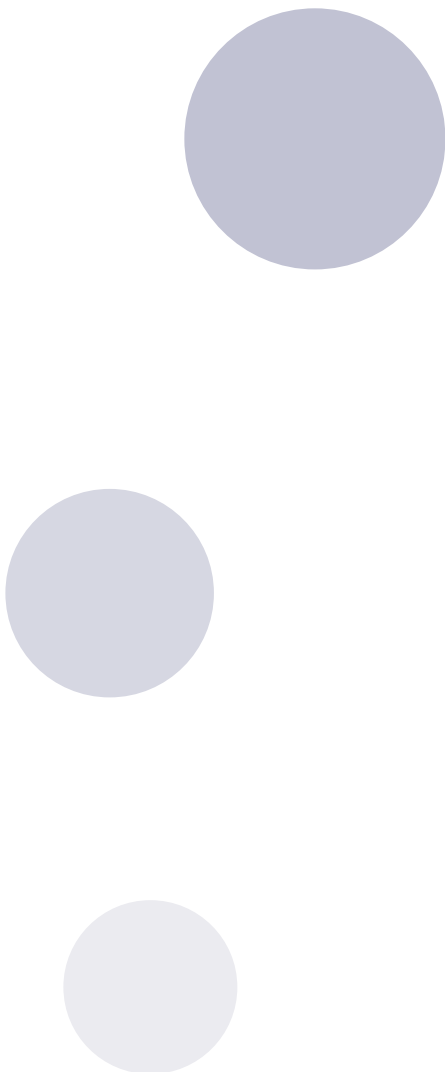


# Teacher Attrition and Mobility:

Results From the 2012–13 Teacher Follow-up Survey

First Look



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**SEPTEMBER 2014**

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# Introduction

This report presents selected findings from the Current Teacher and Former Teacher Data Files of the 2012–13 Teacher Follow-up Survey (TFS). TFS is a nationally representative sample survey of public<sup>1</sup> and private school K–12 teachers who participated in the previous year’s Schools and Staffing Survey (SASS). It has been conducted seven times: in the 1988–89, 1991–92, 1994–95, 2000–01, 2004–05, 2008–09, and 2012–13 school years (after the SASS administrations in the 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, 2007–08, and 2011–12 school years, respectively).

First fielded in school year 1988–89, TFS was designed as a component of SASS and was sponsored by the National Center for Education Statistics (NCES) of the Institute of Education Sciences within the U.S. Department of Education. The purpose of SASS is to collect information that can provide a detailed picture of U.S. elementary and secondary schools and their staff. This information is collected through questionnaires sent to districts, schools, principals, teachers, and library media centers. Information from all of the surveys can be linked. The SASS questionnaires can be found at <http://nces.ed.gov/surveys/sass/questionnaire.asp>.

Like the 2011–12 SASS, the 2012–13 TFS was conducted by the U.S. Census Bureau. The TFS followed up with a sample of SASS teachers in the year after the SASS data collection and included those who left teaching as well as those who continued to teach. Teachers who returned the 2011–12 SASS teacher questionnaires were eligible for the TFS sample, which contained about 5,800 public school teachers and 1,200 private school teachers. Due to unprecedented low response rates among private school teachers, they were dropped from the TFS Current and Former Teacher data files. While previous TFS release reports have included information on teachers who taught in public or private schools during the SASS base-year, this report contains information pertaining only to public school teachers. For additional information on TFS response rates, see appendix B.

The 2012–13 TFS was completed by about 4,400 current and former public school teachers. Of these respondents, teachers who were still teaching in the same school were classified as “stayers,” teachers who were teaching in a different school were classified as “movers,” and teachers who left the profession since the SASS interview in the previous year were classified as “leavers.” More information about the survey design can be found in the *Documentation for the 2012–13 Teacher Follow-up Survey* (Graham, Parmer, and Cox forthcoming).

Because all of the teachers in the TFS sample responded 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 2011–12 SASS. They are termed “base-year” data because the SASS responding teachers form the base for the teachers who are selected for TFS.

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<sup>1</sup> Public schools include traditional public and public charter schools.

The purpose of this First Look is to introduce new data through the presentation of tables containing descriptive information. Selected findings chosen for this report demonstrate the range of information available on the 2012–13 TFS data files. The selected findings do not represent a complete review of all observed differences in the data and are not meant to emphasize any particular issue.

The tables in this report contain counts and percentages demonstrating bivariate associations. All of the results have been weighted to reflect the sample design and to account for nonresponse and other adjustments. Comparisons drawn in the selected findings have been tested for statistical significance at the .05 level using Student's *t* statistics to ensure that the differences are larger than those that might be expected due to sampling variation. No adjustments were made for multiple comparisons. Many of the variables examined are related to one another, and complex interactions and relationships have not been explored. Statistical Analysis Software (SAS 9.3) and SUDAAN (11.0) were used to compute the statistics for this report. Tables of standard errors are provided in appendix A. Detailed information about the survey methodology is provided in appendix B. Appendix C contains a description of the variables used in this report.

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



## Selected Findings

- Of the 3,377,900 public school teachers who were teaching during the 2011–12 school year, 84 percent remained at the same school (“stayers”), 8 percent moved to a different school (“movers”), and 8 percent left the profession (“leavers”) during the following year (table 1).
- Among public school teachers with 1–3 years of experience, 80 percent stayed in their base-year school, 13 percent moved to another school, and 7 percent left teaching in 2012–13 (table 2).
- Among public school teacher movers, 59 percent moved from one public school to another public school in the same district, 38 percent moved from one public school district to another public school district, and 3 percent moved from a public school to a private school between 2011–12 and 2012–13 (table 3).
- About 30 percent of public school teacher movers changed schools involuntarily in 2012–13 (table 4).
- About 10 percent of public school teacher leavers left teaching involuntarily in 2012–13 (table 5).
- About 8 percent of public school teachers who left teaching in 2012–13 were working in an occupation outside the field of education, including military service (table 6).
- About 51 percent of public school teachers who left teaching in 2012–13 reported that the manageability of their work load was better in their current position than in teaching. Additionally, 53 percent of public school leavers reported that their general work conditions were better in their current position than in teaching (table 7).

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## Estimate Tables

Table 1. Number and percentage distribution of public school teacher stayers, movers, and leavers: 1988–89 through 2012–13

Year	Number				Percent		
	Total base year teachers <sup>1</sup>	Stayers	Movers	Leavers	Stayers	Movers	Leavers
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
2012–13	3,377,900	2,846,500	271,900	259,400	84.3	8.1	7.7

<sup>1</sup>Base 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 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,” 2012–13; *Teacher Attrition and Mobility: Results From the 2008–09 Teacher Follow-up Survey*, U.S. Department of Education, National Center for Education Statistics (NCES 2010-353).

Table 2. Number and percentage distribution of public school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2012–13

Teacher or school characteristic in base year <sup>1</sup>	Number			Percent			
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	3,377,900	2,846,500	271,900	259,400	84.3	8.1	7.7
School classification							
Traditional public	3,264,900	2,754,400	260,400	250,100	84.4	8.0	7.7
Public charter	113,000	92,100	11,600!	9,300	81.5	10.2!	8.2
Teaching experience							
1–3 years	398,500	320,400	49,800	28,200	80.4	12.5	7.1
4–9 years	919,500	749,400	107,600	62,500	81.5	11.7	6.8
10–19 years	1,205,400	1,066,200	68,000	71,200	88.5	5.6	5.9
20 years or more	854,500	710,600	46,500	97,400	83.2	5.4	11.4
Age							
Less than 30 years	515,900	406,800	70,700	38,400	78.8	13.7	7.5
30–39 years	982,200	847,400	83,100	51,700	86.3	8.5	5.3
40–49 years	843,300	759,500	49,900	33,900	90.1	5.9	4.0
50 or more years	1,036,400	832,800	68,200	135,400	80.4	6.6	13.1
Base salary							
Less than \$30,000	88,500	61,400	13,900	13,100	69.4	15.7	14.8
\$30,000–\$39,999	643,700	527,600	74,900	41,200	82.0	11.6	6.4
\$40,000–\$49,999	970,300	815,300	77,500	77,500	84.0	8.0	8.0
\$50,000 or more	1,675,300	1,442,200	105,600	127,600	86.1	6.3	7.6
Sex							
Male	801,200	686,600	63,000	51,600	85.7	7.9	6.4
Female	2,576,600	2,159,900	208,900	207,800	83.8	8.1	8.1
Race/ethnicity							
White, non-Hispanic	2,769,700	2,353,400	207,300	209,000	85.0	7.5	7.5
Black, non-Hispanic	229,400	179,400	26,900!	23,100!	78.2	11.7!	10.1!
Hispanic, regardless of race	261,200	207,400	33,000	20,800!	79.4	12.6	8.0!
Asian, non-Hispanic	63,800!	61,200!	1,600!	‡	95.8	‡	‡
Native Hawaiian/Pacific Islander, non-Hispanic	‡	#	#	‡	#	#	100.0
American Indian/Alaska Native, non-Hispanic	22,300!	17,500!	‡	‡	78.8	‡	‡
Two or more races, non-Hispanic	31,200!	27,700!	1,800!	‡	88.8	‡	‡
Main assignment field							
Early childhood/general elementary	1,077,900	930,000	83,000	64,900	86.3	7.7	6.0
Special education	430,000	356,300	45,100	28,600	82.9	10.5	6.6
Arts/music	203,500	177,400	17,000!	9,000	87.2	8.4!	4.4
English/language arts	379,800	317,200	24,400	38,200	83.5	6.4	10.1
Mathematics	295,900	246,300	21,000!	28,600!	83.2	7.1!	9.7!
Natural sciences	226,000	194,700	16,600!	14,700	86.2	7.3!	6.5
Social sciences	209,000	172,700	17,900	18,300	82.6	8.6	8.8
Other	555,800	451,800	46,900	57,100	81.3	8.4	10.3

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: 2012–13—Continued

Teacher or school characteristic in base year <sup>1</sup>	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Teaching status							
Full time	3,126,000	2,678,800	234,200	213,000	85.7	7.5	6.8
Part time	251,800	167,700	37,800	46,400	66.6	15.0	18.4
Certification type <sup>2</sup>							
Regular or standard state certificate or advanced professional certificate	3,121,800	2,637,200	241,600	243,000	84.5	7.7	7.8
Certificate issued after satisfying all requirements except the completion of a probationary period	89,800	73,800	11,200!	4,800!	82.2	12.5	5.3!
Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained	106,400	89,100	11,500	5,800	83.8	10.8!	5.4!
Certificate issued to persons who must complete a certification program in order to continue	35,400!	28,700!	4,500	2,200!	81.1	‡	‡
None of the above certifications in this state	24,400!	17,700!	‡	3,700!	72.3	‡	15.2!
Community type							
City	935,000	769,900	91,100	74,000	82.3	9.7	7.9
Suburban	1,100,900	934,400	85,900	80,600	84.9	7.8	7.3
Town	393,800	339,800	28,700	25,400	86.3	7.3	6.4
Rural	948,100	802,400	66,200	79,500	84.6	7.0	8.4
School level							
Primary	1,658,000	1,391,800	143,500	122,700	83.9	8.7	7.4
Middle	539,600	459,700	42,100	37,900	85.2	7.8	7.0
High	987,800	844,800	66,500	76,600	85.5	6.7	7.8
Combined	192,400	150,300	19,800!	22,200!	78.1	10.3!	11.6!
School enrollment							
Less than 200	156,800	133,600	13,300	9,900	85.2	8.5	6.3
200–499	1,068,800	899,500	84,800	84,500	84.2	7.9	7.9
500–749	866,100	718,200	79,900	68,000	82.9	9.2	7.8
750 or more	1,286,200	1,095,200	94,000	97,100	85.1	7.3	7.5
Percent of K–12 students who were approved for free or reduced-price lunches							
0–34	1,162,900	1,014,100	68,600	80,200	87.2	5.9	6.9
35–49	567,800	485,500	39,800	42,500	85.5	7.0	7.5
50–74	927,700	782,100	79,900	65,800	84.3	8.6	7.1
75 or more	672,300	524,500	82,000	65,800	78.0	12.2	9.8
School did not participate in free or reduced-price lunch program	47,200	40,400	1,700!	5,100	85.8	‡	10.7!

# Rounds to zero.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent (i.e., the standard error is at least 30 percent and less than 50 percent of the estimate).

‡ Reporting standards not met. The coefficient of variation (CV) for this estimate is 50 percent or greater (i.e., the standard error is 50 percent or more of the estimate).

<sup>1</sup> Base year refers to 2011–12.

<sup>2</sup> 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. “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. 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), “Current and Former Teacher Data Files,” 2012–13.

Table 3. Percentage distribution of public school teacher movers who moved across schools, school districts, and sectors, by years of experience and type of move: 2011–12 through 2012–13

Type of move	All public	Percent of teachers with	
		1–3 years of experience	4 or more years of experience
Total	100.0	100.0	100.0
Moved from one public school to another public school in the same school district	58.8	38.0	63.5
Moved from one public school district to another public school district	38.2	56.7	34.1
Moved from a public school to a private school	2.9	5.2!	2.4!

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent (i.e., the standard error is at least 30 percent and less than 50 percent of the estimate). NOTE: “Movers” are teachers who were still teaching in the current school year but had moved to a different school after the base year (2011–12). There are 49,800 public school movers with 1–3 years of teaching experience, and 222,100 public 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,” 2012–13.

Table 4. Percentage distribution of public school teacher movers who changed schools involuntarily or who rated various reasons as the most important in their decision to move from their base year school: 2011–12 through 2012–13

Reason for moving	Percent
Changed schools involuntarily	30.3
Voluntary reasons for moving	
Personal life factors	22.7
Assignment and classroom factors	4.6
Salary and other job benefits	3.5!
School factors	22.6
Student performance factors	0.6!
Other factors	15.8

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent (i.e., the standard error is at least 30 percent and less than 50 percent of the estimate).  
 NOTE: "Movers" are teachers who were still teaching in the current school year but had moved to a different school after the base year (2011–12). Respondents were asked to choose, from various reasons, the most important reason in their decision to move from their base year (2011–12) school. "Changed schools involuntarily" includes contract not renewed, laid off, and school closed or merged. "Other factors" includes teachers who did not indicate their most important reason for moving. 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), "Current Teacher Data File," 2012–13.



Table 5. Percentage distribution of public school teacher leavers who left teaching involuntarily or who rated various reasons as the most important in their decision to leave the position of a K–12 teacher: 2012–13

Reason for leaving	Percent
Left teaching involuntarily	9.7
Voluntary reasons for leaving	
Personal life factors	38.4
Assignment and classroom factors	2.4
Salary and other job benefits	6.8!
Career factors	13.0
School factors	6.3
Student performance factors	3.1
Other factors	20.5

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent (i.e., the standard error is at least 30 percent and less than 50 percent of the estimate).

NOTE: "Leavers" are teachers who left the teaching profession after the base year (2011–12). Respondents were asked to choose, from various reasons, the most important reason in their decision to leave their base year (2011–12) school. "Left teaching involuntarily" includes contract not renewed, laid off, and school closed or merged. "Other factors" includes teachers who did not indicate their most important reason for leaving. 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," 2012–13.

Table 6. Total number and percentage distribution of public school teacher leavers, by their current occupational and industry status: 2012–13

Occupational and industry status	Number	Percent
Main occupational status of all leavers		
Total	259,400	100.0
Working for a school or school district in a position in the field of K–12 education, but not as a regular K–12 classroom teacher	76,000	29.3
Working in the field of K–12 education but not in a school/district	2,900!	1.1!
Working in the field of pre-K or postsecondary education	5,800!	2.2!
Working in an occupation outside the field of education, including military service	20,000	7.7
Student at a college or university	4,900	1.9
Caring for family members	24,300	9.4
Retired	99,200	38.3
Disabled	‡	‡
Unemployed	15,000	5.8
Other	‡	‡
Industry status of leavers whose main occupational status was working in a position in the field of pre-K or postsecondary education, working in the field of K–12 education but not in a school/district, or working outside the field of education, including military service		
Total	28,600	100.0
Employee of a private company, nonprofit, business, or individual for wages, salary, or commission	21,800	76.1
State, federal, or local government employee	3,800	13.4
Self-employed in own business, professional practice, or farm	3,000!	10.5!
Working without pay in a family business, farm, or volunteer job	#	#

# Rounds to zero.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent (i.e., the standard error is at least 30 percent and less than 50 percent of the estimate).

‡ Reporting standards not met. The coefficient of variation (CV) for this estimate is 50 percent or greater (i.e., the standard error is 50 percent or more of the estimate).

NOTE: "Leavers" are teachers who left the teaching profession after the base year (2011–12). 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," 2012–13.

Table 7. Percentage distribution of working public teacher leavers who rated various aspects of their current occupation as better in teaching, better in current position, or not better or worse: 2012–13

Aspects of current occupation	Better in teaching	Better in current position	Not better or worse
Salary	19.7	43.5	36.9
Benefits	25.7	9.5	64.7
Opportunities for professional advancement or promotion	17.6!	48.9	33.6
Opportunities for professional development	21.2!	45.7	33.1
Opportunities for learning from colleagues	15.9	41.7	42.4
Social relationships with colleagues	17.8	32.6	49.5
Recognition and support from administrators/managers	12.5	44.9	42.6
Safety of environment	7.6!	19.9	72.5
Influence over workplace policies and practices	8.4!	58.5	33.1
Autonomy or control over own work	11.7	57.4	30.9
Professional prestige	8.4!	52.2	39.4
Procedures for performance evaluation	9.7!	36.3	54.0
Manageability of workload	16.2!	51.2	32.6
Ability to balance personal life and work	12.9!	60.8	26.3
Availability of resources and materials/equipment for doing your job	16.0!	37.4	46.6
General work conditions	13.8!	52.8	33.4
Job security	25.6	17.6	56.9
Intellectual challenge	10.7	55.1	34.2
Sense of personal accomplishment	11.2	43.9	44.9
Opportunities to make a difference in the lives of others	24.5	44.1	31.3

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent (i.e., the standard error is at least 30 percent and less than 50 percent of the estimate).  
 NOTE: "Leavers" are teachers who left the teaching profession after the base year (2011–12). 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 regular K–12 classroom teacher; former teachers working in the field of K–12 education but not in a school/district; former teachers working in the field of pre-K or postsecondary education; and former teachers working outside the field of education, including the military service. Data on leavers who reported an occupational status of "other than the above" are not included. 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), "Former Teacher Data File," 2012–13.

## **Appendix A: Standard Error Tables**

Table A-1. Standard errors for Table 1: Number and percentage distribution of public school teacher stayers, movers, and leavers: 1988–89 through 2012–13

Sector and year	Number				Percent		
	Total base year teachers	Stayers	Movers	Leavers	Stayers	Movers	Leavers
1988–89 <sup>1</sup>	—	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
2012–13	41,160.0	43,470.0	22,450.0	22,730.0	0.98	0.65	0.64

— Not available.

<sup>1</sup> 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," 2012–13; *Teacher Attrition and Mobility: Results From the 2008–09 Teacher Follow-up Survey*, U.S. Department of Education, National Center for Education Statistics (NCES 2010-353).

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: 2012–13

Teacher or school characteristic in base year	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	41,160	43,470	22,450	22,730	0.98	0.65	0.64
School classification							
Traditional public	43,680	47,430	20,750	23,270	0.98	0.63	0.68
Public charter	13,370	12,760	5,320	2,340	4.73	4.76	2.05
Teaching experience							
1–3 years	31,150	31,600	6,810	5,420	2.71	1.87	1.45
4–9 years	47,130	44,150	13,820	12,710	1.94	1.40	1.34
10–19 years	59,630	59,250	10,840	13,850	1.53	0.90	1.15
20 years or more	43,380	41,890	9,050	11,570	1.61	1.08	1.28
Age							
Less than 30 years	16,020	17,810	11,640	6,320	2.55	2.16	1.20
30–39 years	24,380	24,830	9,840	11,040	1.50	0.98	1.10
40–49 years	26,110	26,180	8,670	7,610	1.46	1.00	0.88
50 or more years	26,820	30,200	12,240	15,450	2.00	1.17	1.40
Base salary							
Less than \$30,000	15,030	14,760	3,110	3,130	5.69	3.63	4.01
\$30,000–\$39,999	40,240	39,570	8,020	6,600	1.89	1.31	1.07
\$40,000–\$49,999	60,030	57,650	10,420	15,290	2.01	1.01	1.58
\$50,000 or more	53,220	52,350	17,360	15,900	1.36	0.98	0.95
Sex							
Male	21,750	23,170	12,770	9,510	2.17	1.53	1.13
Female	30,730	35,310	18,130	18,780	1.03	0.70	0.70
Race/ethnicity							
White, non-Hispanic	45,990	45,420	17,680	16,370	0.86	0.63	0.56
Black, non-Hispanic	11,630	15,510	10,790	8,140	5.97	4.43	3.47
Hispanic, regardless of race	13,030	15,820	8,760	9,810	5.00	3.13	3.73
Asian, non-Hispanic	28,670	28,770	760	†	7.75	†	†
Native Hawaiian/Pacific Islander, non-Hispanic	†	†	†	†	†	†	†
American Indian/Alaska Native, non-Hispanic	7,550	7,210	†	†	13.47	†	†
Two or more races, non-Hispanic	13,250	13,100	710	†	6.09	†	†
Main assignment field							
Early childhood/general elementary	22,080	23,400	13,200	11,800	1.54	1.20	1.08
Special education	15,650	17,400	8,880	5,390	2.38	2.00	1.23
Arts/music	7,960	9,060	7,700	1,980	3.64	3.61	0.92
English/language arts	11,710	12,980	5,250	7,440	2.45	1.33	1.92
Mathematics	10,040	13,610	9,440	9,040	4.54	2.98	2.98
Natural sciences	6,740	9,290	5,860	4,260	3.32	2.55	1.89
Social sciences	6,730	7,770	5,120	4,540	3.13	2.42	2.00
Other	17,170	19,720	8,660	10,200	2.39	1.53	1.77

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: 2012–13—Continued

Teacher or school characteristic in base year <sup>1</sup>	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Teaching status							
Full time	41,530	43,710	18,500	20,630	0.92	0.59	0.63
Part time	28,430	25,050	9,490	9,740	4.50	3.52	3.55
Certification type							
Regular or standard state certificate or advanced professional certificate	44,110	45,630	19,560	22,340	0.97	0.62	0.68
Certificate issued after satisfying all requirements except the completion of a probationary period	14,210	13,020	3,540	2,200	4.39	3.40	2.47
Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained	23,570	23,320	3,310	1,500	4.86	3.69	2.25
Certificate issued to persons who must complete a certification program in order to continue	11,430	11,290	1,210	690	9.68	†	†
None of the above certifications in this state	10,760	7,970	†	1,130	12.00	†	5.83
Community type							
City	57,630	60,140	12,970	12,640	2.35	1.54	1.44
Suburban	59,320	58,440	11,660	10,340	1.43	1.12	0.90
Town	34,910	34,920	5,580	3,740	2.15	1.56	1.10
Rural	56,070	52,390	10,800	12,070	1.69	1.08	1.23
School level							
Primary	42,670	42,890	16,030	14,750	1.28	0.97	0.86
Middle	45,370	44,050	5,450	5,110	1.60	1.01	1.05
High	46,300	47,100	9,960	9,600	1.59	1.06	0.98
Combined	29,010	24,300	8,540	9,060	6.20	4.02	3.90
School enrollment							
Less than 200	20,990	20,580	3,490	2,060	3.48	2.44	1.59
200–499	51,350	48,900	10,660	11,590	1.57	0.99	1.04
500–749	56,220	54,290	12,590	10,530	1.78	1.40	1.24
750 or more	59,360	60,750	13,650	14,070	1.89	1.12	1.07
Percent of K–12 students who were approved for free or reduced-price lunches							
0–34	51,630	50,000	11,650	10,190	1.39	0.98	0.88
35–49	41,410	41,480	7,580	9,410	2.35	1.39	1.78
50–74	58,200	56,510	11,300	11,450	1.71	1.20	1.17
75 or more	44,480	42,750	13,140	12,350	2.85	1.77	1.82
School did not participate in free or reduced-price lunch program	11,120	11,040	780	1,400	4.95	†	3.67

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2012–13.

Table A-3. Standard errors for Table 3: Percentage distribution of public school teacher movers who moved across schools, school districts, and sectors, by years of experience and type of move: 2011–12 through 2012–13

Type of move	All public	Percent of teachers with	
		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	3.56	6.05	4.33
Moved from one public school district to another public school district	3.63	6.16	4.35
Moved from a public school to a private school	0.67	1.87	0.77

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2012–13.



Table A-4. Standard errors for Table 4: Percentage distribution of public school teacher movers who changed schools involuntarily or who rated various reasons as the most important in their decision to move from their base year school: 2011–12 through 2012–13

Reason for moving	Percent
Changed schools involuntarily	3.34
Voluntary reasons for moving	
Personal life factors	3.72
Assignment and classroom factors	0.96
Salary and other job benefits	1.27
School factors	3.14
Student performance factors	0.25
Other factors	3.13

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2012–13.

Table A-5. Standard errors for Table 5: Percentage distribution of public school teacher leavers who left teaching involuntarily or who rated various reasons as the most important in their decision to leave the position of a K–12 teacher: 2012–13

Reason for leaving	Percent
Left teaching involuntarily	1.74
Voluntary reasons for leaving	
Personal life factors	4.69
Assignment and classroom factors	0.65
Salary and other job benefits	2.15
Career factors	2.37
School factors	1.78
Student performance factors	0.86
Other factors	3.52

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2012–13.

Table A-6. Standard errors for Table 6: Total number and percentage distribution of public school teacher leavers, by their current occupational and industry status: 2012–13

Occupational and industry status	Number	Percent
Main occupational status of all leavers		
Total	22,730	†
Working for a school or school district in a position in the field of K–12 education, but not as a regular K–12 classroom teacher	12,800	4.32
Working in the field of K–12 education but not in a school/district	1,140	0.43
Working in the field of pre-K or postsecondary education	1,790	0.68
Working in an occupation outside the field of education, including military service	4,080	1.54
Student at a college or university	1,320	0.52
Caring for family members	5,130	1.87
Retired	15,210	3.9
Disabled	†	†
Unemployed	4,180	1.57
Other	†	†
Industry status of leavers whose main occupational status was working in a position in the field of pre-K or postsecondary education, working in the field of K–12 education but not in a school/district, or working outside the field of education, including military service		
Total	4,670	†
Employee of a private company, nonprofit, business, or individual for wages, salary, or commission	4,260	6.44
State, federal, or local government employee	1,060	3.58
Self-employed in own business, professional practice, or farm	1,460	5.13
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," 2012–13.

Table A-7. Standard errors for Table 7: Percentage distribution of working public teacher leavers who rated various aspects of their current occupation as better in teaching, better in current position, or not better or worse: 2012–13

Aspects of current occupation	Better in teaching	Better in current position	Not better or worse
Salary	3.48	6.23	6.61
Benefits	3.94	1.80	4.32
Opportunities for professional advancement or promotion	5.96	6.27	5.48
Opportunities for professional development	6.39	6.47	5.38
Opportunities for learning from colleagues	3.08	6.53	6.73
Social relationships with colleagues	3.53	6.45	6.11
Recognition and support from administrators/managers	3.14	6.54	6.55
Safety of environment	2.63	3.60	4.62
Influence over workplace policies and practices	2.85	5.83	5.96
Autonomy or control over own work	3.48	5.79	5.95
Professional prestige	2.63	6.61	6.99
Procedures for performance evaluation	2.97	6.99	7.24
Manageability of workload	6.19	7.00	5.43
Ability to balance personal life and work	3.99	6.07	5.18
Availability of resources and materials/equipment for doing your job	5.93	5.69	6.97
General work conditions	6.15	6.70	5.68
Job security	5.39	3.29	6.03
Intellectual challenge	2.77	6.42	6.60
Sense of personal accomplishment	2.57	6.20	6.80
Opportunities to make a difference in the lives of others	6.52	6.92	5.29

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2012–13.

## **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), a nationally representative sample survey of public and private K–12 schools, principals, and teachers in the 50 states and the District of Columbia. School districts associated with public schools and library media centers in public schools are also part of SASS. SASS has been conducted seven times: in school years 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, 2007–08, and 2011–12.

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, 2008–09, and 2012–13 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 *User's Manual for the 2012–13 Teacher Follow-up Survey: Current and Former Teacher Data* (Goldring, Taie, and Riddles forthcoming) and the *Documentation for the 2012–13 Teacher Follow-up Survey* (Graham, Parmer, and Cox forthcoming). For additional information on the specific SASS-related topics discussed in this appendix, consult the *User's Manual for the 2011–12 Schools and Staffing Survey Volumes 1–6* (Goldring et al. 2013) and the *Documentation for the 2011–12 Schools and Staffing Survey* (Graham et al. forthcoming).

## 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. For details on sampling at all levels of SASS, see the *Survey Documentation for the 2011–12 Schools and Staffing Survey* (Graham et al. forthcoming).

The sampling frame for TFS consisted of the public and private school teachers who completed interviews for SASS, excluding any SASS teacher who did not complete an interview or was otherwise found to be out of scope for SASS. As the TFS frame was created before the interview status for SASS was finalized, the TFS frame included about 100 teachers who subsequently became noninterviews or out of scope for SASS but did not include 70 teachers who were reported to have died or left the country at the time when TFS data collection began in the fall of 2012.

The TFS sample is a stratified sample allocated to allow comparisons of teachers by TFS status (stayers, movers, and leavers) within sector (traditional public, public charter, and private), experience groups (first year, second year, third year, fourth or fifth year, and experienced), teacher's grade level (primary,

middle, and high), and teacher's race/ethnicity (Hispanic, Black, and other).<sup>1</sup> To determine TFS status for the TFS frame, each SASS sampled school was mailed a Teacher Status Form at the beginning of the 2012–13 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 who remained in their SASS-year school or whose status was not reported by the school.
- Movers—teachers who left their SASS-year school but continued teaching in a different school, or teachers whose SASS-year school had closed or merged with another school.
- Leavers—teachers who left the teaching profession after the SASS year and before the TFS year began.
- Unknowns—teachers who were reported by their SASS-year school as having left, but for whom no other information was given, or teachers whose SASS-year school did not complete the Teacher Status Form.

Once the sample sizes were determined at the status/sector/race level, the sample was allocated to strata proportional to the measure of size within each stratum relative to the measure of size of the status/sector/race level to maximize the reliability of status/sector/race estimates. The measure of size was the SASS teacher base weight. Teachers were selected within each TFS stratum using a systematic probability proportional to size sampling procedure, which is similar to that used in the SASS school selection. By design, movers and leavers were sampled at higher rates than stayers. These sampling procedures resulted in a sample of 4,400 current teachers and 2,600 former teachers for TFS. Of the sampled teachers, about 4,400 responded to TFS. Among these respondents, about 1,600 were still teaching at the same school in the 2012–13 school year as in the previous year (“stayers”); 1,300 were still teaching in 2012–13, but at a different school than in the previous year (“movers”); and 1,600 had left the teaching profession in the previous year (“leavers”). Note that these are unweighted counts of respondents.

## **Data Collection Procedures**

Data collection for the 2012–13 TFS began as part of a sample selection operation in the fall of 2012 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 2011–12 SASS.

In 2012–13, TFS employed a primarily web-based survey approach with subsequent mail and telephone follow-up. Using the information collected on the TFS-1 forms, a sample of teachers was selected and invited to participate in the 2012–13 TFS. While most TFS data were collected using an internet instrument, paper questionnaires were mailed to Amish and Mennonite teachers. Telephone follow-up efforts were conducted to encourage participation or to collect data over the phone. Throughout this telephone follow-up, paper questionnaires were mailed upon request. Before closing data collection, a last

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<sup>1</sup> Stayer/mover/leaver status was collected during the 2012–13 TFS while sector, experience group, teacher's grade level, and teacher's race/ethnicity were all collected during the base year (2011–12 SASS).

round of paper questionnaires were mailed to teachers who had not yet responded to the survey. The schedule for these data collection activities is discussed below.

Data collection activities for current and former teachers began in January 2013. Initial contact included a letter to sampled teachers inviting their participation in TFS using an internet instrument; an e-mail to those sampled teachers who provided e-mail addresses inviting their participation in TFS; and, for Amish and Mennonite teachers, an invitation letter with a paper questionnaire. Following these initial contacts, a reminder letter and intermittent e-mails were sent to teachers who had not yet returned a completed questionnaire. Telephone follow-up began in February 2013 and was followed by additional reminder e-mails (six total) and second, third, and fourth reminder letters. The third and fourth reminder letters contained paper questionnaires. Reminder letters were also sent to teachers who had partially completed an online questionnaire, encouraging them to finish the survey. Data collection closed in July 2013.

See chapter 3 of the *Documentation for the 2012–13 Teacher Follow-up Survey* (Graham, Parmer, and Cox forthcoming) for more information on sampling and chapter 5 for more information on data processing. For more information on data collection, nonresponse follow-up, and methodology, as well as a brief evaluation of the methodology, see chapter 4 of the survey documentation.

## **Data Processing and Imputation**

The Census Bureau used both central processing and headquarters staff to check returned questionnaires, key the data, and implement quality control procedures.

Data processing was conducted within each TFS questionnaire type (i.e., former and current teacher questionnaires). Questionnaires that had a preliminary classification of a complete interview were submitted to a series of computer edits consisting of a range check, a consistency edit, a blanking edit,<sup>2</sup> and a logic edit. After these edits were run and reviewed by analysts, the records were put through another edit to make a final determination as to whether the case was eligible for the survey and whether sufficient data had been collected for the case to be classified as a complete interview.

After the final edits were run, cases with “not-answered” values for items remained. Values were imputed using two main approaches. First, donor respondent methods, such as hot-deck imputation, were used. If no matching donor case could be found, values for missing items were imputed using the mean or mode of each item from groups of similar cases. After each stage of imputation, computer edits were run again to verify that the imputed data were consistent with the existing questionnaire data. If that was not the case, an imputed value was blanked out by one of these computer edits due to inconsistency with other data within the same questionnaire or because it was out of the range of acceptable values. In these situations, Census Bureau analysts looked at the items and tried to determine an appropriate value. Edit and imputation flags, indicating which edit or imputation method was used, were assigned to each relevant survey variable. For further information, see the sections on data processing and imputation in the *Documentation for the 2012–13 Teacher Follow-up Survey* (Graham, Parmer, and Cox forthcoming).

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<sup>2</sup> Blanking edits delete answers to questions that should not have been filled in (e.g., if a respondent followed a wrong skip pattern).



## Response Rates

**Unit response rate.** The unit response rate indicates the percentage of sampled cases that met the definition of a complete interview. The weighted TFS unit response rate was produced by dividing the weighted number of respondents who completed questionnaires by the weighted number of eligible sampled cases, using the initial base weight (the inverse of the probability of selection).<sup>3</sup>

Table B-1 summarizes the weighted unit response rates in the 2012–13 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 2012–13 school year (stayers) and those who moved to a new school (movers). Both stayers and movers completed the Current Teacher Questionnaire.

**Table B-1. Weighted unit and overall response rates of TFS teachers, using initial base weight, by sector and teaching status: 2012–13**

Sector and teaching status	Weighted unit response rate	Weighted overall unit response rate
Public	80.7	49.9
Current teacher	81.3	50.3
Stayer	81.6	50.5
Mover	77.9	48.2
Former teacher	73.8	45.6
Private	79.3	39.7

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 (2011–12). “Movers” are teachers who were still teaching in the current school year but had moved to a different school after the base year (2011–12).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2012–13.

**Overall response rate.** The overall response rate represents the response rate to the survey taking into consideration each stage of the survey. For TFS teachers, the overall response rate is calculated as the product of the response rate of three stages: the Teacher Listing Form, the SASS teacher questionnaire, and the TFS questionnaire.<sup>4</sup> The weighted overall response rate using the initial basic weight for private school teachers was notably low (39.7 percent), resulting in a decision to exclude private school teachers from the 2012–13 TFS data files. The weighted overall response rate for public school teachers was 49.9 percent (50.3 percent for current and 45.6 percent for former teachers).

### Unit nonresponse bias analysis.

Because the NCES Statistical Standards (4-4) require analysis of nonresponse bias for any survey stage with a base-weighted response rate less than 85 percent, both the Current and Former Teacher TFS data files were evaluated for potential bias. As part of this unit nonresponse bias analysis, comparisons between the frame and respondent populations were made before and after the noninterview weighting adjustments were applied in order to evaluate the extent to which the adjustments reduced or eliminated nonresponse bias.

<sup>3</sup> For the formula used to calculate the unit response rate, see *NCES Statistical Standards* (U.S. Department of Education 2012).

<sup>4</sup> For the formula used to calculate the overall response rate, see *NCES Statistical Standards* (U.S. Department of Education 2012).

Prior to nonresponse adjustments, this comparison between the frame and the base-weighted estimates showed evidence of bias in 8 percent of characteristics for the TFS as a whole. When examined by 2012–13 teacher status, the comparison between the frame and the base-weighted estimates showed evidence of bias in 7 percent of characteristics for stayers, 5 percent of characteristics for movers, and 5 percent of characteristics for leavers.

Nonresponse adjustments were designed to reduce or eliminate bias. When the estimates computed using the nonresponse-adjusted weights were compared to the frame estimates for the TFS, the estimates show that bias remained in 3 percent of the characteristics compared. When examined by 2012–13 teacher status, bias remained in 4 percent of characteristics for stayers, 2 percent of characteristics for movers, and 4 percent of characteristics for leavers.

For further information on unit response rates and nonresponse bias analysis, including the variables used and areas of potential bias, see the *Documentation for the 2012–13 Teacher Follow-up Survey* (Graham, Parmer, and Cox forthcoming).

**Item response rates.** The item response rate indicates the percentage of respondents who answered a given survey question or item. The weighted TFS item response rate is calculated by dividing the weighted number of respondents who provided an answer to an item by the weighted number of respondents who were eligible to answer that item.<sup>5</sup> Table B-2 provides a brief summary of the weighted item response rates for each questionnaire.

For the current teacher data, three of the survey items used in this report have item response rates less than 85 percent: type of move (F1225) and reasons for moving (F1227 and F5249), with response rates of 77, 78, and 77 percent, respectively.

For the former teacher data, one of the survey items used in this report had an item response rate of less than 85 percent. That item asked former teachers to rate their current position relative to teaching based on 20 different aspects. The response rates for rating these aspects range from 68 percent to 74 percent. For further information on the nonresponse bias analysis and item response rates, see the *Documentation for the 2012–13 Teacher Follow-up Survey* (Graham, Parmer, and Cox forthcoming).

**Table B-2. Summary of weighted item response rates by survey, 2012–13**

Survey	Percent of items with a response rate of 85 percent or more	Percent of items with a response rate of less than 85 percent
Current Teacher	84.2	15.8
Former Teacher	71.6	28.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current Teacher and Former Teacher Documentation Data Files,” 2012–13.

<sup>5</sup> For the formula used to calculate the item response rate, see *NCES Statistical Standards* (U.S. Department of Education 2012).

## **Weighting**

The general purpose of weighting is to scale up the sample estimates to represent the target survey population. For SASS, a base weight is used as the starting point. In some cases, this base weight is the simple reciprocal of the unit's probability of selection on the frame (the initial base weight), and in other cases, adjustments are made to this frame base weight to reflect multiple chances of selection from the frame or other situations such as subsampling.

Next, a series of nonresponse-adjustment factors are calculated and applied based on a weighting cell adjustment. Weighting cells are developed using tree search algorithms. These cells are selected to be homogeneous in response propensity within cells and heterogeneous in response propensity across cells (response propensity is the underlying "chance" that a particular sample unit will respond by completing the questionnaire: its individual response rate). The adjustment is the inverse of the weighted response rate within each cell, and each respondent in the cell receives this adjustment. Nonrespondents are given weights of zero: the respondents are reweighted to represent the nonrespondents.

Finally, for some files, a ratio-adjustment factor is calculated and applied to the sample to adjust the sample totals to the frame totals. This improves the precision of survey estimates (Deville and Särndal 1992).

The product of these factors is the final weight for each TFS respondent, which appears as TFSFINWT on both the Current and Former Teacher data files.

Next, a weighting adjustment is applied to reflect the impact of the entire SASS teacher weighting procedure. A TFS nonresponse adjustment factor is then 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 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.

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 which 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 field representatives. The difference occurs because a sample survey estimate is subject to two types of errors: nonsampling and sampling. Estimates of the magnitude of sampling error for TFS data 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, an inability to recall information, errors made in collection (e.g., in recording or coding the data), errors made in processing the data, and errors made in estimating values for missing data. Quality control and edit procedures were used to reduce errors made by respondents, coders, and interviewers.

## **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 education system.

Some of the change may be due to changes in the sampling frame, changes in 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 an improvement in geocoding technology, which improved the assignment of specific addresses to physical locations. In 2005, a new locale code for the Common Core of Data 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 administrations.

## **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 2011–12 Schools and Staffing Survey (SASS) Teacher Questionnaires (variables that begin with “T” and are followed by four digits) and the 2012–13 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 them. 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. The variables without a variable name were created for the analyses in this report and are not on the data files.

**Table C-1. Variables used in the *Teacher Attrition and Mobility: Results From the 2012–13 Teacher Follow-up Survey* report**

Variable	Variable name in data file
Annual base salary	T0508
Charter school identifier <sup>1</sup>	CHARFLAG
Comparison of current position to teaching	F1801-F1820
Contract renewed, leaver	F1700
Contract renewed, mover	F1227
Four-category school level <sup>1</sup>	SCHLEVE2
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 services <sup>1</sup>	<i>Not in file</i>
Main teaching assignment <sup>1</sup>	ASSIGN03
Most important reason for moving	F5249
Most important reason for leaving	F5725
Percentage of students in the school approved for the National School Lunch Program <sup>1</sup>	NSLAPP_S
Questionnaire name <sup>1</sup>	SRVEY_TF
Stayer/mover/leaver status <sup>1</sup>	STTUS_TF
Student enrollment <sup>1</sup>	SCHSIZE
Teacher certification type <sup>1</sup>	<i>Not in file</i>
Teacher’s age <sup>1</sup>	AGE_T
Teacher’s full-time or part-time teaching status <sup>1</sup>	FTPT
Teacher’s sex <sup>1</sup>	GENDER_S
Teacher’s race/ethnicity <sup>1</sup>	RACETH_T
Total years of teaching experience <sup>1</sup>	TOTYREXP_S
Type of move between schools	F1225
Urban-centric school locale code <sup>1</sup>	URBANS12

<sup>1</sup> The definition for this variable can be found in the list that follows.

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,” 2011–12; Teacher Follow-up Survey (TFS), “Current and Former Teacher Data Files,” 2012–13.

**Charter school identifier (CHARFLAG):** A flag variable taken from the SASS Public School data file that identifies charter schools. 1 = School is a public charter school, 2 = School is a traditional public school. A charter school is a public school that, in accordance with an enabling state statute, has been granted a charter exempting it from selected state or local rules and regulation. CHARFLAG is based on S0290 from the SASS Public School Data File.

**Four-category school level (SCHLEVE2):** Taken from the Public School data file, SCHLEVE2 is a four-category variable based on grades reported by the school: primary, middle, high, and combined. Primary schools are those with at least one grade lower than 5 and no grade higher than 8. Middle schools have no grade lower than 5 and no grade higher than 8. High schools have no grade lower than 7 and at least one grade higher than 8. Combined schools are those with at least one grade lower than 7 and at least one grade higher than 8, or with all students in ungraded classrooms.

**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 (F1607) of former teachers whose main occupational status (F1603) 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):** Taken from the Public School Teacher and Private School Teacher data files, ASSIGN03 is a 12-category variable based on the respondent's reported main teaching assignment (T0090).

**Percentage of students in school approved for the National School Lunch Program (NSLAPP\_S):** Taken from the Public School data file, NSLAPP\_S is a continuous variable created by dividing the number of K–12 and ungraded students approved for free or reduced-price lunches (S0273) by the total number of K–12 and ungraded students enrolled (S0039) among schools that participated in the National School Lunch Program (NSLP) (S0272 = 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.

**Questionnaire name (SRVEY\_TF):** This variable indicates whether the respondent completed the Former Teacher Questionnaire (TFS2) or Current Teacher Questionnaire (TFS3).

**Stayer/mover/leaver status (STTUS\_TF):** A TFS created variable, STTUS\_TF indicates whether teachers remained in their 2011–12 SASS school, moved to a new school, or left the teaching profession during the 2012–13 school year.

**Student enrollment (SCHSIZE):** Taken from the SASS Public School and Private School data files, SCHSIZE is a continuous variable based on the number of K–12 and ungraded students enrolled in a respondent's school (S0039). For this report, SCHSIZE was recoded into four categories.

**Teacher certification type:** A variable based on a respondent's reported certification type (T0250, T0276) during the 2011–12 school year.

**Teacher's age (AGE\_T):** Taken from the SASS Public School Teacher and Private School Teacher data files, AGE\_T is a continuous variable that was created by subtracting the teacher's reported year of birth (T0534) from the year of data collection (2011).

**Teacher's full- or part-time teaching status (FTPT):** Taken from the Public School Teacher and Private School Teacher data files, FTPT is a two-category created 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 variable created based on variables from the SASS Public School Teacher and Private School Teacher data files: T0527—whether or not the teacher is of Hispanic or Latino origin and T0528–T0532—the teacher's race. The following categories were created for analysis.

- Hispanic, regardless of race: the teacher indicates he/she is of Hispanic or Latino origin (T0527=1).
- White, non-Hispanic: the teacher indicates he/she is White (T0528=1), not of Hispanic or Latino origin (T0527=2), and does not consider him/herself to be any other race.
- Black or African American, non-Hispanic: the teacher indicates he/she is Black or African American (T0529=1), not of Hispanic or Latino origin (T0527=2), and does not consider him/herself to be any other race.
- Asian, non-Hispanic: the teacher indicates he/she is Asian (T0530=1), not of Hispanic or Latino origin (T0527=2), and does not consider him/herself to be any other race.
- Native Hawaiian/Pacific Islander, non-Hispanic: the teacher indicates he/she is Native Hawaiian or Other Pacific Islander (T0531=1), not of Hispanic or Latino origin (T0527=2), and does not consider him/herself to be any other race.
- American Indian/Alaska Native, non-Hispanic: the teacher indicates he/she is American Indian or Alaska Native (T0532=1), not of Hispanic or Latino origin (T0527=2), and does not consider him/herself to be any other race.
- Two or more races, non-Hispanic: the teacher indicates he/she is more than one race (more than one category T0528–T0532=1) and not of Hispanic or Latino origin (T0527=2).

**Total years of teaching experience (TOTYREXP\_S):** Taken from the SASS Public School Teacher and Private School Teacher data files, TOTYREXP\_S is a created variable that combines the number of years of full-time and part-time experience a teacher had in public and private schools (T0043, T0044, T0047) and accounts for the year they began teaching (T0040).

**Urban-centric school locale code (URBANS12):** Taken from the SASS Public School and Private School data files, URBANS12 is a created variable collapsed from the 12-category urban-centric school locale code (SCLOP12) that was assigned using the 2000 Decennial Census data and recoded into four categories: city, suburban, town, and rural.