of personal accomplishment	23.1 †	44.6	32.2	27.1	30.1	42.8
Opportunities to make a difference in the lives of others	34.2	31.7	34.0	26.3	18.0 †	55.7

! Interpret data with caution. The standard error for this estimate is equal to 30 percent or more of the estimate's value.

‡ Reporting standards not met. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

NOTE: "Leavers" are teachers who left the teaching profession after the base year (2007–08). Working teacher leavers include former teachers working for a school or school district in a position in the field of K–12 education, but not as a K–12 classroom teacher; former teachers working in a position in the field of pre–K or postsecondary education; and former teachers working in an occupation outside the field of K–12 education, including the military service. Data on leavers who reported working in other occupational categories are not included. "Public" and "Private" in the columns refer to the base year (2007–08).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2008–09.

Appendix A: Standard Error Tables

Table A-1. Standard errors for Table 1: Number and percentage distribution of teacher stayers, movers, and leavers, by sector: selected years 1988–89 through 2008–09

Sector and year	Number				Percent		
	Total base year teachers	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Public							
1988–89 ¹	—	55,476.6	9,780.0	6,907.5	0.46	0.41	0.30
1991–92	46,361.8	44,485.9	8,565.9	9,245.2	0.49	0.34	0.36
1994–95	19,625.8	21,992.5	9,148.0	8,572.8	0.52	0.35	0.34
2000–01	19,613.9	24,047.2	13,770.1	11,236.8	0.58	0.45	0.37
2004–05	30,448.4	30,602.5	15,995.1	14,543.6	0.59	0.49	0.44
2008–09	44,374.3	41,967.9	18,076.3	20,395.5	0.84	0.53	0.55
Private							
1988–89 ¹	—	12,667.3	1,975.2	2,533.8	1.31	0.70	0.85
1991–92	10,855.3	9,530.1	1,827.2	3,134.1	0.90	0.51	0.80
1994–95	5,444.3	5,567.7	1,349.9	2,694.3	0.79	0.35	0.70
2000–01	10,496.5	9,268.7	2,343.7	3,457.6	0.83	0.49	0.69
2004–05	11,267.4	10,607.1	2,512.5	10,985.2	2.00	0.55	2.18
2008–09	13,541.8	14,881.5	2,979.5	7,139.0	1.72	0.60	1.53

— Not available.

¹ Standard errors for the number of total previous school year teachers in 1988–89 were not reported in the previous NCES reports from which data for this table were taken.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2008–09; *Teacher Attrition and Mobility: Results from the 2004–05 Teacher Follow-up Survey*, U.S. Department of Education, National Center for Education Statistics (NCES 2007-307).

Table A-2. Standard errors for Table 2: Number and percentage distribution of public school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2008–09

Teacher or school characteristic in base year	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	44,370	41,970	18,076	20,400	0.84	0.53	0.55
School classification							
Traditional public	43,460	42,020	17,527	20,250	0.84	0.53	0.57
Public charter	13,880	11,770	2,862	2,280	4.68	3.31	2.87
Full-time teaching experience							
No full-time teaching experience	11,300	11,330	1,700	1,060	11.60	†	4.70
1–3 years	50,560	47,270	9,047	10,880	2.60	1.65	1.84
4–9 years	52,450	52,110	10,934	12,840	1.91	1.10	1.37
10–19 years	61,220	61,340	6,096	9,320	1.31	0.72	1.04
20 years or more	50,860	49,170	9,069	14,790	1.88	1.05	1.75
Age							
Less than 30 years	55,400	52,010	8,613	11,030	2.62	1.70	1.79
30–39 years	47,320	47,900	10,802	12,700	2.14	1.33	1.46
40–49 years	57,780	56,190	8,419	7,620	1.54	1.09	0.91
50 or more years	55,330	52,640	9,191	14,710	1.55	0.85	1.26
Base salary							
Less than \$30,000	29,460	28,840	3,384	2,570	2.98	1.98	1.75
\$30,000–\$39,999	51,650	48,690	7,629	9,790	1.71	1.05	1.22
\$40,000–\$49,999	70,380	68,570	10,744	14,720	1.81	1.04	1.32
\$50,000 or more	70,750	70,930	11,048	14,150	1.52	0.86	1.17
Sex							
Male	26,070	26,070	10,148	9,230	1.77	1.33	1.13
Female	39,110	40,130	15,130	17,560	0.94	0.57	0.65
Race/ethnicity							
White, non-Hispanic	45,440	41,830	16,376	20,610	0.96	0.58	0.67
Black, non-Hispanic	25,610	23,500	4,771	5,830	3.13	1.90	2.27
Hispanic, regardless of race	26,040	25,580	5,633	4,290	3.18	2.54	1.81
Asian/Pacific Islander, non-Hispanic	15,870	15,620	2,009	1,180	10.84	†	3.84
American Indian/Alaska Native, non-Hispanic	†	†	†	†	29.40	†	†
Two or more races, non-Hispanic	10,400	10,350	915	1,300	9.47	†	†
Main assignment field							
Early childhood/general elementary	39,930	38,500	10,167	9,470	1.18	0.93	0.81
Special education	31,650	33,400	7,886	12,280	3.98	2.22	3.43
Arts/music	22,540	22,200	3,595	2,040	2.55	1.97	1.07
English/language arts	29,650	28,730	7,351	9,150	2.82	1.69	2.14
Mathematics	32,950	31,700	4,103	5,900	2.66	1.45	2.07
Natural sciences	23,220	22,530	3,093	5,940	3.62	1.78	2.95
Social sciences	23,280	23,370	6,796	4,280	4.07	3.34	1.98
Other	36,670	37,710	6,287	9,730	2.17	1.13	1.81

See notes at end of table.

Table A-2. Standard errors for Table 2: Number and percentage distribution of public school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2008–09—Continued

Teacher or school characteristic in base year	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Teaching status							
Full time	53,950	53,650	17,600	17,700	0.87	0.58	0.54
Part time	37,040	33,940	5,347	10,440	3.67	1.76	3.20
Certification type							
Regular or standard state certificate or advanced professional certificate	58,430	54,340	15,330	19,750	0.86	0.51	0.62
Certificate issued after satisfying all requirements except the completion of a probationary period	27,400	26,670	6,834	†	7.11	5.91	†
Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained	26,070	25,380	2,741	4,040	3.66	2.22	2.74
Certificate issued to persons who must complete a certification program in order to continue	17,250	16,850	3,080	1,820	6.29	4.71	2.91
None of the above certifications in this state	11,600	9,660	†	†	13.28	†	†
Community type							
City	55,930	51,660	9,158	10,600	1.41	0.97	1.01
Suburban	65,130	60,670	8,053	12,630	1.30	0.80	1.08
Town	50,310	49,270	9,466	10,420	3.64	2.06	2.51
Rural	59,480	51,030	8,969	14,860	1.97	0.97	1.44
School level							
Elementary	62,450	58,890	13,794	17,020	0.96	0.61	0.74
Secondary	62,830	55,710	13,298	13,020	1.70	1.28	1.05
Combined	26,540	25,520	2,573	3,670	4.36	2.41	2.94
School enrollment							
Less than 200	30,780	28,700	4,420	7,290	4.38	2.58	3.24
200–499	68,210	65,160	10,795	16,610	2.02	1.13	1.52
500–749	59,240	59,240	6,294	5,480	1.33	0.92	0.79
750 or more	73,980	66,110	12,928	15,130	1.43	0.94	1.01
Percent of K–12 students who were approved for free or reduced-price lunches							
0–34	71,120	69,370	12,352	12,750	1.36	0.92	0.87
35–49	49,930	46,290	10,222	11,560	3.10	1.80	2.38
50–74	57,900	58,410	6,676	14,280	2.37	1.05	2.03
75 or more	53,230	51,220	8,286	4,990	1.71	1.34	0.90
School did not participate in free or reduced-price lunch program	18,860	18,040	1,407	†	5.34	2.41	†

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Data File," 2007–08; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2008–09.

Table A-3. Standard errors for Table 3: Number and percentage distribution of private school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2008–09

Teacher or school characteristic in base year	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	13,542	14,882	2,980	7,139	1.72	0.60	1.53
Full-time teaching experience							
No full-time teaching experience	5,330	4,897	591	3,223	8.28	1.70	8.34
1–3 years	9,453	9,013	1,542	4,331	4.57	1.55	4.20
4–9 years	10,141	9,539	1,836	2,798	2.68	1.68	2.05
10–19 years	10,551	10,534	895	3,120	3.44	0.88	3.20
20 years or more	11,092	10,271	949	2,517	2.33	0.85	2.10
Age							
Less than 30 years	8,724	7,631	1,581	3,728	4.65	1.90	4.46
30–39 years	11,737	10,585	1,768	4,477	3.73	1.42	3.35
40–49 years	8,454	8,613	1,221	2,460	2.93	1.22	2.81
50 or more years	12,157	11,743	1,046	4,202	2.49	0.58	2.36
Base salary							
Less than \$30,000	13,533	12,665	1,861	5,490	2.99	1.03	2.65
\$30,000–\$39,999	12,247	11,645	1,812	4,048	3.65	1.62	3.08
\$40,000–\$49,999	9,315	8,878	931	2,888	3.19	1.05	2.92
\$50,000 or more	9,787	9,215	711	2,411	3.33	1.19	3.17
Sex							
Male	7,295	8,074	1,564	3,722	3.42	1.29	3.11
Female	10,625	11,367	2,555	5,782	1.84	0.68	1.63
Race/ethnicity							
White, non-Hispanic	11,873	13,228	2,506	6,671	1.82	0.59	1.59
Black, non-Hispanic	3,175	2,845	534	1,553	10.90	3.78	10.11
Hispanic, regardless of race	5,043	4,374	†	2,299	8.37	†	7.18
Asian/Pacific Islander, non-Hispanic	3,299	2,223	†	†	19.14	†	19.67
American Indian/Alaska Native, non-Hispanic	†	†	†	†	†	†	†
Two or more races, non-Hispanic	2,582	2,582	†	†	†	†	†
Main assignment field							
Early childhood/general elementary	7,338	7,803	2,145	3,303	2.50	1.34	2.08
Special education	3,910	2,658	554	†	12.63	†	12.53
Arts/music	4,075	4,247	†	1,003	4.56	†	2.67
English/language arts	6,415	6,157	707	2,722	4.71	1.20	4.43
Mathematics	4,798	4,966	†	2,025	5.17	†	4.99
Natural sciences	3,839	4,684	665	2,097	7.08	1.85	6.02
Social sciences	5,623	5,756	744	1,260	5.30	†	4.24
Other	7,815	8,562	1,354	4,791	5.28	1.44	5.32
Teaching status							
Full time	16,155	15,827	2,677	5,568	1.63	0.69	1.42
Part time	9,458	8,104	1,477	5,096	5.28	1.64	4.69

See notes at end of table.

Table A-3. Standard errors for Table 3: Number and percentage distribution of private school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2008–09—Continued

Teacher or school characteristic in base year	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Certification type							
Regular or full certification by an accrediting or certifying body other than the state	9,164	8,920	1,703	2,369	3.82	2.15	3.31
Regular or standard state certificate or advanced professional certificate	11,249	10,873	1,396	3,737	2.12	0.75	1.88
Certificate issued after satisfying all requirements except the completion of a probationary period	2,517	2,445	380	†	13.72	†	†
Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained	†	†	†	†	17.44	†	†
Certificate issued to persons who must complete a certification program in order to continue	†	†	†	299	6.80	†	†
None of the above certifications in this state	13,266	12,388	1,731	5,794	3.25	0.91	2.92
Community type							
City	14,681	13,999	1,988	5,465	2.81	0.96	2.55
Suburban	11,028	10,539	1,639	4,893	2.96	0.98	2.71
Town	5,540	5,400	642	814	4.47	2.43	3.08
Rural	9,094	8,439	1,084	2,708	4.50	1.59	3.86
School level							
Elementary	14,630	13,247	2,381	4,494	2.05	1.10	1.84
Secondary	7,929	7,806	1,299	2,143	3.87	1.73	3.21
Combined	16,964	15,949	1,430	5,534	3.10	0.79	2.87
School enrollment							
Less than 200	13,138	13,198	2,112	5,276	3.54	1.29	3.11
200–499	13,576	13,202	1,914	3,145	2.24	1.13	1.72
500–749	9,859	9,163	787	2,612	3.74	1.09	3.36
750 or more	9,562	9,082	779	2,651	5.61	†	4.87
Percent of K–12 students who were approved for free or reduced-price lunches							
0–34	10,418	9,671	850	3,899	4.10	1.01	4.05
35–49	4,561	4,187	†	1,207	8.05	†	6.34
50–74	3,208	3,043	548	559	8.53	†	5.06
75 or more	4,077	3,778	†	†	9.66	†	†
School did not participate in free or reduced-price lunch program	15,570	14,474	2,449	6,742	1.99	0.70	1.81

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Teacher Data File," 2007–08; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2008–09.

Table A-4. Standard errors for Table 4: Percentage distribution of public and private school teacher movers who moved across schools, school districts, and sectors, by sector, years of experience, and type of move: 2007–08 through 2008–09

Type of move	Public			Private		
	All public	1-3 years of experience	4 or more years of experience	All private	1-3 years of experience	4 or more years of experience
Total	†	†	†	†	†	†
Moved from one public school to another public school in the same school district	3.39	5.59	4.42	†	†	†
Moved from one public school district to another public school district	3.41	5.69	4.48	†	†	†
Moved from a public school to a private school	0.70	1.12	0.79	†	†	†
Moved from a private school to a public school	†	†	†	6.63	9.69	7.49
Moved from one private school to another private school	†	†	†	6.63	9.69	7.49

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2008–09.

Table A-5. Standard errors for Table 5: Percentage distribution of public and private school teacher movers who changed schools because their contract was not renewed or who rated various reasons as the most important in their decision to move from their base year school: 2008–09

Reason for moving	Public	Private
Contract was not renewed	1.79	3.16
Reasons for moving, other than contract was not renewed		
Personal life factors	2.62	3.80
Assignment and credential factors	1.49	†
Salary and other job benefits	1.27	4.25
Classroom factors	0.65	†
School factors	2.04	3.91
Student performance factors	0.70	†
Other factors	3.41	5.88

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2008–09.

Table A-6. Standard errors for Table 6: Percentage distribution of public and private school teacher leavers who left teaching because their contract was not renewed or who rated various reasons as the most important in their decision to leave the position of a K–12 teacher: 2008–09

Reason for leaving	Public	Private
Contract was not renewed	1.30	2.76
Reasons for leaving, other than contract was not renewed		
Personal life factors	3.97	4.20
Assignment and credential factors	0.46	0.52
Salary and other job benefits	1.27	3.31
Other career factors	2.78	4.41
Classroom factors	†	†
School factors	2.46	2.81
Student performance factors	1.04	†
Other factors	4.57	3.07

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2008–09.

Table A-7. Standard errors for Table 7: Total number and percentage distribution of public and private school teacher leavers, by their current occupational and industry status: 2008–09

Occupational and industry status	Public		Private	
	Number	Percent	Number	Percent
Main occupational status of all leavers				
Total	20,395	†	7,139	†
Working for a school or school district in a position in the field of K–12 education, but not as a K–12 classroom teacher	13,018	4.11	4,715	4.86
Working in a position in the field of pre–K or postsecondary education	1,663	0.63	†	†
Working in an occupation outside the field of education, including military service	5,290	1.80	2,503	3.21
Student at a college or university	6,241	2.23	941	1.12
Caring for family members	6,900	2.36	2,051	2.40
Retired	11,897	3.67	2,060	2.46
Disabled	†	†	†	†
Unemployed and seeking work	3,799	1.38	1,182	1.47
Other	9,769	3.40	3,058	3.60
Industry status of leavers whose main occupational status was working in a position in the field of pre-K or postsecondary education or working in an occupation outside the education field, including military service				
Total	5,543	†	3,170	†
Employee of a private company, non–profit, business, or individual for wages, salary, or commission	2,696	9.79	3,016	8.16
State, federal, or local government employee	4,917	10.48	726	4.55
Self-employed in own business, professional practice, or farm	981	3.57	1,025	6.75
Working without pay in a family business, farm, or volunteer job	†	†	†	†

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2008–09.

Table A-8. Standard errors for Table 8: Percentage distribution of working public and private school teacher leavers who rated various aspects of their current occupation as better in teaching, better in current position, or not better or worse: 2008–09

Aspects of current occupation	Public			Private		
	Better in teaching	Better in current position	Not better or worse	Better in teaching	Better in current position	Not better or worse
Salary	7.33	8.33	6.91	8.16	6.94	6.53
Benefits	6.72	5.76	7.80	5.21	6.89	8.00
Opportunities for professional advancement or promotion	7.20	8.13	7.88	4.81	6.92	8.53
Opportunities for professional development	6.81	7.19	7.86	5.67	5.64	7.96
Opportunities for learning from colleagues	6.81	7.62	7.61	6.41	3.64	7.29
Social relationships with colleagues	6.06	7.07	8.00	6.69	5.14	7.91
Recognition and support from administrators/managers	4.73	9.11	8.45	4.85	5.33	7.03
Safety of environment	3.86	7.75	8.22	†	3.88	5.07
Influence over workplace policies and practices	†	6.36	7.58	4.56	9.04	9.41
Autonomy or control over own work	5.92	7.61	7.14	6.42	9.17	9.27
Professional prestige	7.09	7.39	7.12	8.61	7.49	7.30
Procedures for performance evaluation	6.30	6.85	7.73	4.88	3.92	6.07
Manageability of workload	4.89	7.64	8.09	6.49	8.25	8.19
Ability to balance personal life and work	3.23	7.40	7.70	6.46	8.50	7.45
Availability of resources and materials/equipment for doing your job	†	7.70	7.78	2.31	5.85	6.73
General work conditions	3.86	6.60	6.73	†	5.94	6.78
Job security	6.30	5.90	7.85	6.59	5.82	7.56
Intellectual challenge	7.37	6.94	7.37	6.20	6.36	8.36
Sense of personal accomplishment	7.57	7.53	7.04	6.85	7.53	8.81
Opportunities to make a difference in the lives of others	7.17	6.46	8.18	7.30	6.06	8.26

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2008–09.

Appendix B: Methodology and Technical Notes

Overview of the Teacher Follow-up Survey

The Teacher Follow-up Survey (TFS) is sponsored by the National Center for Education Statistics (NCES) of the Institute of Education Sciences on behalf of the U.S. Department of Education and is conducted by the U.S. Census Bureau. TFS is a follow-up survey of selected elementary and secondary school teachers who participate in the NCES Schools and Staffing Survey (SASS), which is the largest survey of public, private, and Bureau of Indian Education (BIE)-funded K–12 school districts, schools, teachers, and administrators in the United States today.

SASS provides extensive data on the characteristics and qualifications of teachers and principals, teacher hiring practices, professional development, class size, and other conditions in schools across the nation. TFS focuses on a sample of public and private school teachers who participated in SASS, including those teachers who leave the K–12 teaching profession and those who change schools but continue to teach. TFS is conducted in the school year following SASS. The first administration took place in the 1988–89 school year, with subsequent administrations in the 1991–92, 1994–95, 2000–01, 2004–05, and 2008–09 school years.

To access additional general information on SASS and TFS, or to find electronic copies of the questionnaires, go to the SASS home page (<http://nces.ed.gov/surveys/sass>). For additional information on specific TFS-related topics discussed here, consult the *Documentation for the 2008–09 Teacher Follow-up Survey* (Cox et al. forthcoming). For additional information on 2007–08 SASS methodology, consult the *Documentation for the 2007–08 Schools and Staffing Survey* (Tourkin et al. 2010).

Sampling Frames and Sample Selection

Teachers sampled for TFS are drawn from the SASS teacher sample, which, in turn, is drawn from the SASS school sample. Because SASS and TFS are so interrelated, the description of sampling frames and sample selection begins with SASS and then moves on to TFS.

SASS Sampling Frames and Sample Selection

Public and BIE schools. The starting point for the 2007–08 SASS public school and BIE school sampling frame was the preliminary 2005–06 Common Core of Data (CCD)¹ Nonfiscal School Universe data file. The CCD includes regular and nonregular schools (special education, alternative, vocational, or technical), public charter schools, and BIE schools. The sampling frame was adjusted from the CCD in order to fit the definition of a school eligible for SASS. To be eligible for the SASS sampling frame, a school was defined as an institution, or part of an institution, that provides classroom instruction to students; has one or more teachers to provide instruction; serves students in one or more of grades 1–12 or the ungraded equivalent; and is located in one or more buildings apart

¹ For more information about the CCD, see <http://nces.ed.gov/ccd>.

from a private home. It was possible for two or more schools to share the same building; in this case, they were treated as different schools if they had different administrators (i.e., principal or school head).

The SASS definition of a school is generally similar to the CCD definition, with some exceptions. Whereas SASS is confined to the 50 states plus the District of Columbia, the CCD includes the other jurisdictions and Department of Defense schools (overseas and domestic). The CCD also includes some schools that do not offer teacher-provided classroom instruction in grades 1–12 or the ungraded equivalent (whereas these schools are excluded in SASS). In some instances, schools in the CCD are essentially administrative units that may oversee entities that provide classroom instruction or they may only provide funding and oversight.

CCD schools with the same location, address, and phone number were collapsed during the SASS frame building on the assumption that the respondent would consider them to be one school. Because SASS allows schools to define themselves on the school questionnaire, Census Bureau staff observed that schools generally report as one entity in situations where the administration of two or more schools in the CCD is the same. A set of rules was applied in certain states to determine in which instances school records should be collapsed; when they were, the student and teacher counts, grade ranges, and names as reported to the CCD were all modified to reflect the change.

Finally, additional school records were added to the sampling frame. Most of these records were for Career Technical Centers or alternative, special education, or juvenile justice facilities in California, Pennsylvania, New York, and other states. For a detailed list of frame modifications, see the *Documentation for the 2007–08 Schools and Staffing Survey* (Tourkin et al. 2010). After adding, deleting, and collapsing school records, the SASS public school sampling frame consisted of 90,410 traditional public schools, 3,850 public charter schools, and 180 BIE schools.

The SASS sample is a stratified probability proportionate to size (PPS) sample. With the exception of BIE schools, all schools underwent multiple levels of stratification.² 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) and school type (traditional public, public charter, BIE funded, and schools with high American Indian enrollment). For a full description of the allocation procedure, see the *Documentation for the 2007–08 Schools and Staffing Survey* (Tourkin et al. 2010). Within each stratum, all non-BIE schools were systematically selected using a PPS algorithm. The measure of size used for the schools was the square root of the number of full-time-equivalent teachers reported or imputed for each school during the sampling frame creation. Any school with a measure of size greater than the sampling interval (the inverse of the rate at which the sample is selected) was included in the sample with certainty and thus automatically excluded from the probability sampling operation. These sampling procedures resulted in a total public

² BIE schools that fit the SASS definition of a school were included in the 2007–08 SASS public school sample with certainty.

school sample of about 9,800 public schools (including both traditional public and public charter schools) and 180 BIE schools in the 2007–08 SASS. For a more detailed explanation of PPS sampling, consult *Sampling Techniques* (Cochran 1977).

Private schools. The 2007–08 SASS private school sampling frame was based on the 2005–06 Private School Universe Survey (PSS).³ The PSS is designed to generate biennial data on the total number of private schools, students, and teachers and to build a universe of private schools in the 50 states and the District of Columbia to serve as a sampling frame of private schools for NCES sample surveys, such as SASS. Prior to each PSS collection, NCES updates the list of schools to be included in the PSS by collecting membership lists from private school associations and religious denominations, as well as private school lists from state education departments. This list-frame update is intended to improve coverage of new private schools and private schools previously not included in the PSS. Since the list-frame update for the 2007–08 PSS preceded the SASS frame building, the schools discovered during the update were used to augment the SASS private school frame. The SASS private school frame also includes schools from the 2005–06 PSS area frame, which is made up of schools overlooked in the list-building operation. In a sample of 124 geographical areas (out of 2,062), local field staff used such resources as local telephone directories and local resource guides to identify schools for the area frame. The resultant lists of schools were matched to the PSS list frame, and any school that was not part of the list frame was added as an area frame school.

During the creation of the SASS private school sampling frame, schools with kindergarten as the highest grade level were deleted from the frame and school records lacking information necessary for the sample selection were amended. For example, the school grade range was needed to stratify SASS schools during the private school sampling process. If the data on school grade range were missing, values were assigned in one of four ways: taking information from earlier PSS data; using information from the school’s name (e.g., middle school); obtaining the information by calling the school; or, as a last resort, assigning a grade level of combined (both elementary and secondary levels). Missing data on school affiliation and student and teacher counts were assigned in a similar manner. After these changes, the private school sampling frame consisted of 28,490 private schools. Private schools were stratified by affiliation, grade level (elementary, secondary, and combined), and census region (Northeast, Midwest, South, and West). The number of private school affiliation strata was reduced from 17 in 2003–04 to 11 in 2007–08. The current affiliation strata include

- Catholic – parochial;
- Catholic – diocesan;
- Catholic – private;
- Baptist;
- Jewish;
- Lutheran;
- Seventh-Day Adventist;
- Other religious;
- Nonsectarian – regular;

³ For more information about the PSS, see <http://nces.ed.gov/surveys/pss>.

Nonsectarian – special emphasis; and
Nonsectarian – special education.

Within each stratum, private schools in the list frame were systematically selected using a PPS algorithm. The measure of size used was the square root of the number of full-time-equivalent teachers. Any school with a measure of size larger than the sampling interval (the inverse of the rate at which the sample is selected) was excluded from the probability sampling process and included in the sample with certainty. About 2,940 private schools were sampled from the PSS, of which 2,760 were from the 2005–06 list frame and 2007–08 list-frame update, and 180 were from the 2005–06 area frame.

Teachers. Teachers in SASS are defined as staff who teach regularly scheduled classes to students in any of grades K–12. Teacher rosters (i.e., Teacher Listing Forms) were collected from sampled schools, primarily by mail, and compiled at the Census Bureau. This compilation was done on an ongoing basis throughout the roster collection period. Along with the names of teachers, respondents at the sampled schools were asked to provide information about each teacher’s teaching experience (1–3 years, 4–19 years, and 20 or more years), teaching status (full or part time), and subject matter taught (special education, general elementary, math, science, English/language arts, social studies, vocational/technical, or other), as well as whether they felt the teacher would likely be teaching at the same school in the following year.

Sampling was also done on an ongoing basis throughout the roster collection period. The Census Bureau first stratified teachers into five teacher types: (1) new teachers expected to be teaching at the same school in the next school year, (2) experienced teachers expected to be teaching at the same school in the next school year, (3) new teachers expected to leave before or during the next school year, (4) mid-career teachers expected to leave before or during the next school year, and (5) highly experienced teachers expected to leave before or during the next school year. Before teachers were allocated to these strata, schools were allocated an overall number of teachers to be selected within each school stratum.

Sampling rates for teachers varied between the strata listed above. Private school teachers in category 2 and all teachers in categories 3–5 were oversampled at different rates. So that a school would not be overburdened by sampling too large a proportion of its teachers, the maximum number of teachers per school was set at 20. About 14 percent of the eligible public schools, 15 percent of the eligible private schools, and 13 percent of eligible BIE schools did not provide teacher lists. For these schools, no teachers were selected. Within each teacher stratum in each school, teachers were selected systematically with equal probability. About 56,360 teachers were sampled: 47,440 from public schools, 750 from BIE schools, and 8,180 from private schools (detail may not sum to totals because of rounding).

TFS Teacher Sampling Frames and Sample Selection Procedures

The sampling frame for TFS consisted of the 44,200 public and private school teachers who preliminarily completed interviews for SASS. The sampling frame excluded any

SASS teacher who did not complete an interview or was otherwise found to be out of scope for SASS. (Because the TFS frame was created before the interview status for SASS was finalized, about 30 teacher records included in the TFS frame as SASS interviews subsequently became noninterviews or out of scope for SASS.) The sampling frame also excluded teachers from BIE-funded schools, as well as about 80 teachers who were reported to have died or left the country at the time of the TFS data collection in the fall of 2008. Thus, the total number of records in the TFS frame (44,200) does not agree with the total number of interviewed public, public charter, and private school teachers in SASS (44,240) (detail may not sum to totals because of rounding).

The TFS sample is a stratified sample allocated to allow comparisons of teachers by status (stayers, movers, and leavers), within sector (traditional public, public charter, and private), experience groups, grade level, and teacher's race/ethnicity. All of the strata, except status, were defined using data from teachers' SASS records. To determine status for the TFS frame, each SASS sampled school was mailed a Teacher Status Form at the beginning of the 2008–09 school year asking for current information about the previous year's teachers. The information collected from the form was used to stratify each teacher into the following status categories:

- Stayers – teachers in the 2007–08 school year who remained a teacher at the same school for the 2008–09 school year or teachers whose status was not reported (left blank) by the school.
- Movers – teachers in the 2007–08 school year who remained a teacher for the 2008–09 school year but in a different school or teachers who worked in a school in the 2007–08 school year that closed or merged with another school.
- Leavers – teachers in the 2007–08 school year who left the teaching profession before the 2008–09 school year began.
- Unknowns – teachers who were reported by the school as having left, without any other information given, or teachers whose SASS school did not complete the Teacher Status Form.

The 2008–09 TFS sample was allocated to strata in order to best achieve the goals of the sampling design. To accomplish this, the following rules were applied:

- Select all public beginning-year teachers with certainty.
- Optimize the reliability of comparisons of current versus former teachers (i.e., leavers versus nonleavers) by selecting about 46 percent of leavers.
- Optimize the comparison of movers versus nonmovers (stayers) by selecting about 46 percent of private school movers.
- Optimize the reliability of comparisons of White, non-Hispanic movers versus movers of all other race/ethnicities. To that end:
 - Select approximately 23 percent of the traditional public and public charter White, non-Hispanic movers.

- Select approximately 32 percent of the traditional public and public charter movers of all other race/ethnicities.
- Since teachers with an unknown status could be movers or leavers, sample using the mover sampling rate. Thus:
 - Select approximately 46 percent of private teachers with an unknown status.
 - Select approximately 23 percent of White, non-Hispanic and 32 percent of all other race/ethnicity traditional public and public charter teachers with an unknown status.
- To optimize the comparison of stayers versus movers or leavers and to increase the number of reporting categories for publication, select a fixed sample size of stayers as follows:
 - 790 traditional non-first-year public school stayers (approximately 3 percent of the sampling frame of this group of teachers).
 - 60 public charter school non-first-year stayers (approximately 7 percent of the sampling frame of this group of teachers).
 - 450 private school stayers (approximately 9 percent of the sampling frame of this group of teachers).

Once the sample sizes were determined at the status, sector, and race levels based on these rules, the sample was allocated to strata proportional to the cumulative measure of size (SASS teacher initial final weight) within each stratum. This maximizes the reliability of status, sector, and race estimates.

Within each TFS stratum, teachers who had completed interviews in the 2007–08 SASS were sorted by measure of size, main subject taught as reported by the teacher in SASS, Census region, SASS private school affiliation strata (private teachers only), SASS school locale, SASS school enrollment, and SASS teacher control number to achieve a random, balanced sample.

After the teachers were sorted using the above variables, they were selected within each stratum using a systematic PPS sampling procedure, which is similar to the sampling procedure used in the SASS school selection. Any teacher with a measure of size greater than the sampling interval was automatically selected. Since TFS selection probabilities are not conditional, the selected sample sizes equaled the allocated sample size.

Data Collection Procedures

Data collection for the 2008–09 TFS began as part of a sample selection operation in the fall of 2008 with the mailing of the Teacher Status Form (TFS-1) to each school that had at least one teacher who had completed a Teacher Questionnaire in the 2007–08 SASS. A knowledgeable person at the school, such as the principal, was asked to complete the TFS-1 by indicating the current teaching or other occupational status of each teacher

listed on the form. The sample for TFS was selected based on the status of teachers obtained in the TFS-1 operation.⁴

In February 2009, all sampled teachers were mailed a letter inviting their participation in TFS using an internet instrument. The letters contained the URL to the survey, along with a user name and password to access their survey on a secure server. At the same time, teachers who had provided an e-mail address on their 2007–08 SASS Teacher Questionnaire received a similar e-mail invitation. In March 2009, a reminder letter was sent to all teachers. E-mail reminders were sent to nonrespondents at various times during the entire data collection period.

Before telephone follow-up began, approximately 76 percent of respondents had not completed the TFS questionnaire. To either encourage participation or to facilitate completion of the interview by telephone, Census Bureau telephone center staff followed up with the sampled teachers who had not responded. Telephone follow-up was conducted from late March 2009 through July 2009.

In late April 2009, approximately one month after the start of telephone follow-up, paper questionnaires were mailed to all nonrespondents. In late May 2009, letters were mailed to respondents who had partially completed the internet survey, encouraging them to complete their survey. A second paper questionnaire was mailed to nonrespondents in early June 2009. If an interview was not obtained during telephone follow-up or through the second paper questionnaire, the case was determined to be a noninterview. Data collection ended in August 2009.

For more detailed information on the TFS data collection, see the *Documentation for the 2008-09 Teacher Follow-up Survey* (Cox et al. forthcoming).

Data Processing and Imputation

While Census Bureau headquarters staff in Suitland, Maryland, were responsible for retrieving the internet data on a daily basis, Census Bureau staff at the National Processing Center in Jeffersonville, Indiana, were responsible for checking in completed paper questionnaires, capturing data, and implementing quality control procedures. Once all paper responses were captured and checked, a file was sent to Census Bureau headquarters to be merged with the internet responses for data processing.

Data processing was conducted within each TFS questionnaire type (i.e., former and current teacher questionnaires). Census Bureau analysts began the data review process by assigning a preliminary interview status recode (ISR). After the preliminary ISR classification, all files were submitted to a series of computer edits. These edits consisted of a range check, a consistency edit, a blanking edit, and a logic edit. The files were then put through another edit to make a final determination of whether the case was eligible

⁴ The focus primarily was on distinguishing between teachers still teaching at the same school as in the 2007–08 school year, teachers who had moved to new schools, and teachers no longer teaching in grades pre-K–12.

for the survey and, if so, whether sufficient data had been collected for the case to be classified as a completed interview. A final ISR value was assigned to each case as a result of this edit. After the final ISR edits were run, there were still cases with unanswered values in the files for some items. Values were created for these items in the next step of the processing: imputation.

In order to fill the unanswered items with data, questionnaires were put through an imputation stage of data processing during which two main approaches were used. In the first approach, often called hot-deck imputation, data were imputed from “donors” found on questionnaires of the same type (former or current teacher questionnaires) that had certain characteristics in common. If the hot-deck imputation was unsuccessful in finding an appropriate donor, a second method of imputation was applied in which missing items were imputed from the mean or mode of data found on questionnaires of the same type among respondents who have certain characteristics in common. Mean and mode imputation was implemented only as a final method of imputation and on an as-needed basis.

Following imputation, the computer edits were conducted again, and any remaining data issues were resolved. These edits were used to ensure that the values imputed were within acceptable ranges and were consistent with other items in the same questionnaire. Analysts performed a final review of the imputed data. Any items that were imputed at a rate greater than 15 percent were analyzed as part of the item bias analysis.

Response Rates

Unit response rate. The unit response rate is the rate at which the sampled units responded by completing the questionnaire sufficiently for it to be considered a complete interview. Unit response rates can be calculated as unweighted or base weighted. The unweighted response rates are the number of interviewed cases divided by the number of eligible sampled units (i.e., including interviews and noninterviews, but not out-of-scope cases). The base-weighted response rates are the base-weighted (initial basic weight multiplied by the sampling adjustment factor) number of interviewed cases divided by the base-weighted number of eligible cases.⁵ The initial base weight for each sampled unit is the inverse of the probability of selection.

Table B-1 summarizes the unweighted and base-weighted unit response rates in the 2008–09 TFS by teaching status (i.e., current and former teachers) and by sector of a teacher’s SASS schools (i.e., public or private). The response rate for current teachers includes teachers who stayed in the same school for the 2008–09 school year (stayers) and those who moved to a new school (movers). Both stayers and movers completed the Current Teacher Questionnaire.

⁵ For the formula used to calculate the unit response rate, see the *NCES Statistical Standards* (U.S. Department of Education 2003).

Table B-1. Unweighted and base-weighted response rates of TFS teachers, by sector and teaching status: 2008–09

Sector and teaching status	Unweighted response rate	Base-weighted response rate
Total	85.5	87.9
Current teacher	87.0	88.2
Stayer	88.9	88.6
Mover	82.1	84.7
Former teacher	81.4	84.7
Public	86.1	88.1
Current teacher	87.5	88.4
Stayer	89.0	88.7
Mover	83.6	85.6
Former teacher	81.9	84.8
Private	82.6	86.7
Current teacher	84.4	87.1
Stayer	88.1	87.8
Mover	73.8	75.9
Former teacher	79.7	84.4

NOTE: The public sector includes teachers from traditional public and public charter schools. "Stayers" are teachers who were teaching in the same school in the current school year as in the base year (2007–08). "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year (2007–08). SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Documentation Data Files," 2008–09.

Overall response rate. The overall response rate represents the response rate taking into consideration each stage of data collection. For a teacher to be eligible for the 2008–09 TFS, it was necessary for the school to have responded to the Teacher Listing Form during the 2007–08 SASS data collection (which provided a sampling frame for teachers at that school) and for the teacher to have responded to the SASS teacher questionnaire.

The overall TFS response rate is the product of the following survey response rates shown in tables B-2 and B-3: the SASS Teacher Listing Form response rate, the SASS Teacher Questionnaire response rate, and the TFS questionnaire response rate.⁶ The overall response rates by sector for current teachers for the 2008–09 TFS are shown in table B-2. The overall response rates by sector for former teachers for the 2008–09 TFS are shown in table B-3.

⁶ For the formula used to calculate the overall response rate, see the *NCES Statistical Standards* (U.S. Department of Education 2003).

Table B-2. Base-weighted response rates for SASS teacher data files and the TFS Current Teacher data file, by sector: 2007–08 and 2008–09

Sector	Base-weighted 2007–08 SASS Teacher Listing Form response rate	Base-weighted 2007–08 SASS Teacher Questionnaire response rate	Base-weighted 2008–09 TFS Current Teacher Questionnaire response rate			Overall base-weighted 2008–09 TFS Current Teacher Questionnaire response rate		
			Total	Stayer	Mover	Total	Stayer	Mover
Total	85.9	83.3	88.2	88.6	84.7	63.1	63.4	60.6
Public	86.2	84.0	88.4	88.7	85.6	64.0	64.2	62.0
Private	85.1	77.5	87.1	87.8	75.9	57.4	57.9	50.0

NOTE: The public sector includes teachers from traditional public and public charter schools. "Stayers" are teachers who were teaching in the same school in the current school year as in the base year (2007–08). "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year (2007–08). SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public and Private School Teacher Documentation Data Files," 2007–08; Teacher Follow-up Survey (TFS), "Current Teacher Documentation Data Files," 2008–09.

Table B-3. Base-weighted response rates for SASS teacher data files and the TFS Former Teacher data file, by sector: 2007–08 and 2008–09

Sector	Base-weighted 2007–08 SASS Teacher Listing Form response rate	Base-weighted 2007–08 SASS Teacher Questionnaire response rate	Base-weighted 2008–09 TFS Former Teacher Questionnaire response rate	Overall base-weighted 2008–09 TFS Former Teacher Questionnaire response rate
	Total	85.9	83.3	84.7
Public	86.2	84.0	84.8	61.4
Private	85.1	77.5	84.4	55.7

NOTE: The public sector includes teachers from traditional public and public charter schools. SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public and Private School Teacher Documentation Data Files," 2007–08; Teacher Follow-up Survey (TFS), "Former Teacher Documentation Data Files," 2008–09.

Unit nonresponse bias analysis. Because NCES Statistical Standard 4-4 requires analysis of unit nonresponse bias for any survey stage with a base-weighted response rate of less than 85 percent, all 2007–08 SASS teacher data files were evaluated for potential bias. Comparisons between the frame and respondent populations were made before and after the nonresponse weighting adjustments were applied in order to evaluate the extent to which the adjustments reduced or eliminated nonresponse bias. For detailed information and results for the analysis of 2007-08 SASS, see chapter 6 of the *Documentation for the 2007–08 Schools and Staffing Survey* (Tourkin et al. 2010). In addition, a nonresponse bias analysis was conducted on the 2008–09 TFS Current and Former Teacher data files for stayers, movers, and leavers.

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

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

where

- \bar{y}_T = the estimated mean based on all eligible sample cases
- \bar{y}_R = the estimated mean based only on respondent cases
- \bar{y}_M = the estimated mean based only on nonrespondent cases
- n_T = the estimated number of cases (i.e., $n_T = n_R + n_M$)
- n_M = the estimated number of nonrespondents
- n_R = the estimated number of respondents

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

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

Relative bias was estimated for variables known for respondents and nonrespondents. There are extensive data available for all teachers from the 2007–08 SASS sampling frame and teacher data files. The variables used are presented in Exhibit B-1.

Exhibit B-1. Variables used in the TFS unit nonresponse bias analysis: 2008–09

- | | |
|--|---|
| <ul style="list-style-type: none"> • Average number of students taught; • Base teaching salary; • Census region; • Class organization; • Community type; • First-year teacher, other new teacher, or experienced teacher status; • Grade level of students taught; • Highly Qualified Teacher status; • Main teaching assignment; • National Board for Professional Teaching Standards certification status; • Number of areas of classroom planning and teaching over which the teacher has no control or minor control; • Number of school-related activities outside of normal teaching duties; • Number of separate class periods taught; • Percentage of teacher’s students who are limited-English proficient (LEP); • Percentage of teacher’s students with an Individualized Education Program (IEP); • Percentage of enrolled students approved for the National School Lunch Program; • School level; • School type; • Teacher’s career reflection; • Teacher’s dissatisfaction; • Teacher has been physically attacked by a student; | <ul style="list-style-type: none"> • Teacher participated in induction program in first year of teaching; • Teacher participated in professional development activities; • Teacher’s plans to remain in teaching; • Teacher’s stayer/mover/leaver status; • Teacher’s main activity; • Teacher’s main activity in the last school year; • Teacher’s age; • Teacher’s detailed race/ethnicity; • Teacher’s evaluation of the usefulness of professional development activities; • Teacher’s highest degree earned; • Teacher’s Praxis or other exam results; • Teacher’s race/ethnicity; • Teacher’s sex; • Teacher’s subject matter taught; • Total hours per week spent on all school-related activities; • Total hours per week spent on classroom instruction; • Total K–12 and ungraded enrollment in school; • Total number of students taught; • Total years of teaching experience; • Type of certification; and • Union member status. |
|--|---|
-

The following steps were followed to compute the relative bias. First, the nonresponse bias was estimated and tested to determine if the bias is significant at the 5 percent level. Second, nonresponse adjustments were computed, and the variables listed above were

included in the nonresponse models. The nonresponse adjustments (see the “Weighting” section below) were designed to significantly reduce or eliminate nonresponse bias for variables included in the models. Third, after the weights were computed, any remaining bias was estimated for the variables listed above and statistical tests were performed to check the remaining significant nonresponse bias.

As shown in table B-4, the weighting adjustments eliminated some, but not all, significant bias. For all respondents, 15.12 percent of the variable categories were significantly biased before nonresponse weighting adjustments, and 6.34 percent were significantly biased after adjustments. Similarly, for stayers, movers, and leavers, 10.73 percent, 12.20 percent, and 10.24 percent, respectively, of the variable categories were significantly biased before nonresponse weighting adjustments. After adjustments, 8.29 percent, 5.85 percent, and 8.29 percent of variable categories were significantly biased for stayers, movers, and leavers, respectively. For more detailed information on the TFS nonresponse bias analysis, see the *Documentation for the 2008-09 Teacher Follow-up Survey* (Cox et al. forthcoming).

Table B-4. Summary of teacher nonresponse bias, by 2008–09 status

Nonresponse bias statistic	Total	2008–09 status		
		Stayer	Mover	Leaver
Before nonresponse adjustment				
Mean estimated percent relative bias	-0.01	-0.01	-0.01	-0.03
Median estimated percent relative bias	#	#	#	-0.01
Percent of variable categories significantly biased	15.12	10.73	12.20	10.24
After nonresponse adjustment				
Mean estimated percent relative bias	-0.01	#	#	-0.02
Median estimated percent relative bias	#	#	#	#
Percent of variable categories significantly biased	6.34	8.29	5.85	8.29

Rounds to zero.

NOTE: The public sector includes teachers from traditional public and public charter schools. "Stayers" are teachers who were teaching in the same school in the current school year as in the base year (2007–08). "Movers" are teachers who were still teaching in the current school year, but had moved to a different school after the base year (2007–08). "Leavers" are teachers who left the teaching profession after the base year (2007–08).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public and Private School Teacher Data Files," 2007–08; Teacher Follow-up Survey (TFS), "Current and Former Teacher Documentation Data Files," 2008–09.

Item response rates. The item response rate indicates the percentage of respondents who answered a given survey item. The weighted item response rate is produced by dividing the base-weighted number of teachers responding to an item by the base-weighted number of teachers eligible to answer the item. Table B-5 provides a brief summary of the base-weighted item response rates for each survey population in the 2008–09 TFS. The nonresponse bias analysis conducted at the item level revealed no substantial evidence of bias in the data files. For further information on the nonresponse bias analysis and item response rates, see the *Documentation for the 2008–09 Teacher Follow-up Survey* (Cox et al. forthcoming).

Table B-5. Summary of base-weighted item response rates, by survey population: 2008–09

Survey population	Range of item response rate	Percentage of items with a response rate of 85.0 percent or more	Percentage of items with a response rate of 70.0-84.9 percent	Percentage of items with a response rate of less than 70.0 percent
Current teacher	74.8 - 100	95.0	5.0	#
Former teacher	74.4 - 100	69.9	30.1	#

Rounds to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Documentation Data Files," 2008–09.

Weighting

The general purpose of weighting is to scale up the sample estimates to represent the target survey population, which for the 2008–09 TFS includes stayers, movers, and leavers. For TFS, a base weight (the inverse of the sampled teacher’s probability of selection) is used as the starting point. Next, a weighting adjustment is applied to reflect the impact of the entire SASS teacher weighting procedure. Next, a TFS nonresponse adjustment factor is calculated and applied using information about the respondents that is known from the sampling frame. Finally, a TFS ratio adjustment factor is calculated and applied to the sample to adjust the sample totals to the frame totals in order to reduce sampling variability. The product of these factors is the final weight for each TFS respondent, which appears as TFSFINWT in the data file.

Variance Estimation

In surveys with complex sample designs, such as SASS and TFS, direct estimates of sampling errors that assume a simple random sample will typically underestimate the variability in the estimates. The SASS sample design and estimation 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. Therefore, to accurately estimate variance, users must employ special calculations.

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 and TFS data file includes a set of 88 replicate weights designed to produce variance estimates; they were created using the same estimation procedures used for the full sample. The replicate weights for TFS respondents are TFRPWT1–TFRPWT88.

Reliability of Data

TFS estimates are based on samples. The sample estimates may differ somewhat from the values that would be obtained from administering a complete census using the same questionnaire, instructions, and enumerators. The difference occurs because a sample survey estimate is subject to two types of errors: nonsampling and sampling. Estimates of the magnitude of the TFS sampling error, but not the nonsampling error, can be derived or calculated. 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, 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.

Caution Concerning Change Estimates

Care must be taken in estimating change over time in a TFS data element, because some of the measured change may not be attributable to a change in the educational system. Some of the change may be due to changes in the sampling frame, changes in the questionnaire item wording, or other changes. For example, the definition of locale codes has undergone major changes since the 2000 Decennial Census. The first major change was due to an improvement in geocoding technology, which improved the assignment of specific addresses to physical locations. In 2005, a new locale code for the CCD was implemented based on the new urban-centric method of classifying locale. Changes in how areas and, thus, schools are categorized may account for at least some changes that are noted from previous survey administrations.

To facilitate the transition from the older locale codes to the new ones, locale codes based on geographic concepts from both the 2000 Decennial Census and the new urban-centric method are included in the 2007–08 SASS data files. (SLOCP8, URBANS8, DLOCP8, and URBAND8 use the 2000 Census metropolitan areas, and SLOCP12, URBANS12, DLOCP12, and URBAND12 use the new urban-centric method.) The specific categories reported by the 2000 Census locale codes are based upon the 2000 Census definitions for central city, urban fringe of a large or medium-sized central city, large or small town, and rural areas either inside a metropolitan area or outside a metropolitan area. The new urban-centric locale codes are based on the more immediate proximity of a physical location to an urbanized area than are the older, county-based locale codes. This report uses the new urban-centric locale codes.

Appendix C: Description of Variables

Description of Variables

Variables used in this report are listed in table C-1. They include those found in the 2007–08 Schools and Staffing Survey (SASS) Teacher Questionnaires (variables that begin with “T” and are followed by four digits) and the 2008–09 Teacher Follow-up Survey (TFS) questionnaires, as well as “created variables” computed using survey variables, sampling frame variables, other created variables, or a combination of these. Created variables are frequently used in National Center for Education Statistics (NCES) publications and have been added to the data files to facilitate data analysis. The definitions for the TFS and SASS created variables follow table C-1.

Table C-1. Variables used in the *Teacher Attrition and Mobility: Results From the 2008–09 Teacher Follow-up Survey First Look report*

Variable	Variable name in data file
Annual base salary	T0343
Comparison of current position to teaching	OPSAL - OPDIF
Contract renewed, leaver	LCNYN
Contract renewed, mover	MCNYN
Industry status of leavers whose main occupational status was working in a position in the field of prekindergarten or postsecondary education or working in an occupation outside the education field, including military service	...(1)
Main teaching assignment	ASSIGN03 ¹
Most Important reason for moving	MMIMP
Most Important reason for leaving	LVIMP
Percentage of students in the school approved for the National School Lunch Program	NSLAPP_S ¹
Private teacher certification type	...(1)
Public teacher certification type	...(1)
Stayer/mover/leaver status	STTUS_TF ¹
Student enrollment	SCHSIZE ¹
Teacher's age	AGE_T ¹
Teacher's full- or part-time teaching status	FTPT ¹
Teacher's sex	T0352
Teacher's race/ethnicity	RACETH_T ¹
Three-category school level	SCHLEVEL ¹
Total years of full-time teaching experience	...(1)
Total years of teaching experience	TOTYREXP ¹
Type of move between schools	MVTYP
Urban-centric school locale code	URBANS12 ¹

¹ The definition for this variable can be found in the text below this table.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher and Private School Teacher Data Files," 2007–08; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2008–09.

Industry status of leavers whose main occupational status was working in a position in the field of prekindergarten or postsecondary education or working in an occupation outside the education field, including military service: This variable was created by aggregating the job classification (OCCCL) of former teachers whose main occupational status (OCCST) indicated that they are now in a position in the field of prekindergarten or postsecondary education, or working in an occupation outside the education field, including military services.

Main teaching assignment (ASSIGN03): A SASS created variable taken from the public, private, and Bureau of Indian Education (BIE) school data files, ASSIGN03 is a 12-category variable based on respondent's reported main teaching assignment (T0067).

Percentage of students in the school approved for the National School Lunch Program (NSLAPP_S): A SASS created variable taken from the public, private, and BIE school data files, NSLAPP_S is a continuous variable created by dividing the number of students approved for free or reduced-price lunches (S0217) by the total number of K–12 grade students enrolled (S0047) in schools that participated in the National School Lunch Program (NSLP) (S0215 = 1). Schools that did not participate in the NSLP have valid skip values.

For public schools in this report, NSLAPP_S is recoded as a categorical variable describing the proportion of students approved for free or reduced-price lunches. For private schools in this report, NSLAPP_S is recoded as a dichotomous variable of schools that participated and did not participate.

Private teacher certification type: This variable is based on a private school teacher's reported certification type (T0405, T0160, T0430, T0185, T0186) during the 2007–08 school year.

Public teacher certification type: This variable is based on a public school teacher's reported certification type (T0160, T0185, T0186) during the 2007–08 school year.

Stayer/mover/leaver status (STTUS_TF): This TFS created variable, based on whether they are currently teaching in the same school as during the 2007–08 school year (MOVYN), whether they currently teach any regularly scheduled classes (REGCL), and what their main activity is (POSSC), indicates whether teachers remained in their 2007–08 SASS school, moved to a new school, or left the teaching profession during the 2008–09 school year.

Student enrollment (SCHSIZE): A SASS created variable taken from the public, private, and BIE school data files, SCHSIZE is a continuous variable based on the number of K–12 and ungraded students enrolled in a respondent's school (S0047). For this report, SCHSIZE was recoded into six categories for public schools and five categories for private schools.

Teacher's age (AGE_T): A SASS created variable based on respondent's reported year of birth, AGE_T is a continuous variable created by subtracting the teacher's reported year of birth from the year of data collection (2007).

Teacher's full- or part-time teaching status (FTPT): A SASS created variable taken from the public, private, and BIE school data files, FTPT is a two-category variable based on T0025 and T0028 and indicates whether the teacher is a full- or part-time teacher.

Teacher's race/ethnicity (RACETH_T): A SASS created variable based on respondents' reported race and ethnicity (T0353–T0358). The 2007–08 SASS allowed respondents to mark more than one racial category. Recoded into seven categories for this report: White, non-Hispanic; Black, non-Hispanic; American Indian/Alaska Native, non-Hispanic; Asian, non-Hispanic; Native Hawaiian, non-Hispanic; Hispanic, regardless of race; and two or more races, non-Hispanic.

Three-category school level (SCHLEVEL): A SASS created variable taken from the public, private, and BIE school data files, SCHLEVEL is a three-category variable based on grades reported by the school: elementary, secondary, and combined. Elementary schools are those with any of grades K–6 and none of grades 9–12. Secondary schools have any of grades 7–12 and none of grades K–6. Combined schools are those schools with classes at both the elementary and secondary grade levels or with all students in ungraded classrooms.

Total years of full-time teaching experience: A variable that combines the number of years of full-time experience a teacher had in public and private schools (T0038, T0041) and accounts for the year they began teaching (T0037).

Total years of teaching experience (TOTYREXP): A SASS created variable taken from the public, private, and BIE teacher data files that combines the number of years of full-time and part-time experience a teacher had in public and private schools (T0038, T0039, T0041, T0042) and accounts for the year they began teaching (T0037).

Urban-centric school locale code (URBANS12): A SASS frame variable taken from the public, private, and BIE school data files, URBANS12 is a created variable collapsed from the 12-category urban-centric school locale code (SCLOP_07) that was assigned using the 2000 Decennial Census data and recoded into four categories: city, suburban, town, and rural.