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December 2010

Prepared by

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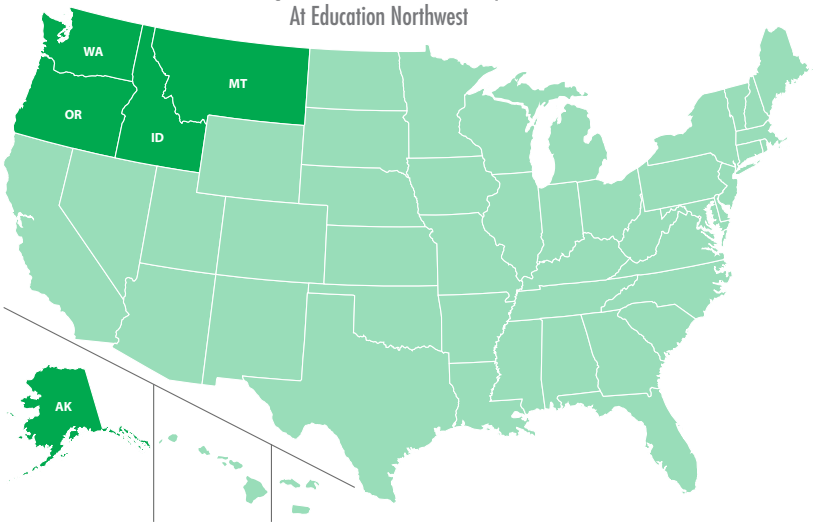

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December 2010

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Summary

REL 2010–No. 097

How well prepared and supported are new teachers? Results for the Northwest Region from the 2003/04 Schools and Staffing Survey

This study provides descriptive statistics on the preparation and support of public school teachers in Northwest Region states and nationally. It summarizes information from teachers on the coursework and practice teaching they completed before they began teaching, how prepared they felt for their major classroom roles, and the kinds of support they received in their first year of teaching.

In recent years researchers, the media, and policy groups have voiced concern about teacher turnover, especially among new and early-career teachers. The National Commission on Teaching and America's Future (2007) estimates the cost of teacher turnover in public schools at more than $7 billion a year. Different studies produce different estimates of the rate at which new teachers leave the profession; however, studies concur that early-career teachers are more likely to quit teaching than are more experienced teachers. High turnover among new teachers may diminish cohesion, reducing a school's effectiveness (Ingersoll 2003). Research also has identified specific forms of support that help keep teachers in their schools after their first year of teaching, including access to mentors in the same subject area and participation in induction activities, such as planning and collaboration with other teachers (Smith and Ingersoll 2004).

This study summarizes survey responses by teachers in Northwest Region public schools concerning coursework they completed in preparation for teaching, the support they received during their first year, and their preparation for essential classroom roles and compares responses to those at the national level. The study draws its data from the 2003/04 Schools and Staffing Survey (SASS) administered by the National Center for Education Statistics on behalf of the U.S. Department of Education. The SASS sample is representative of teachers in public schools at both the national and state levels. The study analyzes SASS results for public school teachers who began teaching between 1999 and 2003, excluding teachers in charter schools, special-purpose schools, and Bureau of Indian Affairs–administered schools. The results of the study thus generalize to the population of public school teachers who began teaching in 1999–2003, except teachers in the excluded categories of schools.

The study yields a wealth of descriptive information, summarized in table S1, figure S1, and table S2. The purpose of the study was to report descriptive statistics, not to test hypotheses about differences between the country as a whole and the Northwest Region or hypotheses about differences across the

TABLE S1

What coursework and practice teaching did teachers report completing in preparation for teaching, 2003/04? (percentage of all teachers)

Item	United States	Northwest Region
Education		
Holds bachelor's degree from a college, school, or department of education	68	64
Hold's master's degree from a college, school, or department of education	19	34
Coursework, observation, and formal feedback		
Completed coursework on selecting and adapting instructional materials	90	93
Completed coursework on learning theory or psychology appropriate to the ages of their students	93	97
Observed other classroom teachers and received formal feedback on their own teaching	90	96
Number of completed courses in teaching methods/strategies		
0–2	29	17
3–4	26	27
5–9	27	28
10 or more	19	28
Completed all courses before beginning to teach	55	52
Weeks of practice training		
4 or less	18	5
5–11	19	23
12	64	72

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

Northwest Region states in teacher preparation and support. For this reason, total numbers, percentages, and standard errors are reported but inferential statistics are not.

Key findings include the following:

- An estimated 24 percent of surveyed teachers in the Northwest Region had no more than five years of teaching experience in 2003/04, compared with about 26 percent nationally.

- As part of their preparation for teaching, 93 percent of teachers in the Northwest Region had completed coursework on selecting and adapting instructional materials, 97 percent had completed coursework on learning theory or psychology appropriate to the ages of their students, and 96 percent observed other classroom teachers and received formal feedback on their teaching.

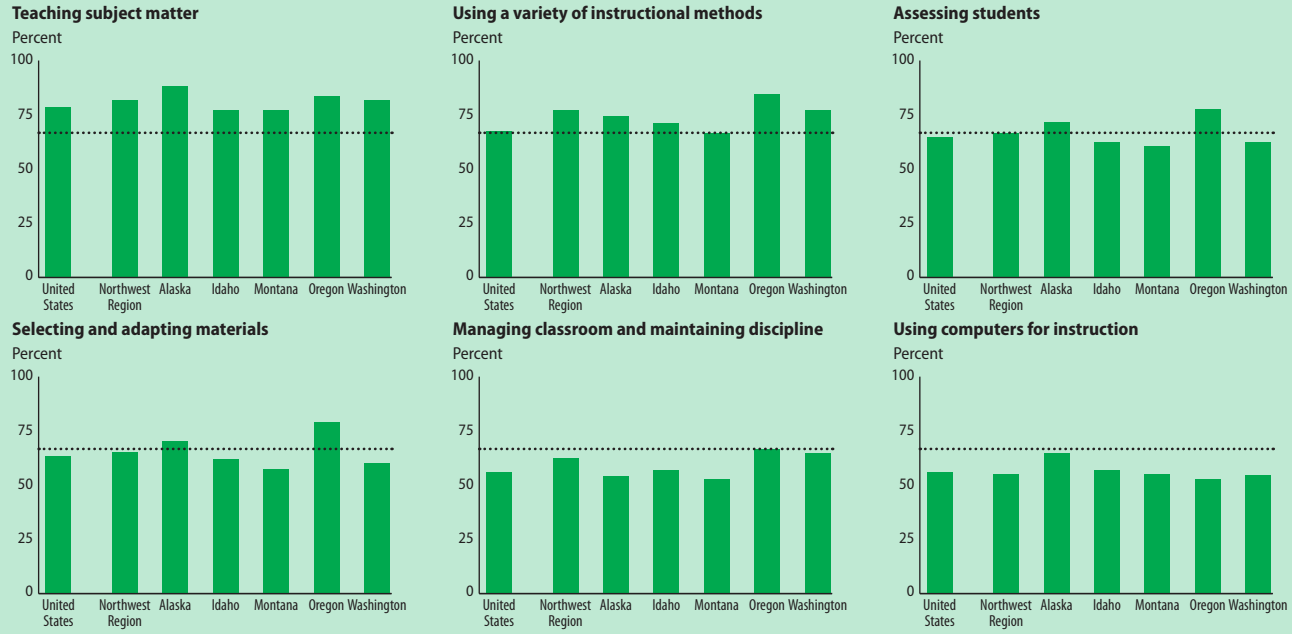
- Some 17 percent of teachers in the Northwest Region completed no more than 2 courses in methods and strategies, and 28 percent completed at least 10 courses.

- In all Northwest Region states, at least two-thirds of teachers reported being well prepared or very well prepared for teaching subject matter and using a variety of instructional methods. In all states except Oregon, less than two-thirds of teachers reported being well prepared or very well prepared for classroom management and discipline. In no state in the region did two-thirds of teachers describe themselves as well prepared for using computers for instruction.

- Teachers reported receiving various forms of support during their first year of teaching, including induction programs, reduced teaching schedule, reduced number of preparations, common planning time, classes or seminars for new teachers, classroom assistance, and supportive communication.

FIGURE S1

How do teachers describe their degree of preparation for their major classroom roles? (percentage of teachers reporting that they were well prepared or very well prepared in 2003/04)



Note: The horizontal line indicates 67 percent, which is the median percentage of teachers who reported being well prepared or moderately well prepared in similar areas in Levine (2006)'s study of teacher preparation.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE S2

What kinds of support did teachers report receiving in their first year of teaching? (percentage of teachers, 2003/04)

Area	Induction programs	Reduced teaching schedule	Reduced number of preparations	Common planning time	Access to classes or seminars for new teachers	Classroom assistance	Supportive communication
United States	67.7	5.7	8.2	48.8	67.6	27.1	79.0
Northwest Region	59.2	3.9	5.7	35.1	60.1	23.1	68.2
Alaska	38.0	3.3	4.0	25.9	40.8	27.0	65.2
Montana	30.1	6.4	4.0	23.5	33.9	26.0	70.2
Oregon	43.6	4.4	6.3	38.7	46.5	24.3	63.4
Washington	73.6	3.3	5.4	35.9	74.4	21.4	68.7

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

Since this study began, results from the 2007/08 administration of the SASS have become available. This study provides a baseline against which to interpret the 2007/08 results.

The study responds to specific questions posed by officials in Northwest Region states concerning the preparation and support of new teachers in public schools. It is also relevant to concerns by teacher educators and education officials about the quality of teachers' preparation and the structure of their first year in the classroom.

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This study provides descriptive statistics on the preparation and support of public school teachers in Northwest Region states and nationally. It summarizes information from teachers on the coursework and practice teaching they completed before they began teaching, how prepared they felt for their major classroom roles, and the kinds of support they received in their first year of teaching.

WHY THIS STUDY?

In recent years researchers, the media, and policy groups have voiced concern about teacher turnover, especially among new and early-career teachers. Based on an analysis of nationally representative data, Ingersoll and Smith (2003) report that turnover is higher in teaching than in other profession—and that turnover is higher among beginning teachers than among other teachers. Based on the same data source, Ingersoll (2003) estimates that roughly a third of teachers quit teaching within their first three years and that 40–50 percent do so within their first five years. Other studies find lower rates. For example, analyzing cross sectional data from Texas for 1993–96, Hanushek and Rivkin (2007) finds that 18 percent of Texas teachers with less than five years' experience had abandoned teaching

Different studies produce different estimates of the rate at which new teachers leave the profession; however, they concur that early-career teachers are more likely to quit teaching than are more experienced teachers. High turnover among new teachers may diminish cohesion, reducing a school's effectiveness (Ingersoll 2003). The National Commission on Teaching and America's Future (2007) estimates the cost of teacher turnover in public schools at more than $7 billion a year.

Research has identified specific forms of support that help keep teachers in their schools after their first year of teaching. Smith and Ingersoll (2004) find that teachers who had access to mentors from the same subject area and who took part in induction activities, such as planning and collaboration with other teachers, were less likely to leave teaching during their first year or move to other schools. But according to the MetLife Survey of the American Teacher for 2004/05 (Harris Interactive 2005), about a third of new teachers either had no mentor or had one who was not helpful. A randomized controlled study indicated that providing teachers with two years of comprehensive induction led to statistically significant increases during those two years in the proportion of teachers with access to and time spent with mentors (Glazerman et al. 2010).

An estimated 23.6 percent of teachers in the Northwest Region had no more than five years of teaching experience in 2003/04—slightly below the national average of 26 percent

This study summarizes survey responses by teachers in Northwest Region public schools on coursework they completed in preparation for teaching, the support they received during their first year of teaching, and their preparation for essential classroom roles. The results of the study provide context for policymakers and other officials concerning induction programs and other kinds of support for beginning teachers. Information on new teachers' perceived levels of preparation also provides context for administrators of teacher preparation programs in institutions of higher learning.

Regional importance

New and early-career teachers constitute a substantial proportion of the public school teaching corps. In the Northwest Region states, 20–26 percent of teachers had no more than five years of full-time teaching experience in 2003/04.

This study responds to specific questions by officials in Northwest Region states on the preparation and support of new teachers in public schools. It is also relevant to concerns of teacher educators and education officials about the quality of teacher preparation and the structure of teachers' first year in the classroom. For example, in a survey of alumni of teacher education programs, 62 percent of respondents reported that schools of education fail to prepare their graduates for working in today's classrooms (Levine 2006). Most principals surveyed thought that their teachers were inadequately prepared for maintaining order in the classroom, addressing the needs of students with disabilities, integrating technology into their teaching, and helping students with limited English proficiency.

The current study

This study was designed to address three questions:

- What coursework and practice teaching did teachers report completing in preparation for teaching?
- How did teachers describe their degree of preparation for their major classroom roles?
- What kinds of support did teachers report receiving during their first year of teaching?

The study examines results of the 2003/04 Schools and Staffing Survey (SASS), administered by the National Center for Education Statistics of the U.S. Department of Education. The SASS sample is representative of teachers in public schools at both the national and state levels. The study sample comprises public school teachers who began teaching between 1999 and 2003. Teachers in charter schools; schools designated for special purposes, such as special education; and schools administered by the Bureau of Indian Affairs are not included in the study. The results of the study generalize to the population of public school teachers who began teaching in 1999–2003, except teachers in the excluded categories of schools.

At the time work began on this project, results from the 2007/08 administration of the SASS were not available. Those results are now available. This study provides a baseline against which to interpret the 2007/08 results.

FINDINGS

An estimated 27,000 teachers in the Northwest Region—23.6 percent—had no more than five years of teaching experience in 2003/04 (table 1). Across states in the region, the percentage of new teachers ranged from about 20 percent (in Montana) to about 26 percent (in Alaska and Oregon). Nationally, new and early-career teachers represent about 26 percent of public school teachers.

What coursework and practice teaching did teachers report completing in preparation for teaching?

The percentage of teachers who earned a bachelor's degree from a college, school, or department of education varied across states in the region: 52 percent in Oregon, 62 percent in Washington,

TABLE 1
Public school teachers with no more than five years' teaching experience, 2003/04

Area	Number	Percent
United States	748,680 (11,506.0)	25.8 (0.32)
Northwest Region	27,040 (1,462.9)	23.6 (0.99)
Alaska	1,920 (153.8)	25.9 (1.61)
Idaho	3,050 (316.1)	21.9 (1.81)
Montana	2,190 (196.8)	20.3 (1.51)
Oregon	6,320 (517.9)	25.9 (1.43)
Washington	13,550 (1,337.3)	23.4 (1.80)

Note: Numbers in parentheses are standard errors. The number of teachers was estimated by multiplying the unweighted counts of the actual number of teachers surveyed by their survey weights.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

66 percent in Alaska, 82 percent in Montana, and 83 percent in Idaho (table 2). The proportion was 64 percent for the region as a whole and 68 percent nationally. The percentage of teachers with master's degrees also varied across states: 13 percent in Idaho, 14 percent in Montana, 32 percent in Alaska, 38 percent in Washington, and 57 percent in Oregon. The proportion was 37 percent for the region as a whole and 23 percent nationally.

These statistics generalize only to teachers who began teaching between 1999 and 2003. The proportions of teachers earning degrees from colleges, schools, or departments of education may differ for more experienced teachers.

As part of their preparation for teaching, 93 percent of teachers in the Northwest Region had completed coursework on selecting and adapting instructional materials (the national figure was 90 percent); 97 percent had completed coursework on learning theory or psychology appropriate to the ages of their students (the national figure was 93 percent); and 96 percent observed other classroom teachers and received formal feedback on their own teaching (the national figure was 90 percent; table 3).

Length of practice teaching varied across states in the region (table 4). For the region as a whole, 5 percent had practice teaching 4 weeks or less, 23 percent had practice teaching 5–11 weeks, and 72 percent of teachers had practice teaching for 12 weeks or more. For the country as a whole, 18 percent had practice teaching for 4 weeks or less, 19 percent had practice teaching for 5–11 weeks, and 64 percent of teachers had practice teaching for 12 weeks or more.

The percentage of teachers who took undergraduate or graduate courses on teaching methods or strategies also varied across states (table 5). For the region as a whole, 17 percent of teachers completed no more than 2 courses in methods and strategies, and 28 percent completed at least 10 courses.

TABLE 2
Percentage of public school teachers with a bachelor's or master's degree, 2003/04

Area	Bachelor's degree from college/ department of education	Master's degree	Master's degree from university/ department of education
United States	67.7 (0.81)	23.2 (0.87)	19.2 (0.82)
Northwest Region	63.8 (3.19)	37.3 (2.60)	34.2 (2.36)
Alaska	65.5 (4.04)	32.3 (4.03)	25.5 (3.90)
Idaho	83.1 (3.75)	13.0 (3.29)	9.7 (2.73)
Montana	82.2 (4.34)	14.0 (3.59)	12.0 (3.33)
Oregon	51.7 (5.16)	56.7 (5.47)	54.0 (5.27)
Washington	61.9 (5.53)	38.2 (4.28)	35.2 (4.05)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 3

Percentage of public school teachers reporting that their preparation included coursework on instructional materials and learning theory, observation, and formal feedback, 2003/04

Area	Completed coursework on selecting and adapting instructional materials	Completed coursework on learning theory or psychology appropriate to the ages of their students	Observed other classroom teachers and received formal feedback on their own teaching
United States	89.6 (0.58)	93.0 (0.44)	90.0 (0.61)
Northwest Region	92.8 (1.93)	96.9 (0.65)	95.8 (1.07)
Alaska	91.7 (2.72)	95.1 (1.84)	98.7 (0.83)
Idaho	92.5 (2.48)	92.9 (2.42)	93.8 (1.80)
Montana	91.1 (2.56)	95.8 (1.83)	96.1 (1.87)
Oregon	96.1 (2.08)	97.2 (1.68)	97.6 (1.45)
Washington	91.7 (3.73)	98.1 (0.62)	94.9 (1.93)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 4

Length of practice teaching reported by public school teachers, 2003/04 (percentage of teachers)

Area	4 weeks or less	5–11 weeks	12 weeks or more
United States	17.8 (0.61)	18.6 (0.76)	63.6 (0.86)
Northwest Region	5.4 (0.92)	22.7 (2.32)	72.0 (2.32)
Alaska	3.1 (1.34)	16.9 (2.70)	80.1 (2.91)
Idaho	9.7 (2.41)	24.9 (4.90)	65.4 (5.58)
Montana	3.9 (1.79)	18.8 (3.10)	77.3 (3.39)
Oregon	6.6 (2.03)	17.2 (3.89)	76.1 (4.22)
Washington	4.4 (1.48)	26.1 (3.87)	69.5 (3.85)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

Nationally, 29 percent of teachers completed no more than 2 courses in methods and strategies and about 19 percent of teachers completed at least 10.

In the Northwest Region, about 13 percent of teachers had not taken any of their courses on teaching methods and strategies before they began teaching (table 6). About 36 percent took some, but not all, of these courses before they began teaching. The proportion of teachers who completed all of their teaching methods and strategies courses before they started teaching was 39 percent in Idaho, 46 percent in Alaska, 52 percent in Washington, 56 percent in Oregon, and 61 percent of Montana. Nationally,

TABLE 5

Number of self-reported undergraduate or graduate courses taken on teaching methods or teaching strategies, 2003/04 (percentage of teachers)

Area	0–2 courses	3–4 courses	5–9 courses	10 or more courses
United States	29.0 (0.80)	25.7 (0.76)	26.8 (0.74)	18.6 (0.86)
Northwest Region	17.0 (2.15)	27.3 (3.04)	27.7 (2.17)	28.0 (2.32)
Alaska	14.5 (3.72)	27.9 (4.03)	27.9 (4.43)	29.6 (2.91)
Idaho	16.6 (3.38)	30.2 (4.69)	32.0 (4.37)	21.3 (5.58)
Montana	29.5 (4.39)	25.9 (3.94)	28.8 (4.46)	15.8 (3.39)
Oregon	10.3 (2.83)	25.1 (3.93)	28.6 (4.86)	35.9 (4.22)
Washington	18.5 (4.36)	27.9 (5.36)	26.1 (4.07)	27.6 (3.85)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 6

Courses on teaching methods and strategies taken before starting teaching as reported by teachers, 2003/04 (percentage of teachers)

Area	None before teaching	Some before teaching	All before teaching
United States	15.9 (0.67)	29.1 (0.94)	55.0 (0.99)
Northwest Region	12.5 (1.80)	35.5 (2.42)	52.0 (3.01)
Alaska	13.1 (2.48)	40.9 (3.92)	46.0 (4.38)
Idaho	23.5 (4.11)	37.7 (5.22)	38.9 (5.68)
Montana	14.9 (3.65)	23.8 (4.39)	61.3 (5.43)
Oregon	9.5 (2.57)	34.3 (4.42)	56.1 (4.92)
Washington	10.9 (3.09)	36.7 (3.74)	52.4 (4.93)

Note: Numbers in parentheses are standard errors. Results are based on teachers who reported having taken courses in teaching methods or strategies.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

16 percent took none before beginning teaching; 55 percent of teachers took all of these courses before they began teaching.

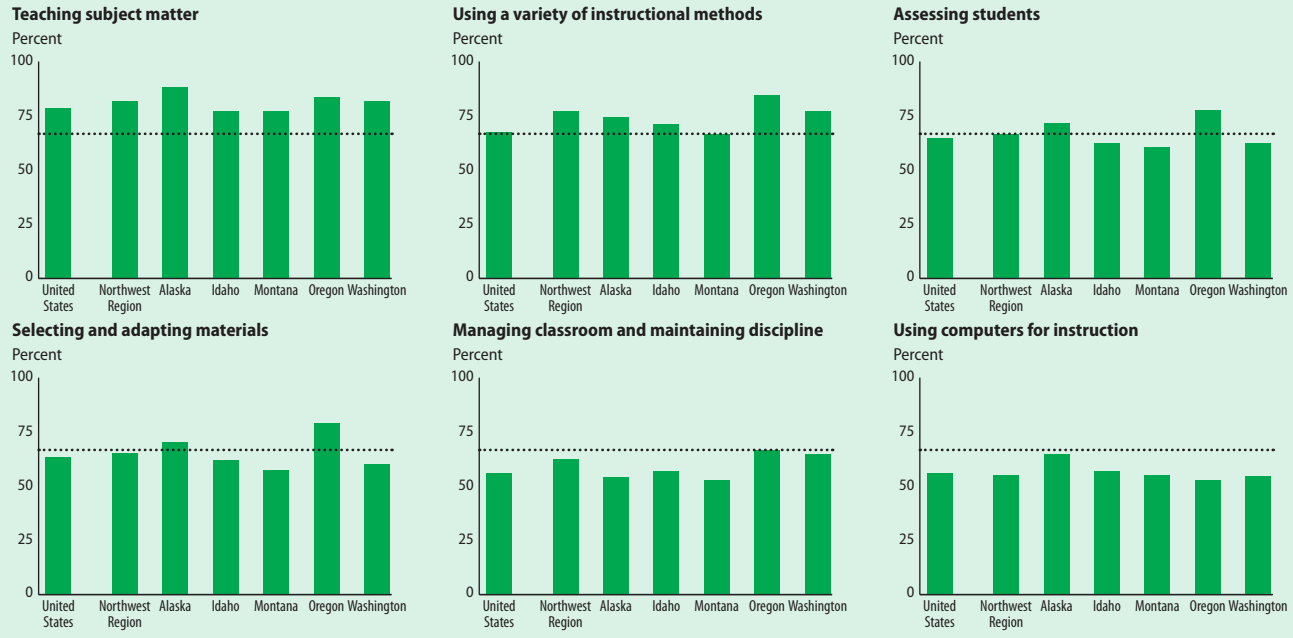
How did teachers describe their degree of preparation for their major classroom roles?

In Levine's (2006) study of teacher preparation, the median percentage of teachers who reported being well prepared or moderately well prepared for major classroom roles was two-thirds. In the current study, nationally and in all Northwest Region states, at least two-thirds of teachers reported being well prepared or very well prepared for teaching subject matter and using a variety of instructional methods (figure 1). In all states in the region except Oregon, less than two-thirds of teachers reported being well prepared or very well prepared for classroom management or discipline. In no state in the region did two-thirds of teachers describe themselves as well prepared for using computers for instruction.

Among teachers in the Northwest Region, 77 percent in Idaho, 77 percent in Montana, 82 percent in Washington, 84 percent in Oregon, and 88 percent in Alaska reported being well prepared or very well prepared for teaching subject matter

FIGURE 1

Self-reported level of teacher preparation for major classroom roles, 2003/04 (percentage of teachers reporting being well prepared or very well prepared)



Note: The horizontal line indicates 67 percent, which is the median percentage of teachers who reported being well prepared or moderately well prepared in similar areas in Levine (2006)'s study of teacher preparation. See tables 7–11 for standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 7

Self-reported level of preparedness for teaching subject matter, 2003/04 (percentage of teachers)

Area	Not prepared/ somewhat prepared	Well prepared/ very well prepared
United States	21.4 (0.85)	78.6 (0.85)
Northwest Region	18.2 (2.02)	81.8 (2.02)
Alaska	12.0 (2.53)	88.0 (2.53)
Idaho	23.0 (2.71)	77.0 (2.71)
Montana	22.9 (3.80)	77.1 (3.80)
Oregon	16.3 (4.11)	83.7 (4.11)
Washington	18.1 (3.66)	81.9 (3.66)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

(table 7). The proportion was 82 percent for the region overall and 79 percent nationally.

Among teachers in the region, 67 percent in Montana, 71 percent in Idaho, 74 percent in Alaska, 77 percent in Washington, and 84 percent in Oregon reported being well prepared or very well prepared for using a variety of instructional methods (table 8). The proportion was 77 percent for the region overall and 68 percent nationally.

TABLE 8

Self-reported level of preparedness in using a variety of instructional methods, 2003/04 (percentage of teachers)

Area	Not prepared/ somewhat prepared	Well prepared/ very well prepared
United States	32.5 (0.82)	67.5 (0.82)
Northwest Region	23.0 (2.58)	77.0 (2.58)
Alaska	25.6 (3.78)	74.4 (3.78)
Idaho	28.6 (3.71)	71.4 (3.71)
Montana	33.4 (4.26)	66.6 (4.26)
Oregon	15.6 (3.75)	84.4 (3.75)
Washington	23.0 (4.71)	77.0 (4.71)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

Among teachers in the region, 61 percent in Montana, 63 percent in Idaho, 63 percent in Washington, 72 percent in Alaska, and 78 percent in Oregon reported being well prepared or very well prepared for assessing students (table 9). The proportion was 67 percent for the region overall and 65 percent nationally.

Among teachers in the region, 58 percent in Montana, 60 percent in Washington, 62 percent in Idaho, 70 percent in Alaska, and 79 percent in Oregon reported being well prepared or very well prepared for selecting and adapting curriculum and instructional materials (table 10). The proportion was 65 percent for the region overall and 63 percent nationally.

Among teachers in the region, 53 percent in Montana, 54 percent in Alaska, 57 percent in Idaho, 65 percent in Washington, and 67 percent in Oregon reported being well prepared or very well prepared for classroom management and discipline (table 11). The proportion was 63 percent for the region overall and 56 percent nationally.

Among teachers in the region, 53 percent in Oregon, 55 percent in Washington, 55 percent in Montana, 57 percent in Idaho, and 65 percent in Alaska reported being well prepared or very

TABLE 9

Self-reported level of preparedness in assessing students, 2003/04 (percentage of teachers)

Area	Not prepared/ somewhat prepared	Well prepared/ very well prepared
United States	35.2 (0.98)	64.8 (0.98)
Northwest Region	33.4 (2.84)	66.6 (2.84)
Alaska	28.3 (3.30)	71.7 (3.30)
Idaho	37.5 (4.91)	62.5 (4.91)
Montana	39.5 (4.79)	60.5 (4.79)
Oregon	22.4 (4.53)	77.6 (4.53)
Washington	37.3 (4.83)	62.6 (4.83)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 10

Self-reported level of preparedness for selecting and adapting curriculum and instructional materials, 2003/04 (percentage of teachers)

Area	Not prepared/ somewhat prepared	Well prepared/ very well prepared
United States	36.7 (0.88)	63.3 (0.88)
Northwest Region	34.8 (3.51)	65.2 (3.51)
Alaska	29.6 (3.83)	70.4 (3.83)
Idaho	37.9 (4.99)	62.1 (4.99)
Montana	42.5 (4.52)	57.5 (4.52)
Oregon	21.1 (3.84)	78.9 (3.84)
Washington	40.0 (6.58)	60.0 (6.58)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 11

Self-reported level of preparation for managing classroom and maintaining discipline, 2003/04 (percentage of teachers)

Area	Not prepared/ somewhat prepared	Well prepared/ very well prepared
United States	44.2 (0.96)	55.8 (0.96)
Northwest Region	37.4 (2.41)	62.6 (2.41)
Alaska	45.7 (4.33)	54.3 (4.33)
Idaho	43.1 (4.90)	56.9 (4.90)
Montana	47.2 (4.33)	52.8 (4.33)
Oregon	33.3 (4.56)	66.7 (4.56)
Washington	35.2 (4.50)	64.8 (4.50)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 12

Self-reported level of teacher preparation for using computers for instruction, 2003/04 (percentage of teachers)

Area	Not prepared/ somewhat prepared	Well prepared/ very well prepared
United States	43.9 (0.88)	56.1 (0.88)
Northwest Region	44.7 (2.90)	55.3 (2.90)
Alaska	35.1 (4.53)	64.9 (4.53)
Idaho	42.9 (3.95)	57.1 (3.95)
Montana	45.1 (5.10)	54.9 (5.10)
Oregon	47.2 (4.25)	52.8 (4.28)
Washington	45.2 (5.40)	54.8 (5.40)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

well prepared for using computers for instruction (table 12). The proportion was 55 percent for the region overall and 56 percent nationally.

What kinds of support did teachers report receiving in their first year of teaching?

Teachers reported receiving various forms of support during their first year of teaching, including induction programs, reduced teaching schedule, reduced number of preparations, common planning time, classes or seminars for new teachers, classroom assistance, and supportive communication (table 13).

Induction programs. Thirty percent of teachers in Montana, 38 percent in Alaska, 44 percent in Oregon, 62 percent in Idaho, and 74 percent in Washington reported participating in induction programs during their first year of teaching. The proportion was 59 percent for the region overall and 68 percent nationally.

Reduced teaching schedule. Three percent of teachers in Alaska, 3 percent in Washington, 4 percent in Idaho, 4 percent in Oregon, and 6 percent in Montana reported having a reduced teaching schedule during their first year of teaching. The proportion was 4 percent for the region overall and 6 percent nationally.

Fewer course preparations. Four percent of teachers in Alaska, 4 percent in Montana, 5 percent in Washington, 6 percent in Oregon, and 8 percent in Idaho reported having reduced preparations during their first year of teaching. The proportion was 6 percent for the region overall and 8 percent nationally.

TABLE 13

Kinds of support provided during teachers' first year of teaching reported by teachers, 2003/04 (percentage of respondents receiving support)

Area	Induction programs	Reduced teaching schedule	Reduced number of preparations	Common planning time	Access to classes or seminars for new teachers	Classroom assistance	Supportive communication
United States	67.7 (0.95)	5.7 (0.40)	8.2 (0.43)	48.8 (0.96)	67.6 (0.89)	27.1 (0.99)	79.0 (0.77)
Northwest Region	59.2 (2.39)	3.9 (0.80)	5.7 (0.99)	35.1 (2.40)	60.1 (2.39)	23.1 (2.80)	68.2 (2.66)
Alaska	38.0 (4.59)	3.3 (1.33)	4.0 (1.63)	25.9 (3.73)	40.8 (3.99)	27.0 (3.74)	65.2 (4.09)
Idaho	62.2 (4.58)	4.4 (1.53)	8.2 (2.59)	38.5 (5.57)	55.7 (4.16)	24.0 (3.79)	76.7 (4.02)
Montana	30.1 (4.75)	6.4 (2.63)	4.0 (2.42)	23.5 (4.27)	33.9 (4.58)	26.0 (4.66)	70.2 (3.90)
Oregon	43.6 (4.98)	4.4 (1.95)	6.3 (2.50)	38.7 (5.17)	46.5 (5.03)	24.3 (3.64)	63.4 (5.86)
Washington	73.6 (3.51)	3.3 (1.25)	5.4 (1.45)	35.9 (4.23)	74.4 (3.58)	21.4 (5.24)	68.7 (4.76)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

Common planning time. Twenty-four percent of teachers in Montana, 26 percent in Alaska, 36 percent in Washington, 39 percent in Idaho, and 39 percent in Oregon reported having common planning time with other teachers during their first year of teaching. The proportion was 35 percent for the region overall and 49 percent nationally.

Access to classes or seminars for new teachers. Thirty-four percent of teachers in Montana, 41 percent in Alaska, 47 percent in Oregon, 56 percent in Idaho, and 74 percent in Washington reported having access to classes or seminars for new teachers during their first year of teaching. The proportion was 60 percent for the region overall and 68 percent nationally.

Classroom assistance. Twenty-one percent of teachers in Washington, 24 percent in Idaho, 24 percent in Oregon, 26 percent in Montana, and 27 percent in Alaska reported having classroom assistance during their first year of teaching. The proportion was 23 percent for the region overall and 27 percent nationally.

Supportive communication. Sixty-three percent of teachers in Oregon, 65 percent in Alaska, 69 percent in Washington, 70 percent in Montana, and 77 percent in Idaho reported receiving supportive communication during their first year of teaching. The proportion was 68 percent for the region overall and 79 percent nationally.

Forty-one percent of teachers in Alaska, 45 percent in Montana, 60 percent in Oregon, 64 percent in Idaho, and 76 percent in Washington reported working closely with a master or mentor teacher during their first year of teaching (table 14). The figure for the region was 66 percent; the national figure was 71 percent. Twenty-nine percent of teachers in Alaska, 35 percent in Montana, 49 percent in Idaho, 51 percent in Oregon, and 56 percent in Washington reported working with a master/mentor teacher in the same subject. The proportion was 50 percent for the region overall and 52 percent nationally.

Concerning the degree of assistance received from a master or mentor teacher during their first year

TABLE 14

Percentage of teachers who reported working closely with a master or mentor teacher during their first year of teaching, 2003/04

Area	Worked with master or mentor teacher	Master or mentor teacher in same subject
United States	70.8 (0.90)	51.9 (0.88)
Northwest Region	65.7 (2.41)	50.2 (2.76)
Alaska	40.5 (4.26)	28.7 (4.09)
Idaho	63.7 (4.94)	49.1 (6.05)
Montana	45.2 (4.64)	35.0 (4.39)
Oregon	59.9 (3.87)	51.3 (4.22)
Washington	75.8 (4.16)	55.5 (4.96)

Note: Numbers in parentheses are standard errors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

TABLE 15

Degree of assistance from master or mentor teacher during teacher's first year of teaching reported by teachers, 2003/04 (percentage of teachers)

Area	None to some	Moderate	Great
United States	25.9 (0.93)	27.8 (0.88)	46.2 (1.04)
Northwest Region	29.9 (3.25)	28.6 (2.92)	41.5 (3.62)
Alaska	37.2 (7.60)	25.2 (6.07)	37.7 (7.35)
Idaho	24.8 (6.14)	29.4 (7.41)	45.8 (6.55)
Montana	32.7 (7.41)	31.1 (7.51)	36.3 (6.97)
Oregon	29.6 (6.40)	30.9 (8.20)	39.5 (6.91)
Washington	30.1 (5.23)	27.6 (4.42)	42.3 (6.14)

Note: Numbers in parentheses are standard errors. Data are reported for the subset of teachers who reported having mentors.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

teaching, 38 percent of teachers in Alaska, 36 percent in Montana, 40 percent in Oregon, 42 percent in Washington, and 46 percent in Idaho reported that their mentors provided them with great assistance (table 15). The proportion was 42 percent for the region overall and 46 percent nationally.

STUDY LIMITATIONS

Three sets of factors may have affected the results of this study. First, the estimates reported in the study are based on self-reports from samples of teachers selected for the SASS. Estimates obtained from the universe of teachers may have differed from the estimates based on the sample. In addition, estimates of the extent of teachers' preparation provided by principals or other sources may differ from teachers' self-reports. Findings from the study cannot be generalized to teachers in public charter schools, schools designated for special purposes, or schools administered by the Bureau of Indian Affairs, because teachers in such schools were not included in the analysis.

Second, the survey was administered in 2003/04 but polled teachers who began teaching in 1999–2003. It may have been more difficult for teachers who began teaching in the earlier years to accurately recall their experiences during their first year. In addition, teachers who were initially better prepared may have been more likely to continue teaching, potentially introducing an upward bias into estimates of the degree of teacher preparation.

Third, the results are based on the 2003/04 administration of the SASS. After work began on this study, results from the 2007/08 SASS became available. Results from the most recent administration of SASS should be considered in conjunction with the results reported here.

APPENDIX A
THE SAMPLE

The sample for the study is a subset of the national sample of teachers surveyed in the 2003/04 Schools and Staffing Survey (SASS), a survey designed to provide a comprehensive picture of elementary and secondary education in the United States. SASS collects data on schools, principals, teachers, school libraries, and public school district policies. Its sample for public schools is designed to be representative of public schools and teachers at the national and state levels. The National Center for Education Statistics (NCES) administers the SASS on behalf of the U.S. Department of Education.

The 2003/04 SASS Teacher Questionnaire was designed to gather information about the characteristics and experiences of teachers, such as education and training, teaching assignment, and perceptions and attitudes about a variety of issues related to teaching (Tourkin et al. 2007). It asked teachers who began teaching between 1999 and 2003 about their preparation for teaching and the support they received in their first year of teaching.

This study had access to SASS data (Gruber 2007) through the restricted-use license granted by the NCES to Education Northwest, which administers Regional Educational Laboratory Northwest. The current study analyzes teachers' responses to this questionnaire. (Items from the questionnaire used in the study are shown in table B2 in appendix B.)

The sample for this study includes 830 teachers in public schools in the Northwest Region who began teaching between 1999 and 2003 (table A1). The sample excludes teachers in public charter schools; schools designated for special purposes, such as special education; and schools administered by the Bureau of Indian Affairs.[1]

TABLE A1
Number of teachers surveyed, 2003/04

Area	Total
United States	9,280
Northwest Region	830
Alaska	180
Idaho	190
Montana	130
Oregon	140
Washington	190

Note: Unweighted sample sizes are rounded to the nearest 10, in accordance with National Center for Education Statistics requirements for reporting results of restricted-use data.

Source: Author's analysis of 2003/04 Schools and Staffing Survey teacher data.

SASS is not based on a simple random sample of teachers. Instead, to ensure that sufficient numbers of cases are available to produce reliable estimates for identified subgroups of teachers, SASS uses a stratified probability proportionate-to-size sample. As a first step in creating the sample, the NCES sampled public schools based on the number of teachers and other characteristics. After schools were selected, 1–20 teachers were selected from each school in accordance with the goal of creating a sample for the 2003/04 survey that included adequate representation of minority teachers and new teachers.

APPENDIX B
RESPONSE RATES, IMPUTATION, AND WEIGHTING

In surveys that use complex sampling, weighting is required to produce estimates that accurately represent the target population. Weighting was also used in the 2003/04 Schools and Staffing Survey (SASS) to adjust for nonresponse. This appendix describes response rates and the imputation and weighting procedures that were applied to the SASS teacher file.[2]

Response rates

Interpreting survey results can be problematic when subjects skip items on a survey or fail to respond to it. The National Center for Education Statistics (NCES) conducted comprehensive analyses to identify nonresponse bias at both the teacher and item levels.

Schools used the teacher listing form to identify their teachers. This form was the basis for constructing the teacher sampling frame. The overall weighted response rate is the weighted questionnaire response rate times the weighted response for the teacher listing form (table B1).

The overall response rate for teachers was greater than the national response rate in four Northwest Region states (all but Oregon). The NCES conducted follow-up analyses for states in which the overall response rate for teachers fell below 85 percent (all states in the region except Idaho). No evidence of substantial nonresponse bias was found at either the teacher or the item level.

TABLE B1
Weighted response rates for the 2003/04 Schools and Staffing Survey (percent)

Area	Teacher listing form	Teacher questionnaire	Overall teacher response rate
United States	89.2	84.8	75.7
Northwest Region			
Alaska	95.9	84.0	80.6
Idaho	99.4	93.6	93.1
Montana	96.9	83.5	80.9
Oregon	77.6	88.7	68.8
Washington	94.1	84.1	76.9

Source: Tourkin and others 2007, table 21.

Imputation

Some teachers left items on the teacher questionnaire unanswered. Items that teachers were directed to skip because the item was not appropriate for them are not counted as unanswered items. For example, most of the items analyzed in this study were directed at new teachers; more experienced teachers were directed to skip those items. To supply data for unanswered items, NCES used a three-stage imputation procedure. The three stages involve various assumptions about how the respondent might have answered. In the first stage, responses for a teacher's unanswered items were imputed from items the teacher answered or from items on the corresponding school record. In the second stage, some of the remaining unanswered items were completed using data from a similar record or by using statistical techniques to randomly assign values to categorical variables consistent with the observed distribution of the data. The third stage used a mixture of statistical and "hands-on" procedures, such as imputing a missing gender field by looking at the respondent's name.

Table B2 shows the percentage of records in the national teacher file used to address the study questions that were subject to imputation. The largest percentage of imputation for any item was 1.9 percent.

Weighting

Statistics presented in this report were calculated using the sampling and replicate weights developed by the NCES for the SASS. Sampling weights are developed to adjust estimates derived from the survey sample so that they accurately represent the

TABLE B2

Imputation rates for questions from the SASS teacher questionnaire used to address the study questions

Research question/survey question		Percentage of records imputed
What coursework and practice teaching did teachers report completing in preparation for teaching?		
20a	Do you have a bachelor's degree?	0.0
20c	Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education?	1.5
22a	Do you have a master's degree?	0.9
22c	Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education?	0.4
	Did your preparation for teaching include—	
25a	Coursework in how to select and adapt instructional materials?	1.5
25b	Coursework in learning theory or psychology appropriate to the age of students you teach?	1.5
25c	Your observation of other classroom teaching?	1.4
25d	Formal feedback on your teaching?	1.9
26	How long did your practice teaching last?	1.5
27	Have you taken any graduate or undergraduate courses that focused on teaching methods or teaching strategies?	1.0
28	How many of these courses did you complete BEFORE you started at the elementary or secondary level	1.4
How do teachers describe their degree of preparation for their major classroom roles?		
	In your FIRST year of teaching, how well prepared were you to—	
33a	Handle a range of classroom management or disciplinary situations?	1.4
33b	Use a variety of instructional methods?	1.4
33c	Teach your subject matter?	1.5
33d	Use computers in classroom instruction?	1.5
33e	Assess students?	1.5
33f	Select and adapt curriculum and instructional materials?	1.5
What kinds of supports did teachers report receiving in their first year?		
34	In your FIRST year of teaching, did you participate in a teacher induction program?	1.5
	Did you receive the following kinds of support during your FIRST year of teaching?	
35a	Reduced teaching schedule	1.3
35b	Reduced number of preparations	1.4
35c	Common planning time with teachers in your subject	1.3
35d	Seminars or classes for beginning teachers	1.3
35e	Extra classroom assistance (e.g., teacher aides)	1.3
35f	Regular supportive communication with your principal, other administrators, or department chair?	1.3
37a	In your FIRST year of teaching, did you work closely with a master or mentor teacher?	1.3
37b	Was this teacher's subject area the same as yours?	1.1
38	In your FIRST year of teaching to what extent did your master or mentor teacher help you?	0.9

Source: Author's compilation, based on data from Gruber (2007) and Tourkin and others (2007).

target population. The final sampling weight for public school teachers is calculated as follows:

(initial basic weight) × (school sampling adjustment factor) × (teacher list nonresponse adjustment factor) × (teacher-within-school nonresponse adjustment factor) × (first-stage ratio adjustment factor) × (teacher adjustment factor),

where *initial basic weight* is the inverse of the probability of selecting the teacher at the time the sample was created; *school sampling adjustment factor* accounts for circumstances identified after data collection begins that affect the school's probability of selection, such as a merger; *teacher list nonresponse adjustment factor* accounts for teachers in schools that did not provide a list

of teachers; *teacher-within-school nonresponse adjustment factor* accounts for sampled teachers who did not respond to the survey; *first-stage ratio adjustment factor*, computed at the school level, adjusts the sampled schools' frame estimates of full-time equivalent teachers to total full-time equivalent teachers in the whole school sampling frame drawn from the 2001/02 Common Core of Data; and *teacher adjustment factor* adjusts the inconsistency between the estimated number of teachers from the SASS school data files and the SASS teacher data files. The teacher adjustment factor ensures that teacher estimates from the teacher file agree with the corresponding teacher aggregates from the school file (after imputation), because the teacher file counts are adjusted to agree with the school file counts.

Replicate weights are developed to estimate standard errors. Using procedures that assume simple random sampling to estimate sampling errors in complex surveys such as SASS runs the risk of underestimating the variability of the estimates. The replicate weight approach begins by constructing subsamples, or replicates, from the full sample and then 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 SASS teacher file includes a set of 88 replicate weights constructed by NCES. NCES reports that analysis of the replicate weights revealed that approximately 3 percent of the teacher weights fell outside a 95 percent confidence interval. This proportion is close to the expected 5 percent, indicating that the replicate weights constructed for the teacher file are close to being distributed normally.

The standard errors reported in the study were calculated using software that incorporated the replicate weights into the computations.

This study verified that the standard errors calculated in the study for the national sample were consistent with the standard errors reported in NCES survey documentation for the same variables. As an additional check, a sensitivity analysis was conducted to determine the degree to which large sampling weights in the study sample may have affected standard errors. The first step was to identify outliers using Tukey's recommendations for constructing box and whisker plots. Sampling weight values falling above the extreme of the upper whisker were identified as outliers (Tukey 1977). (Outliers at the high end were identified because the distribution of sampling weights for the study sample skewed right.)

This process identified no outliers among the sampling weights for Idaho and Washington, 1 for Montana, 2 for Oregon, and 16 for Alaska. The same process identified approximately 10 percent of the national sampling weights as outliers. Standard errors were then calculated omitting cases identified as having outlier sampling weights. For the samples from Alaska, Montana, and Oregon, omitting cases with outlying sampling weights resulted in standard errors that differed negligibly from standard errors calculated from all the cases. For the U.S. sample, omitting cases with outlying sampling weights resulted in standard errors that were on average 17 percent less than standard errors calculated from all the cases. Standard errors calculated on the full U.S. sample were less than their estimates (typically 2–3 percent). As a result, the study did not disregard cases with large sampling weights.

NOTES

1. There were few charter schools in the Northwest Region during the period covered by this research; as of October 2010, there were no charter schools in Montana or Washington.

2. Material in this appendix draws on Tourkin et al. (2007). All statistics were calculated by the author using the survey package for R (Lumley 2004, 2009; R Development Core Team 2005). Estimates incorporated the teacher sampling weight and the replicate weights included with the SASS teacher file.

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