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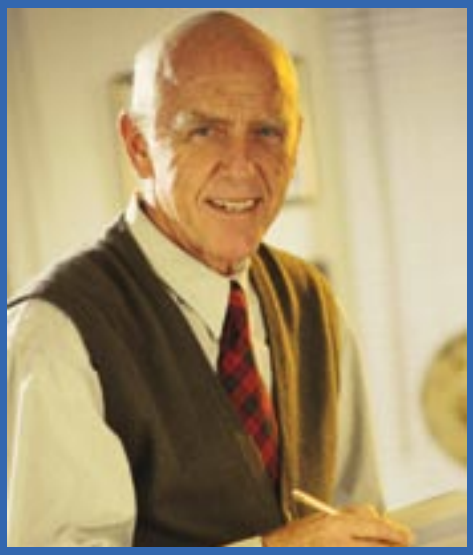
Teacher Attrition and Mobility:

Results from the 2004-05 Teacher Follow-up Survey

U.S. Department of Education
NCES 2007-307

FIRST LOOK



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The tables in this report were developed jointly by AIR and the Census Bureau.

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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 leave 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?" and "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 from year to year with those of teachers who either move to a different school or leave the profession.

TFS has been conducted five times: in 1988–89, 1991–92, 1994–95, 2000–01, and 2004–05, after the 1987–88, 1990–91, 1993–94, 1999–2000, and 2003–04 administrations of SASS, respectively. TFS is sponsored by the National Center for Education Statistics (NCES), the statistical agency of the U.S. Department of Education, and is conducted by the U.S. Census Bureau.

The 2004–05 TFS was completed by 7,429 current and former teachers. Of these respondents, 2,864 were still teaching at the same school in 2004–05 as in the previous year ("stayers"); 1,912 were still teaching in 2004–05, but at a different school than in the previous year ("movers"); and 2,653 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 2004–05 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 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 presented in this report are drawn from the 2003–04 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.

This First Look report provides some selected findings from the 2004–05 TFS along with data tables and methodological information. These findings are intended as simple descriptive statistics and are not meant to imply causality.

Selected Findings

- Of the 3,214,900 public school teachers who were teaching during the 2003–04 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. Among private school teachers, 81 percent were stayers, 6 percent were movers, and 14 percent were leavers (table 1).

- Among public school teachers younger than age 30, about 15 percent moved to another school, while 9 percent left teaching. Among private school teachers in the same age category, 12 percent were movers and 20 percent were leavers (tables 2 and 3).

- Thirty-eight percent of public and 33 percent of private school movers rated the opportunity for a better teaching assignment as very important or extremely important in their decision to change schools. Additionally, 46 percent of private school teacher movers rated better salary or benefits as a very important or extremely important reason in their decision to change schools (table 4).

- Twenty-five percent of public and 30 percent of private school leavers rated pursuing a position other than that of a K–12 teacher as very important or extremely important in their decision to leave K–12 teaching. Additionally, 31 percent of public school leavers rated retiring and 25 percent of private school leavers rated pregnancy and child caring as very important or extremely important in their decision to leave K–12 teaching (table 6).

- Twenty-nine percent of public school teacher leavers were working in a position in the field of education, but not as a regular K–12 classroom teacher, while 12 percent of public school teacher leavers were working in an occupation outside the field of education (table 7).

- Fifty-five percent of public school teachers who left teaching but continued to work in the field of education reported that they had more control over their own work in their new position than in teaching, while 65 percent of public school leavers who worked outside the field of education felt that their workload in their new position was more manageable and that they were better able to balance their personal and work life (table 8).

- Of the private school teacher leavers who were either working in the field of education (but not teaching) or were working outside the field of education, 51 percent reported that the workload in their new position was more manageable than in teaching (table 9).

Estimate Tables

Table 1. Number and percentage distribution of teacher stayers, movers, and leavers, by sector: Selected years 1988–89 through 2004–05

	Number				Percent		
Sector and year	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
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

[1] 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 TFS. The total number of base year teachers for any year is slightly lower than previously published counts, as all teachers who responded to SASS but were ineligible for the TFS (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. 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," 2004–05; *Teacher Attrition and Mobility: Results from the Teacher Follow-up Survey, 2000–01,* U.S. Department of Education, National Center for Education Statistics (NCES 2004–301).

Table 2. Number and percentage distribution of public school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2004–05

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	3,214,900	2,684,200	261,100	269,600	83.5	8.1	8.4
Full-time teaching experience							
No full-time teaching experience	28,100	17,800	4,800	5,500	63.3	17.1	19.6
1–3 years	598,300	461,100	88,600	48,600	77.1	14.8	8.1
4–9 years	867,200	716,800	81,600	68,800	82.7	9.4	7.9
10–19 years	812,600	717,000	51,000	44,700	88.2	6.3	5.5
20 years or more	908,600	771,500	35,200	101,900	84.9	3.9	11.2
Age							
Less than 30 years	593,200	452,400	87,100	53,700	76.3	14.7	9.0
30–39 years	765,900	645,000	68,900	52,000	84.2	9.0	6.8
40–49 years	847,000	742,300	60,100	44,600	87.6	7.1	5.3
50 years or more	1,008,800	844,500	45,000	119,300	83.7	4.5	11.8
Base Salary							
Less than $30,000	388,400	298,900	48,200	41,300	77.0	12.4	10.6
$30,000–$39,999	1,118,300	916,700	121,300	80,400	82.0	10.8	7.2
$40,000 or more	1,708,200	1,468,600	91,700	147,900	86.0	5.4	8.7
Sex							
Male	783,700	657,700	65,300	60,700	83.9	8.3	7.7
Female	2,431,200	2,026,500	195,800	208,800	83.4	8.1	8.6
Race/ethnicity							
White, non-Hispanic	2,726,900	2,287,800	216,300	222,800	83.9	7.9	8.2
Black, non-Hispanic	242,500	192,300	23,500	26,600	79.3	9.7	11.0
Hispanic, single or more than one race	137,800	111,100	13,900	12,800	80.6	10.1	9.3
Asian, Native Hawaiian, or Other Pacific Islander, non-Hispanic	49,300	40,300	3,900	5,100	81.8	7.9	10.3 !
American Indian/Alaska Native, non-Hispanic	24,700	23,000	1,200	500	93.1	5.0	1.9
More than one race, non-Hispanic[2]	33,800	29,800	2,200	1,800	88.1	6.6	5.3 !
Main assignment field							
Early childhood/general elementary	1,127,900	953,600	83,000	91,300	84.5	7.4	8.1
Special education	412,700	325,600	45,900	41,300	78.9	11.1	10.0
Arts/music	193,300	163,700	18,000	11,700	84.7	9.3	6.0
English/language arts	323,300	269,000	29,200	25,100	83.2	9.0	7.8
Mathematics	238,000	201,400	20,400	16,200	84.6	8.6	6.8
Natural sciences	214,000	189,300	11,900	12,700	88.5	5.6	5.9
Social sciences	187,700	160,700	11,300	15,800	85.6	6.0	8.4
Other	518,000	420,900	41,500	55,600	81.3	8.0	10.7
Teaching status							
Full-time	2,925,200	2,476,900	227,900	220,500	84.7	7.8	7.5
Part-time	289,700	207,300	33,300	49,100	71.6	11.5	16.9

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: 2004–05—Continued

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Certification type[3]							
Regular or standard	2,814,900	2,380,000	203,000	231,900	84.5	7.2	8.2
Probationary	116,800	90,600	17,300	9,000	77.5	14.8	7.7
Provisional or temporary	206,700	159,500	31,000	16,200	77.2	15.0	7.8
Waiver or emergency	26,900	20,600	2,700	3,700	76.3	9.9	13.7
None of the above	49,600	33,600	7,100	8,800	67.9	14.4	17.7
Community type							
Central city	853,300	680,800	88,000	84,500	79.8	10.3	9.9
Urban fringe/large town	1,747,600	1,481,400	128,300	137,800	84.8	7.3	7.9
Rural/small town	614,000	522,000	44,800	47,200	85.0	7.3	7.7
School level							
Elementary	2,070,000	1,713,400	181,400	175,200	82.8	8.8	8.5
Secondary	977,600	827,100	66,700	83,800	84.6	6.8	8.6
Combined	167,300	143,700	13,000	10,600	85.9	7.8	6.3
School enrollment							
Less than 200	146,300	117,500	14,600	14,200	80.3	10.0	9.7
200–499	990,100	814,200	81,700	94,200	82.2	8.3	9.5
500–749	830,500	703,900	68,000	58,500	84.8	8.2	7.0
750 or more	1,248,000	1,048,600	96,800	102,700	84.0	7.8	8.2
Percent of K–12 students who were approved for free or reduced-price lunches							
Less than 15	650,100	557,700	41,400	51,100	85.8	6.4	7.9
15–49	1,433,700	1,224,700	103,000	106,000	85.4	7.2	7.4
50 or more	1,074,900	859,900	111,000	104,000	80.0	10.3	9.7
School did not participate in free or reduced-price lunch program	56,200	41,900	5,800	8,500	74.6	10.3	15.1
Percent of enrolled students who were minorities							
Less than 10	926,500	800,300	51,600	74,600	86.4	5.6	8.1
10–34	816,400	697,700	63,800	54,900	85.5	7.8	6.7
35 or more	1,472,000	1,186,200	145,700	140,100	80.6	9.9	9.5

! Interpret data with caution. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

[1] Base year refers to 2003–04.

[2] The 2003–04 SASS allowed respondents to mark multiple race categories.

[3] A probationary certificate is issued after an individual satisfies all regular certification requirements except the completion of a probationary period. A provisional certificate is given to individuals who are still participating in what states call an “alternative certification program." Temporary certification requires some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained, and a waiver or emergency certificate is issued to individuals with insufficient teacher preparation who must complete a regular certification program in order to continue teaching.

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.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Data File," 2003–04; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2004–05.

Table 3. Number and percentage distribution of private school teacher stayers, movers, and leavers, by selected teacher and school characteristics in the base year: 2004–05

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	465,300	374,600	27,600	63,100	80.5	5.9	13.6
Full-time teaching experience							
No full-time teaching experience	40,800	30,000	1,600	9,100	73.6	4.0	22.3
1–3 years	111,400	79,100	11,300	21,100 !	71.0	10.1	18.9
4–9 years	112,700	87,000	7,500	18,100	77.2	6.7	16.1
10–19 years	102,000	90,100	3,900	8,000	88.3	3.8	7.8
20 years or more	98,400	88,300	3,200	6,900	89.7	3.3	7.0
Age							
Less than 30 years	88,800	60,500	10,500	17,800	68.1	11.8	20.1
30–39 years	105,700	85,200	5,500	15,000	80.6	5.2	14.2
40–49 years	113,600	95,800	5,700	12,200	84.3	5.0	10.7
50 years or more	157,200	133,200	5,900	18,100 !	84.7	3.8	11.5 !
Base Salary							
Less than $30,000	239,000	173,500	19,000	46,500	72.6	8.0	19.4
$30,000–$39,999	125,500	107,200	6,200	12,000	85.5	5.0	9.6
$40,000 or more	100,800	93,800	2,300	4,700	93.1	2.3	4.6
Sex							
Male	105,000	84,600	5,500	14,900	80.5	5.2	14.2
Female	360,300	290,000	22,100	48,200	80.5	6.1	13.4
Race/ethnicity							
White, non-Hispanic	413,300	336,000	23,600	53,600	81.3	5.7	13.0
Black, non-Hispanic	16,800	11,400	1,600	3,900 !	67.8	9.2	23.0 !
Hispanic, single or more than one race	17,200	12,100	1,300	3,800	70.3	7.6	22.1
Asian, Native Hawaiian, or Other Pacific Islander, non-Hispanic	13,400	12,000	400	1,000	89.7	2.7	7.6
American Indian/Alaska Native, non-Hispanic	2,800	1,900 !	500 !	500	65.5	18.5 !	16.0 !
More than one race, non-Hispanic[2]	1,700	1,100 !	200 !	400 !	65.8	13.4 !	20.8 !
Main assignment field							
Early childhood/general elementary	173,600	140,700	11,700	21,100 !	81.1	6.8	12.2
Special education	22,600	16,300	1,700	4,600	72.2	7.4 !	20.4
Arts/music	38,100	29,600	1,700	6,900	77.6	4.4	18.0
English/language arts	46,700	37,900	2,600	6,200	81.1	5.6	13.3
Mathematics	38,400	32,200	2,100	4,100	83.8	5.4	10.7
Natural sciences	33,400	28,000	2,000	3,400	84.0	5.9	10.1
Social sciences	27,700	22,700	1,300	3,700	81.8	4.8	13.4
Other	84,900	67,200	4,500	13,100	79.2	5.3	15.5
Teaching status							
Full-time	369,500	303,900	23,100	42,600	82.2	6.2	11.5
Part-time	95,800	70,700	4,500	20,600	73.8	4.7	21.5

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: 2004–05—Continued

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Certification type[3]							
Regular or standard	205,800	171,400	14,200	20,200	83.3	6.9	9.8
Probationary	5,800	3,800	800	1,200 !	65.4	13.5 !	21.0 !
Provisional or temporary	20,800	15,800	1,800	3,200 !	76.1	8.5	15.3 !
Waiver or emergency	1,600	600 !	400 !	600	33.9 !	27.1 !	38.9
No current certification	195,200	153,600	9,400	32,300	78.7	4.8	16.5
No state certification, but regular or full certification by an accrediting body other than the state	36,100	29,400	1,000	5,700	81.5	2.8	15.7
Community type							
Central city	177,600	145,800	10,900	20,900	82.1	6.1	11.8
Urban fringe/large town	241,700	193,900	12,800	35,100	80.2	5.3	14.5
Rural/small town	46,000	34,900	3,900	7,100 !	76.0	8.5	15.5 !
School level							
Elementary	218,600	172,700	16,500	29,500	79.0	7.6	13.5
Secondary	78,200	68,300	2,500	7,400	87.4	3.2	9.4
Combined	168,500	133,600	8,600	26,300	79.3	5.1	15.6
School enrollment							
Less than 200	180,200	131,300	13,900	35,000	72.9	7.7	19.4
200–499	169,800	139,800	9,900	20,100	82.3	5.8	11.9
500–749	48,300	41,600	1,900	4,700	86.3	4.0	9.8
750 or more	67,100	61,800	1,900	3,300	92.2	2.9	4.9
Percent of enrolled students who were minorities							
Less than 10	216,900	181,600	10,900	24,400 !	83.7	5.0	11.3
10–34	168,000	134,000	9,900	24,200	79.7	5.9	14.4
35 or more	80,400	59,000	6,800	14,600	73.4	8.5	18.1

! Interpret data with caution. The standard error for this estimate is equal to 50 percent or more of the estimate's value.

[1] Base year refers to 2003–04.

[2] The 2003–04 SASS allowed respondents to mark multiple race categories.

[3] A probationary certificate is issued after an individual satisfies all regular certification requirements except the completion of a probationary period. A provisional certificate is given to individuals who are still participating in what states call an “alternative certification program." Temporary certification requires some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained, and a waiver or emergency certificate is issued to individuals with insufficient teacher preparation who must complete a regular certification program in order to continue teaching.

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.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Data File," 2003–04; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2004–05.

Table 4. Percentage of public and private school teacher movers who rated various reasons as very important or extremely important in their decision to move from their base year school: 2004–05

Reason for moving	Public	Private
New school is closer to home	26.2	22.8
Better salary or benefits	16.5	46.4
Higher job security	19.1	33.4
Opportunity for a better teaching assignment (subject area or grade level)	38.1	33.1
Dissatisfaction with workplace conditions at previous school	32.7	21.4
Dissatisfaction with support from administrators at previous school	37.2	27.0
Dissatisfaction with changes in job description or responsibilities	18.3	17.5
Laid off or involuntarily transferred	18.7	19.2
Did not have enough autonomy over classroom at previous school	10.4	7.6
Dissatisfaction with opportunities for professional development at previous school	12.8	19.7
Dissatisfaction with base year school for other reasons	31.2	29.7

NOTE: Movers are teachers who were still teaching in the current school year but had moved to a different school after the base year (2003–04). Respondents were asked to rate the importance of each reason individually in their decision to move from the base year school, although some reasons may be involuntary. Response choices were based on a 5-point scale, and included the following: "Not at all important," "Slightly important," "Somewhat important," "Very important," and "Extremely important." This table includes the percent of movers who responded "Very important" or "Extremely important."

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2004–05 .

Table 5. Percentage of public and private school teacher movers who moved across schools, school districts, and sectors, by sector, years of experience, and type of move: 2003–04 through 2004–05

	Public (in 2003–04)		Private (in 2003–04)	
	Years of experience		Years of experience	
Type of move	Less than three	Three or more	Less than three	Three or more
Total	100.0	100.0	100.0	100.0
Moved from one public school to another public school in the same school district	39.7	51.7	†	†
Moved from one public school district to another public school district	55.3	45.8	†	†
Moved from a public school to a private school	5.1 !	2.5	†	†
Moved from a private school to a public school	†	†	62.7	48.5
Moved from one private school to another private school	†	†	37.3	51.5

† Not applicable.

! Interpret data with caution. 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 (2003–04). 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," 2004–05.

Table 6. Percentage of public and private school teacher leavers who rated various reasons as very important or extremely important in their decision to leave the position of a K–12 teacher: 2004–05

Reason for leaving	Public	Private
Changed residence	11.2	17.4
Pregnancy or child rearing	18.7	24.6
Health	11.8	13.2
Retirement	31.4	10.2
School staffing action (e.g., reduction-in-force, lay-off, school closing, school reorganization, reassignment)	14.6	17.7
Better salary or benefits	14.2	21.8
To pursue a position other than that of a K-12 teacher	25.3	29.5
To take courses to improve career opportunities within the field of education	8.9	9.8
To take courses to improve career opportunities outside the field of education	5.3	7.3
Dissatisfied with teaching as a career	14.6	10.8
Dissatisfied with previous school or teaching assignment	16.0	18.1
Other family or personal reasons	20.4	30.6

NOTE: Leavers are teachers who left the teaching profession after the base year (2003–04). Respondents were asked to rate the importance of various reasons in their decision to leave the teaching profession, although some reasons may be involuntary. Response choices were based on a 5-point scale, and included the following: "Not at all important," "Slightly important," "Somewhat important," "Very important," and "Extremely important." This table includes the percent of leavers who responded "Very important" or "Extremely important."
SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2004–05.

Table 7. Percentage distribution of public and private school teacher leavers by their current occupational and industry status: 2004–05

Occupational and industry status	Percent	
	Public	Private
Total	100.0	100.0
Main occupational status of all leavers		
Attending a college or university	3.4	5.0
Caring for family members	12.5	18.2
Disabled	1.0	0.5
Retired	30.0	10.1
Other	8.0	10.9
Unemployed and seeking work	4.0	7.4
Working in a position in the field of education, but not as a regular K-12 classroom teacher	29.1	23.1 !
Working in an occupation outside the field of education	12.0	24.7
Industry status of leavers who were working in a position in the field of education, but not as a regular K-12 classroom teacher		
Employee of a private company, business, or individual for wages, salary, or commission	13.5	62.9
State or federal government employee	28.2	15.0 !
Local government employee	54.6	8.6
Self-employed in own business, professional practice, or farm	3.7	11.2 !
Working without pay in a family business, farm, or volunteer job	#	2.3 !
Industry status of leavers who were working in an occupation outside the field of education		
Employee of a private company, business, or individual for wages, salary, or commission	62.7	71.4
State or federal government employee	9.9	5.7
Local government employee	4.6	2.7 !
Self-employed in own business, professional practice, or farm	22.1	18.7
Working without pay in a family business, farm, or volunteer job	0.7	1.4 !

Rounds to zero.

! Interpret data with caution. 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 (2003-04). 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," 2004–05.

Table 8. Percentage distribution of working public school teacher leavers who rated various aspects of their current occupation as better in teaching, better in current position, or not better or worse, by their current main occupational status: 2004–05

	Working in a position in the field of education, but not as a regular K–12 classroom teacher			Working outside the field of education		
Aspect of current occupation	Better in teaching	Better in current position	Not better or worse	Better in teaching	Better in current position	Not better or worse
Salary	28.0	33.3	38.7	41.0	44.6	14.4
Benefits	28.2	8.9	62.9	46.5	26.8	26.6
Job security	41.0	11.5	47.4	32.9	34.4	32.7
Intellectual challenge	15.9	42.9	41.2	30.2	47.8	22.0
Opportunities for professional development	21.3	43.2	35.6	28.8	36.7	34.5
Professional prestige	24.5	49.1	26.4	27.7	47.0	25.3
General work conditions	11.2	27.8	61.0	14.0	60.9	25.1
Safety of environment	9.2	17.6	73.3	17.1	43.5	39.4
Manageability of workload	16.1	46.8	37.1	17.6	65.4	17.0
Procedures for performance evaluation	17.4	22.6	60.1	24.5	38.0	37.5
Autonomy or control over own work	19.7	54.8	25.6	15.0	63.5	21.5
Influence over workplace policies and practices	14.7	45.0	40.3	10.6	52.6	36.8
Social relationships with colleagues	26.0	20.7	53.3	26.0	39.3	34.7
Ability to balance personal life and work	18.1	40.9	41.0	14.1	64.7	21.2
Availability of resources and materials and/or equipment for doing job	21.3	29.4	49.3	12.9	55.9	31.1
Recognition and support from administrators and/or managers	21.1	41.1	37.8	14.6	53.3	32.1
Opportunities for learning from colleagues	26.6	32.0	41.4	30.4	39.5	30.0
Opportunities for professional advancement or promotion	22.9	43.0	34.1	19.5	57.6	22.9
Sense of personal accomplishment	29.7	39.6	30.7	30.1	46.6	23.3
Opportunities to make a difference in the lives of others	21.0	31.2	47.9	42.2	25.7	32.1

NOTE: Leavers are teachers who left the teaching profession after the base year (2003-04). 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," 2004–05.

Table 9. Percentage distribution of working 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: 2004–05

Aspect of current occupation	Better in teaching	Better in current position	Not better or worse
Salary	22.0	53.4	24.6 !
Benefits	23.9	32.1	44.0
Job security	14.1	34.9	51.0
Intellectual challenge	30.4	35.7 !	33.9
Opportunities for professional development	22.3	39.4	38.3 !
Professional prestige	27.0	32.0	41.0
General work conditions	12.4	36.9	50.7
Safety of environment	12.3	25.4	62.3
Manageability of workload	14.3	51.4	34.3
Procedures for performance evaluation	18.6	26.2	55.3
Autonomy or control over own work	22.8	46.9	30.3
Influence over workplace policies and practices	26.2	31.0	42.8
Social relationships with colleagues	26.4	25.3	48.4
Ability to balance personal life and work	14.2	53.1	32.8
Availability of resources and materials and/or equipment for doing job	13.4	35.9	50.7
Recognition and support from administrators and/or managers	23.6	28.5	47.9
Opportunities for learning from colleagues	22.0	34.5	43.5
Opportunities for professional advancement or promotion	17.4	43.6	38.9
Sense of personal accomplishment	28.8	27.7 !	43.4
Opportunities to make a difference in the lives of others	42.0	19.8 !	38.1

! Interpret data with caution. 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 (2003-04). Detail may not sum to totals because of rounding. This table reports data on leavers who were working in positions in the field of education, but not as regular K–12 classroom teachers, as well as leavers in positions outside the field of education. Data on leavers who reported working in other occupational categories are not included.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2004–05.

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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 2004–05

	Number				Percent		
Sector and year	Total base year teachers[1]	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Public							
1988–89[2]	—	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
Private							
1988–89[2]	—	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

— Not available.

[1] 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 TFS. The total number of base year teachers for any year is slightly lower than previously published counts, as all teachers who responded to SASS but were ineligible for the TFS (died or moved out of the country) were removed from the weighted count of base year teachers.

[2] 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.

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.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 1991–92, 1994–95 and 2004–05, previously unpublished tabulation (November 2006); Teacher Attrition and Mobility: Results from the Teacher Follow-up Survey, 2000–01, U.S. Department of Education, National Center for Education Statistics (NCES 2004–301).

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: 2004–05

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	30,448.4	30,602.5	15,995.1	14,543.6	0.59	0.49	0.44
Full-time teaching experience							
No full-time teaching experience	5,379.4	5,208.6	1,082.0	1,262.4	9.04	4.68	6.75
1–3 years	59,318.5	48,664.8	10,359.8	5,528.1	1.54	1.20	0.87
4–9 years	33,687.2	29,721.3	5,321.9	9,770.6	1.10	0.58	1.04
10–19 years	34,939.0	34,654.8	4,626.9	5,800.4	0.98	0.60	0.71
20 years or more	47,943.1	45,221.3	4,777.4	9,959.1	1.03	0.62	0.86
Age							
Less than 30 years	38,236.5	33,157.1	8,882.6	8,290.0	1.73	1.26	1.52
30–39 years	33,304.2	32,682.7	5,292.7	6,583.7	1.25	0.74	0.87
40–49 years	27,556.8	26,729.7	5,392.2	6,326.8	0.92	0.66	0.73
50 years or more	45,570.7	43,926.0	5,256.1	9,863.0	0.96	0.64	0.77
Base Salary							
Less than $30,000	31,986.1	29,415.2	5,647.8	4,576.2	2.10	1.22	1.66
$30,000–$39,999	35,063.8	33,061.3	10,627.4	7,771.9	1.07	0.86	0.76
$40,000 or more	57,520.3	56,476.0	6,793.5	10,377.8	0.74	0.44	0.59
Sex							
Male	15,435.0	13,085.2	7,044.0	5,448.0	1.00	0.84	0.67
Female	26,465.1	26,514.2	11,691.8	12,648.1	0.60	0.48	0.50
Race/ethnicity							
White, non-Hispanic	31,662.4	33,793.1	13,969.0	13,932.7	0.63	0.52	0.50
Black, non-Hispanic	18,095.8	16,999.0	2,705.7	5,415.7	2.64	1.11	2.31
Hispanic, single or more than one race	13,239.2	13,270.1	2,661.4	2,614.9	3.14	2.22	1.89
Asian, Native Hawaiian, or Other Pacific Islander, non-Hispanic	9,226.3	9,094.2	793.8	2,261.6	6.71	2.47	5.52
American Indian/Alaska Native, non-Hispanic	6,009.8	6,051.6	307.4	128.1	2.54	2.08	0.77
More than one race, non-Hispanic[2]	8,071.9	8,088.5	622.1	754.3	5.10	3.19	3.19
Main assignment field							
Early childhood/general elementary	33,620.0	32,799.5	7,515.2	10,471.9	0.99	0.72	0.85
Special education	29,253.4	22,516.5	6,214.2	6,660.8	1.99	1.12	1.51
Arts/music	14,254.5	13,925.8	2,490.9	1,538.7	1.63	1.35	0.92
English/language arts	14,887.1	14,270.8	3,406.8	3,187.2	1.50	1.04	0.97
Mathematics	13,958.1	13,637.7	3,383.6	2,034.1	1.69	1.45	0.87
Natural sciences	10,688.0	10,331.5	1,607.9	2,060.4	1.30	0.76	0.94
Social sciences	11,665.5	11,314.6	1,696.1	3,121.9	1.94	0.89	1.61
Other	19,220.0	17,483.6	4,288.9	6,628.3	1.41	0.78	1.26
Teaching status							
Full-time	33,425.2	33,746.8	14,390.6	13,351.9	0.58	0.50	0.44
Part-time	23,711.2	21,562.5	4,240.4	6,164.8	2.93	1.52	2.22

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: 2004–05—Continued

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Certification type[3]							
Regular or standard	41,717.0	42,290.6	11,608.1	14,205.8	0.62	0.45	0.46
Probationary	11,749.8	10,569.6	2,381.7	1,907.1	2.69	1.98	1.66
Provisional or temporary	19,293.1	16,284.1	4,385.9	2,655.9	2.08	1.67	1.45
Waiver or emergency	7,084.9	7,002.2	858.8	821.5	9.50	4.69	6.03
None of the above	9,780.4	8,682.9	1,525.8	1,972.8	6.96	3.65	5.45
Community type							
Central city	37,258.3	33,787.5	6,929.8	9,398.2	1.22	0.83	1.05
Urban fringe/large town	44,553.8	44,774.6	9,056.5	10,938.7	0.87	0.54	0.63
Rural/small town	31,322.0	30,527.5	5,171.5	5,703.6	1.11	0.91	0.92
School level							
Elementary	42,930.7	44,723.5	13,130.1	12,984.5	0.87	0.66	0.62
Secondary	37,872.1	36,618.9	5,680.6	7,205.8	0.94	0.60	0.74
Combined	18,682.3	18,930.4	1,865.3	1,704.2	2.53	1.59	1.38
School enrollment							
Less than 200	15,775.8	15,271.3	2,490.3	2,281.2	2.87	1.91	1.72
200–499	39,561.2	39,597.5	6,853.2	9,569.2	1.21	0.74	1.00
500–749	44,376.5	43,505.2	6,702.1	6,429.5	1.30	0.89	0.75
750 or more	47,429.3	45,572.7	8,446.1	9,384.5	0.98	0.66	0.79
Percent of K–12 students who were approved for free or reduced-price lunches							
Less than 15	38,961.9	35,387.5	4,589.9	6,107.3	1.15	0.66	0.88
15–49	46,071.0	45,922.9	8,849.8	7,800.4	0.89	0.66	0.52
50 or more	40,902.0	37,018.4	9,385.8	11,462.9	1.23	0.84	1.03
School did not participate in free or reduced-price lunch program	9,831.9	9,177.5	1,420.1	1,572.7	4.63	2.71	3.15
Percent of enrolled students who were minorities							
Less than 10	36,539.5	34,909.5	5,239.4	8,100.0	0.99	0.60	0.81
10–34	32,949.4	31,691.4	5,618.1	5,598.2	1.00	0.67	0.71
35 or more	43,014.0	38,614.0	10,821.7	11,263.5	0.98	0.69	0.74

[1] Base year refers to 2003–04.

[2] The 2003–04 SASS allowed respondents to mark multiple race categories.

[3] A probationary certificate is issued after an individual satisfies all regular certification requirements except the completion of a probationary period. A provisional certificate is given to individuals who are still participating in what states call an “alternative certification program." Temporary certification requires some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained, and a waiver or emergency certificate is issued to individuals with insufficient teacher preparation who must complete a regular certification program in order to continue teaching.

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.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Data File," 2003–04; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2004–05.

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: 2004–05

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	11,267.4	10,607.1	2,512.5	10,985.2	2.00	0.55	2.18
Full-time teaching experience							
No full-time teaching experience	10,046.5	10,159.3	612.9	1,523.3	5.95	1.32	5.53
1–3 years	16,965.6	7,593.2	1,342.9	13,568.7	7.05	1.69	8.32
4–9 years	13,565.0	11,203.2	1,152.8	3,987.3	3.39	0.90	3.09
10–19 years	12,333.9	12,958.8	558.9	1,317.6	2.14	0.72	1.63
20 years or more	9,877.5	10,107.1	1,149.2	1,562.7	2.62	1.21	1.95
Age							
Less than 30 years	7,816.6	7,747.7	1,341.3	2,005.3	3.34	1.43	2.68
30–39 years	10,632.1	9,030.7	844.3	2,545.6	2.22	1.05	1.81
40–49 years	15,237.9	14,907.2	835.2	2,460.7	2.43	0.98	2.08
50 years or more	12,314.0	12,235.4	1,052.7	12,694.5	7.10	0.71	7.37
Base Salary							
Less than $30,000	22,328.4	16,916.4	1,981.8	12,092.6	3.49	1.11	3.73
$30,000–$39,999	15,483.8	14,067.7	1,082.2	1,672.8	1.60	0.82	1.33
$40,000 or more	9,222.0	8,963.2	614.5	987.1	1.13	0.58	0.98
Sex							
Male	8,572.4	7,015.9	861.9	2,548.5	2.04	0.79	2.06
Female	14,911.8	11,255.5	2,142.7	12,053.2	2.57	0.70	2.88
Race/ethnicity							
White, non-Hispanic	11,440.8	10,162.7	2,212.0	10,511.9	2.16	0.55	2.32
Black, non-Hispanic	3,329.4	2,561.9	384.9	2,713.2	11.35	2.97	13.00
Hispanic, single or more than one race	3,782.3	3,187.4	464.9	787.4	6.25	2.90	5.72
Asian, Native Hawaiian, or Other Pacific Islander, non-Hispanic	4,506.8	4,614.1	130.4	281.3	3.65	1.11	2.84
American Indian/Alaska Native, non-Hispanic	1,241.6	1,119.5	334.3	226.3	22.23	17.65	10.72
More than one race, non-Hispanic[2]	626.9	622.6	131.2	493.0	28.84	8.37	31.30
Main assignment field							
Early childhood/general elementary	27,090.1	19,918.0	1,656.5	13,071.3	4.59	1.54	5.31
Special education	6,724.6	5,698.6	528.5	1,369.9	8.86	3.89	6.40
Arts/music	7,194.9	7,465.9	427.4	1,700.9	5.49	1.28	4.78
English/language arts	7,401.8	6,658.0	594.8	1,370.7	3.56	1.35	3.11
Mathematics	4,479.7	4,070.6	527.4	1,061.5	2.59	1.63	2.53
Natural sciences	5,829.8	5,489.2	570.0	856.0	3.28	2.67	2.30
Social sciences	5,010.1	4,749.3	358.4	817.9	3.81	1.57	3.02
Other	7,497.5	8,339.3	914.7	2,951.4	4.58	1.38	3.93
Teaching status							
Full-time	13,804.2	10,110.1	2,382.7	11,362.8	2.44	0.68	2.74
Part-time	8,823.9	8,211.3	867.2	2,336.5	2.89	0.96	2.58

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: 2004–05—Continued

Teacher or school characteristic in base year[1]	Number				Percent		
	Total	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Certification type[3]							
Regular or standard	11,752.0	11,875.1	1,627.1	2,342.4	1.73	0.85	1.20
Probationary	1,480.6	1,491.7	319.4	651.9	17.80	9.68	12.92
Provisional or temporary	3,902.7	2,696.9	351.9	2,319.7	7.57	2.17	8.01
Waiver or emergency	654.3	460.0	278.4	288.2	20.10	14.13	17.33
No current certification	16,951.2	11,575.6	1,208.2	12,284.9	4.67	0.76	4.97
No state certification, but regular or full certification by an accrediting body other than the state	6,522.2	5,378.0	288.6	1,562.2	3.60	0.75	3.41
Community type							
Central city	11,965.5	10,878.9	1,247.1	2,864.1	1.60	0.68	1.58
Urban fringe/large town	14,097.1	14,963.9	1,464.6	4,243.2	2.22	0.62	1.93
Rural/small town	12,536.4	6,534.8	1,162.4	13,262.6	17.99	2.74	19.40
School level							
Elementary	22,408.2	22,614.2	1,657.6	3,425.3	2.51	1.17	1.65
Secondary	7,013.4	6,861.6	635.5	1,577.7	2.49	0.85	2.11
Combined	18,499.4	20,118.7	1,426.0	10,672.7	6.66	0.93	6.79
School enrollment							
Less than 200	25,055.5	19,683.5	1,607.0	12,600.5	4.66	1.38	5.10
200–499	17,394.5	15,215.0	1,303.9	2,819.9	1.54	0.91	1.29
500–749	6,790.6	6,337.0	540.1	1,270.3	2.75	1.06	2.63
750 or more	8,457.5	8,230.9	661.7	572.4	1.43	1.05	0.90
Percent of enrolled students who were minorities							
Less than 10	22,439.0	16,157.1	1,348.8	13,150.7	4.44	0.82	4.81
10–34	14,169.3	12,160.4	1,398.9	2,854.9	1.79	0.74	1.53
35 or more	8,490.6	6,850.4	1,158.4	3,122.7	3.57	1.45	3.52

[1] Base year refers to 2003–04.

[2] The 2003–04 SASS allowed respondents to mark multiple race categories.

[3] A probationary certificate is issued after an individual satisfies all regular certification requirements except the completion of a probationary period. A provisional certificate is given to individuals who are still participating in what states call an “alternative certification program." Temporary certification requires some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained, and a waiver or emergency certificate is issued to individuals with insufficient teacher preparation who must complete a regular certification program in order to continue teaching.

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.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Data File," 2003–04; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2004–05.

Table A-4. Standard errors for Table 4: Percentage of public and private school teacher movers who rated various reasons as very important or extremely important in their decision to move from their base year school: 2004–05

Reason for moving	Public	Private
New school is closer to home	1.90	2.80
Better salary or benefits	1.75	3.45
Higher job security	1.52	2.83
Opportunity for a better teaching assignment (subject area or grade level)	2.23	3.03
Dissatisfaction with workplace conditions at previous school	2.46	2.77
Dissatisfaction with support from administrators at previous school	2.41	2.99
Dissatisfaction with changes in job description or responsibilities	2.20	2.52
Laid off or involuntarily transferred	1.79	2.93
Did not have enough autonomy over classroom at previous school	1.32	1.41
Dissatisfaction with opportunities for professional development at previous school	1.92	2.55
Dissatisfaction with base year school for other reasons	1.96	2.97

NOTE: Movers are teachers who were still teaching in the current school year but had moved to a different school after the base year (2003–04). Respondents were asked to rate the importance of each reason individually in their decision to move from the base year school, although some reasons may be involuntary. Response choices were based on a 5-point scale, and included the following: "Not at all important," "Slightly important," "Somewhat important," "Very important," and "Extremely important." This table includes the percent of movers who responded "Very important" or "Extremely important."

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2004–05.

Table A-5. Standard errors for Table 5: Percentage of public and private school teacher movers who moved across schools, school districts, and sectors, by sector, years of experience, and type of move: 2003–04 through 2004–05

	Public (in 2003–04)		Private (in 2003–04)	
	Years of experience		Years of experience	
Type of move	Less than three	Three or more	Less than three	Three or more
Total	†	†	†	†
Moved from one public school to another public school in the same school district	5.02	2.33	†	†
Moved from one public school district to another public school district	5.59	2.25	†	†
Moved from a public school to a private school	3.17	0.58	†	†
Moved from a private school to a public school	†	†	7.97	4.36
Moved from one private school to another private school	†	†	7.97	4.36

† Not applicable.

NOTE: Movers are teachers who were still teaching in the current school year but had moved to a different school after the base year (2003–04).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File," 2004–05.

Table A-6. Standard errors for Table 6: Percentage of public and private school teacher leavers who rated various reasons as very important or extremely important in their decision to leave the position of a K–12 teacher: 2004–05

Reason for leaving	Public	Private
Changed residence	1.99	5.41
Pregnancy or child rearing	3.03	6.48
Health	1.49	3.97
Retirement	2.63	2.35
School staffing action (e.g., reduction-in-force, lay-off, school closing, school reorganization, reassignment)	1.66	3.64
Better salary or benefits	1.49	3.96
To pursue a position other than that of a K–12 teacher	1.97	8.11
To take courses to improve career opportunities within the field of education	1.30	2.38
To take courses to improve career opportunities outside the field of education	0.85	2.28
Dissatisfied with teaching as a career	1.87	3.01
Dissatisfied with previous school or teaching assignment	2.07	3.65
Other family or personal reasons	2.34	6.85

NOTE: Leavers are teachers who left the teaching profession after the base year (2003–04). Respondents were asked to rate the importance of various reasons in their decision to leave the teaching profession, although some reasons may be involuntary. Response choices were based on a 5-point scale, and included the following: "Not at all important," "Slightly important," "Somewhat important," "Very important," and "Extremely important." This table includes the percent of leavers who responded "Very important" or "Extremely important."
SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2004–05.

Table A-7. Standard errors for Table 7: Percentage distribution of public and private school teacher leavers by their current occupational and industry status: 2004–05

Occupational and industry status	Percent	
	Public	Private
Total	†	†
Main occupational status of all leavers		
Attending a college or university	0.70	1.23
Caring for family members	2.82	4.35
Disabled	0.30	0.26
Retired	2.11	2.34
Other	1.61	2.75
Unemployed and seeking work	0.76	2.28
Working in a position in the field of education, but not as a regular K–12 classroom teacher	2.43	13.99
Working in an occupation outside the field of education	1.32	6.96
Industry status of leavers who were working in a position in the field of education, but not as a regular K–12 classroom teacher		
Employee of a private company, business, or individual for wages, salary, or commission	2.46	15.54
State or federal government employee	4.52	9.44
Local government employee	5.02	3.93
Self-employed in own business, professional practice, or farm	1.12	7.61
Working without pay in a family business, farm, or volunteer job	†	1.28
Industry status of leavers who were working in an occupation outside the field of education		
Employee of a private company, business, or individual for wages, salary, or commission	4.85	4.64
State or federal government employee	2.49	1.93
Local government employee	1.96	1.75
Self-employed in own business, professional practice, or farm	3.76	4.47
Working without pay in a family business, farm, or volunteer job	0.74	0.78

† Not applicable.

NOTE: Leavers are teachers who left the teaching profession after the base year (2003–04).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2004–05.

Table A-8. Standard errors for Table 8: Percentage distribution of working public school teacher leavers who rated various aspects of their current occupation as better in teaching, better in current position, or not better or worse, by their current main occupational status: 2004–05

	Working in a position in the field of education, but not as a regular K–12 classroom teacher			Working outside the field of education		
Aspect of current occupation	Better in teaching	Better in current position	Not better or worse	Better in teaching	Better in current position	Not better or worse
Salary	5.14	5.20	5.97	5.25	5.10	2.93
Benefits	5.43	1.93	5.71	4.85	4.66	4.10
Job security	5.85	3.66	6.02	5.55	4.99	4.19
Intellectual challenge	5.15	5.77	5.61	4.74	4.68	3.92
Opportunities for professional development	5.01	5.99	5.39	4.45	5.10	5.24
Professional prestige	6.60	5.71	5.10	4.51	4.89	4.52
General work conditions	4.07	4.17	5.23	4.61	5.81	4.12
Safety of environment	4.02	3.55	4.66	4.36	5.40	4.47
Manageability of workload	3.09	5.88	5.62	5.32	5.56	3.51
Procedures for performance evaluation	3.45	3.98	4.78	4.13	4.71	4.56
Autonomy or control over own work	6.39	6.29	5.53	3.74	4.92	4.17
Influence over workplace policies and practices	4.22	5.79	5.89	4.16	5.78	5.72
Social relationships with colleagues	5.69	3.90	5.35	5.32	5.16	4.76
Ability to balance personal life and work	5.18	5.88	6.01	3.95	5.08	4.21
Availability of resources and materials and/or equipment for doing job	5.49	4.86	5.69	4.95	5.26	4.70
Recognition and support from administrators and/or managers	5.61	5.46	5.07	5.06	5.51	5.01
Opportunities for learning from colleagues	6.12	5.04	5.23	5.19	5.77	5.04
Opportunities for professional advancement or promotion	6.01	5.78	5.71	4.52	5.05	4.54
Sense of personal accomplishment	6.88	5.68	5.27	5.52	5.50	3.89
Opportunities to make a difference in the lives of others	4.10	5.01	4.84	4.39	4.20	4.70

NOTE: Leavers are teachers who left the teaching profession after the base year (2003–04).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2004–05.

Table A-9. Standard errors for Table 9: Percentage distribution of working 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: 2004–05

Aspect of current occupation	Better in teaching	Better in current position	Not better or worse
Salary	7.26	18.51	22.70
Benefits	7.80	10.34	17.52
Job security	5.74	12.23	17.65
Intellectual challenge	9.13	18.98	11.14
Opportunities for professional development	7.41	14.18	19.31
Professional prestige	8.57	10.83	18.23
General work conditions	5.09	13.67	18.17
Safety of environment	4.59	9.13	13.22
Manageability of workload	5.29	14.43	10.13
Procedures for performance evaluation	6.43	8.73	13.32
Autonomy or control over own work	8.34	16.72	10.09
Influence over workplace policies and practices	8.08	9.65	16.68
Social relationships with colleagues	8.64	8.94	17.14
Ability to balance personal life and work	5.27	15.73	11.03
Availability of resources and materials and/or equipment for doing job	4.90	13.41	17.67
Recognition and support from administrators and/or managers	8.09	9.53	17.04
Opportunities for learning from colleagues	7.89	11.84	19.02
Opportunities for professional advancement or promotion	6.29	14.76	19.24
Sense of personal accomplishment	8.80	22.01	15.15
Opportunities to make a difference in the lives of others	12.87	24.74	12.90

NOTE: Leavers are teachers who left the teaching profession after the base year (2003–04). This table reports data on leavers who were working in positions in the field of education, but not as regular K–12 classroom teachers, as well as leavers in positions outside the field of education. Data on leavers who reported working in other occupational categories are not included.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Data File," 2004–05.

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), the statistical agency 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). SASS is the largest survey of public, private, and Bureau of Indian Affairs (BIA)-funded K–12 school districts, schools, teachers, and administrators in the United States today. It 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, and 2004–05 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 in this appendix, consult the *Documentation for the 2004–05 Teacher Follow-up Survey* (Cox et al. forthcoming). For additional information on 2003–04 SASS methodology, consult the *Documentation for the 2003–04 Schools and Staffing Survey* (Tourkin 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. 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 Procedures

Public schools. The foundation for the 2003–04 SASS public school sampling frame is the 2001–02 Common Core of Data (CCD) data file, which includes 97,623 regular public schools, public charter schools, BIA-funded schools, Department of Defense-operated domestic military base schools, and special-purpose schools, such as special education, vocational, and alternative schools**.** Extensive modifications to CCD (as described below) resulted in 90,239 schools on the SASS public school sampling frame.

Schools were added and deleted from the CCD in order to fit the definition of a school used in SASS. In SASS, a school is 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. SASS is confined to the 50 states plus the District of

Columbia and excludes territories and overseas schools. The SASS definition of a school was generally similar to CCD with some exceptions. CCD included some schools that did not offer teacher-provided classroom instruction that included academic subjects in grades 1–12 or the equivalent ungraded levels. In some instances, schools in CCD were essentially administrative units that may have overseen entities that provided classroom instruction, or the school on CCD may have provided funding and oversight only. SASS collapsed CCD schools where the location, address, and phone number were the same based on the assumption that the respondent would consider this to be one school. To be considered a school, CCD only required that the entity in question have an assigned administrator. Unlike CCD, SASS allowed responding schools to define themselves as a school, and Census Bureau staff observed that schools generally responded as one entity in situations where the administration of two or more schools was the same. Therefore, some schools had to be added to the SASS sampling frame. The CCD also includes schools located overseas that are operated by the Department of Defense. These schools are excluded from the SASS sample. Finally, SASS added schools in Pennsylvania and California after having directly contacted their administrative units reported on CCD. These administrative units oversee certain types of educational entities (e.g., special education schools, juvenile justice facilities) within various California and Pennsylvania counties. This type of education is often provided at a number of locations within a particular county, but not necessarily at schools listed on CCD. To avoid confusion, these administrative units were contacted by phone, and requested to provide a list of the schools they oversaw. These lists were subsequently matched to CCD. If any of the schools from these lists were not already on CCD, they were added to the SASS sampling frame at that time (for more details see the *Documentation for the 2003–04 Schools and Staffing Survey* [Tourkin et al. forthcoming]).

The SASS sample is a stratified probability proportional to size (PPS) sample. All BIA-funded schools are included in the sample. All other schools undergo multiple levels of stratification. Non-BIA schools are first stratified by type (high American Indian enrollment, public charter, or regular). Within type, schools are stratified by state or state group (for nonregular schools). Within state or state group, schools are stratified by grade level (elementary, secondary, and combined). Non-BIA-funded schools are systematically selected for the sample from a hierarchically sorted list using the PPS algorithm within each stratum (systematic selection from a sorted list results in implicit stratification). In applying this algorithm, a measure of size for each non-BIA-funded school is used to determine whether the school is selected with certainty, or whether a probability sampling procedure is applied (for a more detailed explanation of PPS sampling, consult *Sampling Techniques* [Cochran 1977]). The measure of size used is the square root of the number of full-time-equivalent teachers reported for each school or imputed during sampling frame creation. Any non-BIA-funded school with a measure of size greater than the sampling interval (the inverse of the rate at which the sample is selected) is included in the sample with certainty and excluded from the probability sampling operation. In the 2003–04 SASS, these procedures produced a non-BIA sample of 10,202 public schools (455 high American Indian enrollment schools, 303 public charter schools, and 9,444 traditional public schools) and a BIA-funded sample of 166 schools.

Private schools. The 2003–04 SASS private school sample consists of schools selected from a list frame and an area frame.[1] The area frame improves coverage, because the list frame omits about 8 percent of eligible private schools. Both frames are from the 2001–02 Private School Universe Survey (PSS); the schools in these frames were combined to create the complete frame. The SASS private school sample contains 3,622 schools; 3,443 schools are from the list frame and 179 are from the area frame.

Like public schools, private schools undergo multiple levels of stratification. Within each stratum, private schools in the list frame were systematically selected from a hierarchically sorted list using a PPS algorithm (resulting in implicit stratification). In applying this algorithm, the measure of size used was the square root of the 2000–01 PSS number of teachers in the school. Any school with a measure of size larger than the sampling interval was excluded from the probability sampling process and included in the sample with certainty.

Teachers. The sampling frame for the 2003–04 SASS teacher questionnaires consists of lists of teachers provided by schools in the SASS sample. Teachers are defined as staff who teach a regularly scheduled class to students in any of grades K–12. The SASS Teacher Listing Form was collected by Census Bureau field representatives as early as possible in the 2003–04 school year from all public (including public charter), private, and BIA-funded schools in the SASS sample to obtain a complete list of teachers employed at each school. Within each school, teachers were classified into four strata based on their minority status or years of teaching experience. The strata to which teachers were assigned, in hierarchical order, were Asian or Pacific Islander, American Indian or Alaska Native, new teachers (3 or fewer years teaching), and experienced teachers (more than 3 years teaching). The goals of the teacher sampling were to select at least 1,600 Asian or Pacific Islander teachers, at least 1,600 American Indian or Alaska Native teachers, and a minimum of 2,300 new teachers by sector. No oversampling of new teachers in public schools was needed because of the large number of sampled schools with new teachers. In private schools, new teachers were oversampled by a factor of 1.5. Within each stratum, teachers were selected systematically with equal probability. The sample of 63,135 teachers was selected from all schools that provided teacher lists. About 11 percent of public schools and 16 percent of private schools that met the SASS definition of a school did not provide teacher lists. No teachers were selected from these schools.

[1] During each administration of the PSS survey, the PSS private school register is updated prior to survey mailout. Two sources are used to update the register: (1) the *list frame*, a synthesis of association, state, and commercial listings of private schools; and (2) an *area sample*, an independent listing of private schools included in a sample of geographical areas. A nationally representative sample of primary sampling units (PSUs)—each PSU consisting of a single county or a group of counties—is chosen for the area sample. The area frame consists of the list of PSUs of which the nation is composed.

TFS Teacher Sampling Frames and Sample Selection Procedures

The 2004–05 TFS sample consists of 7,429 teachers out of the 51,223 public and private school teachers who participated in the 2003–04 SASS. The TFS teacher sample is selected from the pool of teachers who participated in the previous year's SASS. Similar to SASS, the 2004–05 TFS sample includes teachers from the public (including public charter) and private school sectors.

The sampling frame for TFS consisted of the 51,748 public, private, and BIA-funded school teachers who completed interviews for SASS. Teachers from BIA-funded schools were included in the sampling frame, but were dropped from the TFS sample because there were so few teachers from BIA-funded schools on the frame (151 BIA-funded schools were dropped from the TFS sample). The number of teachers in the sampling frame is slightly lower than the total number of interviewed teachers in SASS (51,847) because it excludes 99 teachers who were reported to have died or left the country at the time of the teacher status collection in the fall of 2004.

The TFS sample was selected using the SASS teacher base weights (the inverse of the sampled teacher's probability of selection) as the starting point, because the SASS teacher final weights were not completed in time for sampling. The SASS final teacher weights are more reflective of the teacher population. Subsequently, an adjustment factor was used in the production of the TFS teacher final weights to take into account the differences between the base and final weights. The weighting adjustment factor adjusts for all stages of weighting that occurred between the base and final weighting calculations for SASS teachers (for additional information, please see the chapter on weighting in *Documentation for the 2004–05 Teacher Follow-up Survey* (Cox et al. forthcoming).

The TFS sample is a stratified sample that was allocated by sector, status, and minority status in order to allow comparisons of teachers by strata: status (stayers, movers, and leavers)[2] within sector (traditional public, public charter, and private), teaching experience groups (3 or fewer years of teaching experience, more than 3 years of teaching experience), grade level taught (elementary, middle, and secondary), and minority status (minority or non-minority). All teachers who responded to the 2003–04 SASS were stratified by these five variables in the following order: sector, status, teaching experience, grade level taught, and minority status.

All of the strata, except for status, were defined based on data from teachers' SASS records. To determine whether a teacher in the TFS frame was a stayer, mover, or leaver, each SASS sampled school was mailed a Teacher Status Form (TFS–1) at the beginning of the 2004–05 school year asking for current information about the previous year's teachers. The information collected on this form was used to stratify each teacher into the following categories:

[2] Definitions of these and other terms are contained in the "Summary of Variables" section at the end of appendix C.

- Leavers – teachers in the 2003–04 school year who left the teaching profession before the 2004–05 school year began.
- Stayers – teachers in the 2003–04 school year who remained a teacher at the same school for the 2004–05 school year or teachers whose status was not reported (left blank) by the school. Teachers whose status was not reported in the TFS–1 were assumed to be stayers because in any given year most teachers are stayers. These teachers account for approximately 1-2 percent of all stayers.
- Movers – teachers in the 2003–04 school year who remained a teacher for the 2004–05 school year but in a different school or teachers who worked in a school in the 2003–04 school year that closed or merged with another school.
- Unknowns – teachers whose status was reported by the school as having left, without any other information given.

To best achieve the comparisons discussed above (e.g., across sector, teaching experience, grade level taught, etc.), the sample was allocated to the strata based on the teacher's sector, status, and minority status. The following rules were applied:

- Optimize the reliability of comparisons of current teachers with former teachers by selecting all leavers;
- Optimize the reliability of comparisons of movers with nonmovers by selecting all movers from private schools;
- Subsequently, select all private school teachers with an unknown status and approximately 50 percent of traditional public and public charter school teachers with an unknown status, because they are more likely to be movers or leavers;
- Optimize the reliability of comparisons of minority with nonminority movers by selecting approximately 70 percent of minority movers from traditional public and public charter schools and 50 percent of non-minority movers from traditional public and public charter schools;
- Optimize the reliability of comparisons of stayers with movers and leavers by allocating the remaining sample in the following way: 1,760 traditional public school stayers, 120 public charter school stayers, and 900 private school stayers.

Once the sample sizes were determined within status, sector, and minority status, the sample was allocated to strata (i.e., sector, status, teaching level, teaching experience, minority status) proportional to the cumulative measure of size (SASS teacher initial basic weight) within each stratum relative to the cumulative measure of size of the status/sector/minority level. This maximizes the reliability of status/sector/minority status estimates.

Within each TFS stratum, teachers who had completed interviews in the 2003–04 SASS were sorted by a measure of size (the 2003–04 SASS teacher initial basic weight, which

is the inverse of the probability of selection prior to any corrections identified during data collection), main subject taught as reported by the teacher in SASS (i.e., special education, general elementary, mathematics, science, English/language arts, social studies, vocational/technical, and other), Census region, SASS private school affiliation stratum (for private school teachers only), SASS school locale (based on the 1990 Census geography), SASS school enrollment, and SASS teacher control number.

After the teachers were sorted using the above variables, they were selected within each stratum using a systematic probability proportional to size (PPS) sampling procedure, which implicitly stratified the sample. This procedure is similar to that used in the SASS school selection. Any teacher with a measure of size (SASS teacher initial basic weight) greater than the sampling interval was included in the sample with certainty. Since TFS selection probabilities are not conditioned on anything, the selected sample sizes equaled the allocated sample size. At this point, 40 BIA teachers were dropped from the TFS sample.

Teacher Follow-Up Survey Methodology

Data Collection Procedures

Before the administration of the 2004–05 TFS, the survey items and methodology were tested and improved. In an effort to develop questionnaire items that would accurately capture current and former teachers' responses to key questionnaire items, a cognitive study was conducted to identify problems that could be corrected prior to the survey's administration. The results of this study were used to make revisions to the survey items; a second, smaller study was conducted to test some of the key revisions. The second study was also a usability test[3] of an internet instrument, which was added as a reporting method for the 2004–05 TFS. For details, see the appendix on the pretest and usability test in the *Documentation for the 2004–05 Teacher Follow-up Survey* (Cox et al. forthcoming).

TFS data collection began with the sample selection in fall 2004. The Teacher Status Form was mailed to each school that had at least one teacher who participated in the 2003–04 SASS. A knowledgeable person at the school (e.g., a school administrator or a member of the office staff) was asked to complete the form by indicating the current teaching or other occupational status of each teacher listed on it.

Collection of Teacher Status Forms ended in November 2004. Approximately 99 percent of schools provided information about SASS teachers. The TFS sample of 7,429 teachers was drawn from a sampling frame of 51,748 teachers who completed interviews for SASS.

[3] A usability test is a way to identify how users actually interact with a system; in this case, the TFS internet instrument. The goal of a usability test is to find out what is and is not working well in the instrument.

In January 2005, as part of an experiment on response rates for mailed vs. internet questionnaires, approximately one-third of the sampled teachers were mailed a Former Teacher Questionnaire or a Current Teacher Questionnaire to complete. The remaining respondents were offered the option of completing the questionnaire on the Internet and were mailed a letter that included a user name and password to use to access the survey on the Internet. At the end of January, internet respondents were also mailed paper questionnaires. As part of the experiment, roughly half of all respondents received monetary incentives in an effort to increase response rates. Presumably, with these incentives, the number of cases sent to field for follow-up would be reduced. For more information on the internet and incentive experiment, please see the section on data collection in the *Documentation for the 2004–05 Teacher Follow-up Survey* (Cox et al. forthcoming).

Follow-up efforts began in April 2005. Approximately 6 weeks after the initial delivery of the questionnaires, each sampled person who had not completed the questionnaire was sent a new one, and the internet groups were reminded about their internet option. Cases were included in nonresponse follow-up if the sampled teachers had not returned a completed paper questionnaire or completed it online. Supervisors at 12 regional Census offices coordinated work of field staff, who in turn contacted all nonrespondents either by phone or by visiting them personally. Data collection ended in June of 2005.

Data Processing and Imputation

Census Bureau data processing staff were responsible for checking in completed questionnaires, capturing data, and implementing quality control procedures. Questionnaires classified as complete were submitted to a series of computer edits consisting of a range check, a consistency edit, and a blanking edit (for further information, including definitions, please see the section on data processing in the *Documentation for the 2004–05 Teacher Follow-up Survey*, [Cox et al. forthcoming]). 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 complete. After the final edits were run, there were still some cases with "not-answered" values for some items. Values were created for these items in the next step of the data processing, which was imputation.

The imputation procedure consisted of three stages. In the first stage, items were imputed with a valid response using data either from other items in the same TFS questionnaire or from items in the related 2003–04 SASS school or teacher questionnaires. In the second stage, hot deck imputation, subsample ratio imputation, and random subsample ratio imputation methods were used (these methods are described in the imputation chapter of the *Documentation for the 2004–05 Teacher Follow-up Survey* [Cox et al. forthcoming]). In the final stage, all remaining unanswered items were imputed manually by Census Bureau analysts. After each stage of imputation, computer edits were run again to verify that the imputed data were consistent with the existing questionnaire data. Imputation

flags, indicating which imputation method was used, were assigned to each variable. For further information, please see the section on data processing and imputation in the *Documentation for the 2004–05 Teacher Follow-up Survey* (Cox et al. forthcoming).

Response Rates

Unit response rates. The weighted unit response rate for all teachers in the 2004–05 TFS was 91.8 percent.[4] Table B-1 summarizes the weighted and unweighted response rates for cases in the 2004–05 TFS by data file (i.e., current and former teachers) and by sector of teachers' base-year schools (i.e., public or private). The response rate for current teachers includes teachers who stayed in the same school for the 2004–05 school year (stayers) and those who moved to a new school (movers). Both stayers and movers completed the Current Teacher Questionnaire.

A comprehensive unit nonresponse bias analysis was conducted for the 2004–05 TFS. The analysis evaluated the extent of potential bias introduced by teacher nonresponse at the unit level. An examination of response rates revealed no substantial evidence of a bias at the unit level. For further information on nonresponse bias analysis, please see the *Documentation for the 2004–05 Teacher Follow-up Survey* (Cox et al. forthcoming).

Table B-1. Unweighted and base-weighted response rates for the Teacher Follow-up Survey, by sector and teaching status: 2004–05

Teacher sample	Unweighted response rate (percent)	Base-weighted response rate (percent)
Total	91.02	91.82
Current teachers	92.17	92.03
Former teachers	89.95	89.64
Public[1]	92.03	91.90
Current teachers	92.49	92.06
Former teachers	91.16	90.25
Private	88.33	91.14
Current teachers	90.96	91.86
Former teachers	84.56	86.58

[1] The public sector includes teachers from traditional public and public charter schools.
NOTE: Base-weighted response rates use the inverse of the probability of selection and the sampling adjustment factor.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Documentation Data Files," 2004–05.

The overall response rate represents the response rate to the survey taking into consideration each stage of data collection. For a teacher to be eligible for TFS, it was necessary to have received the Teacher Listing Form (TLF) from the school during the 2003–04 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. This

[4] For the formula to calculate the unit response rate, see Standard 1-3 in the *NCES Statistical Standards* (NCES 2003–601).

overall response rate is the product of the survey response rates shown in table B-2: (SASS TLF response rate) x (SASS teacher questionnaire response rate) x (TFS questionnaire response rate). The overall response rates by sector and teacher status for the 2004–05 TFS are shown in table B-2.

Table B-2. Unit response rates for the Schools and Staffing Survey and Teacher Follow-up Survey, by sector: 2003–04 and 2004–05

Teacher sample	Base-weighted SASS Teacher Listing Form response rate (percent)	Base-weighted SASS teacher data files response rate, 2003–04 (percent)	Base-weighted TFS response rate, 2004–05 (percent)		Overall response rate	
			Current teachers	Former teachers	Current teachers	Former teachers
Total	88.27	84.55	92.03	89.64	68.68	66.90
Public[1]	89.20	84.90	92.06	90.25	69.72	68.35
Private	85.40	82.40	91.86	86.58	64.64	60.92

[1] The public sector includes teachers from traditional public and public charter schools.
NOTE: Base-weighted response rates use the inverse of the probability of selection and the sampling adjustment factor.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public and Private School Teacher Documentation Data Files," 2003–04; Teacher Follow-up Survey (TFS), "Current and Former Teacher Documentation Data Files," 2004–05.

Item response rates. Item response rates indicate the percentage of respondents that answered a given survey question, or item. The weighted TFS item response rates are produced by dividing the number of sampled teachers who responded to an item by the number of sampled teachers who were eligible to answer that item, adjusting by the final weight. Table B-3 provides a brief summary of the item response rates for both questionnaires. The item response rates in the table are weighted and do not reflect additional response loss due to respondents' refusal to participate in the survey.

On the former teacher questionnaire, there were five items that had a weighted response rate of less than 85 percent, and on the current teacher questionnaire, there were seven items that had a weighted response rate of less than 85 percent. As on the unit level, nonresponse bias analysis conducted at the item level for the 2004–05 TFS revealed no substantial evidence of bias.

Table B-3. Summary of weighted item response rates for the Teacher Follow-up Survey, by questionnaire: 2004–05

Questionnaire	Range of item response rates (percent)	Percent of items with a response rate of 85 percent or more	Percent of items with a response rate of 70.0–84.9 percent	Percent of items with a response rate of less than 70 percent
Former Teacher Questionnaire	40.81–100.00	94.00	2.00	4.00
Current Teacher Questionnaire	63.00–100.00	95.85	3.55	0.60

NOTE: Weighted response rates use the inverse of the probability of selection and the sampling adjustment factor.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Documentation Data Files," 2004–05.

Weighting

The general purpose of weighting is to scale up the sample estimates to represent the target survey population, which for the 2004–05 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 SASS teacher weighting procedure. Next, a nonresponse adjustment factor is calculated and applied using information about the respondents that is known from the sampling frame data. Finally, a 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 on the data file.

Variance Estimation

The preferred method of calculating sampling errors of complex sample designs, such as that of SASS, 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. The replicate weights are used to compute the variance of a given statistic. Each SASS data file includes a set of 88 replicate weights designed to produce variance estimates. The set of replicate weights for each file is applied to the respondents in that file.

For TFS, the replicate weights are derived from the SASS teacher replicate weights, making appropriate adjustments for the TFS sampling procedure. The TFS base weight for each TFS respondent was multiplied by each of the 88 SASS replicate weights divided by the SASS teacher full-sample base weight for that respondent. To calculate 88 replicate weights, which should be used for variance calculations, these TFS replicate

basic weights were processed through the remainder of the TFS weighting system. The replicate weights for TFS respondents are TFRPWT1 – TFRPWT88.

A variance estimate is obtained by first calculating the estimate for each replicate, then summing the squared deviations of the replicate estimates from the full-sample estimate, and finally dividing by the number of replicates:

$$\sum_{k=1}^{88} (\hat{y}_k - \hat{y})^2 / 88$$

where $k = 1, 2 .....88$,

y_k = kth replicate estimate, and

y = the full sample estimate.

The computation of sampling errors for either TFS or SASS data using these replicate weights can be done easily with one of the following software programs: WesVar Complex Sample Software, SUDAAN (SUDAAN programs can be written within a SAS statistical package), Stata 9, or AM Statistical Software.[5]

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, to questionnaire item wording, or other changes. For example, the definition of locale codes based on the U.S. Census was revised in 2000 and again in 2003. Changes in how schools are categorized may, therefore, account for at least some changes that are noted from previous

[5] For information on each of these software programs, please see their respective websites: www.westat.com/wesvar, www.rti.org/SUDAAN/, www.stata.com, and am.air.org.

administrations. This impacts the urbanicity variable included in the report, which is based on the 2000 Census definitions for locale codes.

The definition of locale codes changed between the 1999–2000 and 2003–04 administrations of SASS. To facilitate the transition, locale codes based on geographic concepts from both the 1990 and 2000 Decennial Census are included on the 2003–04 SASS data files. (SLOCP_99 uses the 1990 Census metropolitan areas, and SLOCP_03 and URBANS03 use the 2000 Census metropolitan areas). The specific categories reported in the locale codes are based, respectively, upon the 1990 or 2000 definitions for central city, urban fringe of large or medium-sized central city, large or small town, and rural areas either inside a metropolitan area or outside a metropolitan area. The 1990 Decennial Census geographic areas were based upon countywide definitions of metropolitan or nonmetropolitan areas. By the 2000 Census, urban and rural classifications were based on a subcounty level.

In 2003, the Office of Management and Budget changed the geographic classifications, replacing "central city" with "principal city" and "Standardized Metropolitan Statistical Area" (SMSA) with "Core-based Statistical Area" (CBSA). However, these newer terms and locale codes could not be used in the 2003–04 SASS because the 2003 geographic classification of schools or school districts had not been completely implemented into the Common Core of Data (CCD) or the Private School Universe Survey (PSS), which serve as the sampling frames for SASS, by the time the 2003–04 SASS data were collected. Since then, the 2003–04 CCD and 2003–04 PSS have incorporated a new set of 12-level locale codes.

Only the urbanicity variables that utilize the 2000 definitions (SLOCP_03 and URBANS03) are included on the 2004–05 TFS data files. Therefore, caution should be taken when comparing urbanicity estimates from the 2004–05 TFS of the respondent's base year school with previous administrations, because the locale codes are not based on the same definitions.

Appendix C: Summary of Variables

Summary of Variables

Table C-1 displays variables that are used in this report. Variables beginning with the letter "F" (e.g., F0581) refer to items on the 2004–05 TF S questionnaires; variables beginning with the letter "T" (e.g., T0399) refer to items on the 2003–04 SASS teacher questionnaires; and variables beginning with the letter "S" (e.g., S0632) refer to items on the 2003–04 SASS school questionnaires. Definitions for the remaining variables follow table C-1.

Table C-1. Summary information for the variables used in this report

Variable	Variable name	Data file location[1]	Recoded (yes/no)
Age[2]	AGE_T	2	Yes
Base salary	T0399	3	Yes
Certification type, public school teachers	T0166, T0188	3	Yes
Certification type, private school teachers	T0442, T0443	3	Yes
Community type[2]	URBANS03	2	No
Comparison of current employment to teaching	F0581-F0600	1	No
Full-time teaching experience, public	T0036	3	Yes
Full-time teaching experience, private	T0039	3	Yes
Industry status	F0557	1	Yes
Main assignment field[2]	ASGN03_S	2	No
Main occupational status	F0553	1	No
Percent of K–12 students approved for free or reduced-price lunch[2]	S0632, NSLAPP_S	3,2	Yes
Percent of enrolled students who were minorities[2]	MINENR	2	Yes
Plan to remain in teaching, 2003–04	T0383	3	No
Plan to remain in teaching, 2004–05	F0562	1	No
Race/ethnicity[2]	RACETH_T	2	Yes
Reason for leaving teaching	F0567-F0578	1	Yes
Reason for moving to another school	F0161-F0171	1	Yes
School enrollment[2]	SCHSIZE	2	Yes
School level[2]	SCHLEVEL	2	No
Sector (public/private)[2]	SECTOR	2	No
Sex[2]	GENDER_S	2	No
Stayer/mover/leaver status[2]	STTUS_TF	1	No
Teaching status	T0026, T0029	3	Yes
Type of move between schools	F0159	1	No

[1] The variables in this report have three possible data file locations. Questions that were asked during the Teacher Follow-up Survey (TFS) administration and are included on the TFS data files are indicated with a 1. Because TFS teachers participated in the 2003–04 SASS (i.e., the base year), some questions were not repeated in the TFS data collection. SASS questions (e.g., sex, race/ethnicity) that have been added permanently to the TFS data files are noted with a 2, and SASS questions that have been merged with the TFS data files for this analysis are noted with a 3.

[2] See explanation in text below.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public and Private School Teacher Data Files," "Public and Private School Data Files," 2003–04; Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2004–05.

AGE_T (Age): A SASS created variable based on respondents' reported year of birth. AGE_T is a continuous variable that was created by subtracting the teachers' reported year of birth from the year of data collection (2003).

URBANS03 (Community type): A SASS frame variable based on the physical location of the school in which the respondent taught during the base year. 1 = "Central city," which includes schools located in large and mid-size central cities, as defined by the Census Bureau. 2 = "Urban fringe/large town," which includes schools located in urban fringes of large and mid-size central cities, in large towns, and in rural areas inside a core based statistical area or consolidated statistical area. 3 = "Rural/small town," which includes schools located in small towns or rural areas outside a core based statistical area or consolidated statistical area. In this report, these categories are based on the 2000 Census definitions of locale codes. Please see the "Caution Concerning Change Estimates" section above for information regarding how locale code definitions have changed over time.

ASGNO3_S (Main assignment field): A created variable based on respondents' answers to the main assignment field question on the 2003–04 SASS but included on only the TFS data files. 1 = early childhood and general elementary, 2 = special education, 3 = arts and music, 4 = English and language arts, 5 = mathematics, 6 = natural sciences, 7 = social sciences, 8 = all others, which includes teachers who reported a main assignment in computer science, English as a second language, foreign languages, health education, vocational/technical education, or all miscellaneous others.

NSLAPP_S (Percent of K–12 students approved for free or reduced-price lunch): A SASS created variable that is computed by dividing the number of K–12 students approved for free or reduced-price lunch in the respondents' schools (S0634) by the number of K–12 students enrolled in the respondents' schools, provided the respondents' schools participate in the National School Lunch Program (S0632 = 1). Recoded into four categories for this report: 1 = less than 15 percent, 2 = 15–49 percent, 3 = 50 or more percent, 4 = school did not participate in free or reduced-price lunch program.

MINENR (Percent of enrolled students who were minorities): A SASS created variable based on the percentage of enrolled minority students as reported by the respondent's base year school. MINENR is a continuous variable and was created by dividing the number of minority students enrolled in the school (NMINST_S) by the total number of K–12 and comparable ungraded students enrolled in the school (ENRK12UG). Recoded into three categories for this report: 1 = less than 10 percent, 2 = 10–34 percent, 3 = 35 or more percent.

RACETH_T (Race/ethnicity): A SASS created variable based on respondents' reported race and ethnicity. The 2003–04 SASS allowed respondents to mark more than one racial category. Recoded into six categories for this report: 1 = White, non-Hispanic; 2 = Black, non-Hispanic; 3 = Hispanic, single or more than one race; 4 = Asian, Native Hawaiian, or other Pacific Islander, non-Hispanic; 5 = American Indian or Alaska Native, non-Hispanic; 6 = more than one race, non-Hispanic.

SCHSIZE (School enrollment): A SASS created variable based on the number of K–12 and ungraded students enrolled in the respondents' schools (ENRK12UG). Recoded into four categories for this report: 1 = less than 200, 2 = 200–499, 3 = 500–749, 4 = 750 or more.

SCHLEVEL (School level): A SASS created variable based on the grade levels offered at respondents' base year schools. 1 = elementary, 2 = secondary, 3 = combined grades. Elementary schools include those with any of grades K–6 and none of grades 9–12. Secondary schools include those with any of grades 7–12 and none of grades 1–6. Combined schools include all other cases.

SECTOR (public/private): A SASS frame variable, determined by a school's classification on the SASS sampling frame. 1 = public, 2 = private. On SASS and TFS, private schools fall into one of nine categories according to their affiliation: Catholic- Parochial; Catholic- Diocesan; Catholic- Private; other religious- Conservative Christian; other religious, affiliated with a religious school association; other religious, not affiliated with a religious school association; nonsectarian- regular; nonsectarian- special emphasis; nonsectarian- special education.

GENDER_S (Sex): A SASS created variable based on respondents' gender as reported on the 2003–04 SASS (T0408). 1 = male, 2 = female.

STTUS_TF (Stayer/mover/leaver status): A TFS created variable. 1 = leaver, 2 = stayer, 3 = mover. Leavers are teachers who left the teaching profession after the base year. 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.