

# STATE BOARD OF EDUCATION

**HEARING TYPE:**      X   INFORMATION/NO ACTION

**DATE:**               November 1, 2007

**SUBJECT:**           **Trends in Teacher Retention and Mobility in Selected WA Middle and High Schools**

**SERVICE UNIT:**    Edie Harding, Executive Director  
State Board of Education

**PRESENTERS:**       Ana Elfers, University of Washington  
Marge Plecki, University of Washington

## **BACKGROUND:**

Research by organizations such as The Education Trust<sup>1</sup> has shown that teacher resources in terms of teaching quality and qualifications are often unevenly distributed among schools and districts. The argument made is that more economically disadvantaged students or more students from racial and ethnic minority backgrounds are not given their share of the “best” teachers. This issue of teacher resource inequality has come up in our System Performance Accountability work.

To learn more about whether such patterns of inequality exist in Washington schools, we contracted with The Center for Strengthening the Teaching Profession (CSTP) for a study of teacher resource distribution in a select group of middle and high schools. Included behind this tab is a brief summary of the study and the final report from CSTP.

The researchers from the University of Washington who conducted the CSTP study will be presenting the findings of their study.

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<sup>1</sup> Peske, Heather G. and Haycock, Katie, (June 2006). *Teaching Inequality How Poor and Minority Students are Shortchanged on Teacher Quality*. Washington, D.C.: The Education Trust.



# WASHINGTON STATE BOARD OF EDUCATION

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November 1, 2007

**To:** Board Members

**From:** Dr. Evelyn Hawkins  
Research Associate

**RE: Study of Trends in Teacher Retention and Mobility in Selected Washington Middle and High Schools**

SBE contracted with The Center for Strengthening the Teaching Profession (CSTP) to complete a study on teacher resources in our schools. The study focused on the middle schools and high schools in six districts—Highline, Pasco, Seattle, Spokane, Tacoma, and Yakima. The six districts were selected based on the variability among their middle schools in students' performance on the WASL. As noted in the study, these six districts are not to be considered representative of districts in the state or any groups of districts in the state.

SBE staff posed the following research questions for the study:

- What are the trends in teacher retention and mobility in schools, in the study districts, over the two five-year time periods (1998-2002 and 2000-2004)?
  - What are the characteristics of middle and high school teachers in the schools during the two five-year time periods? What differences exist in the distribution of teacher experience among the schools within their districts?
  - How do these schools and districts differ in the percentage of teachers who stay at the same school, move within the districts or to another district, or exit the Washington education system over a five-year period?
  - Is there a notable pattern of relationship between teacher retention and mobility and teaching experience, the level of school poverty, the racial/ethnic make-up of the students, and the students' WASL performance?
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## Major Findings

- There was a high degree of mobility, particularly among middle schools teachers:
  - ✓ 46 percent left their school within five years compared to 40 percent of high school teachers.
- The differences are greater among schools within a district than across districts in teacher mobility rates and percent of teachers with less than five years of teaching experience.<sup>1</sup>
- The following relationships were found between teacher mobility and student and teacher characteristics:
  - ✓ Higher teacher mobility rates were related to higher levels of student poverty and higher percentages of teachers with fewer years of experience<sup>2</sup> (particularly those with less than five years of experience).
  - ✓ Lower teacher mobility rates were related to higher performance on the reading and math WASL.

## Implications

- The middle school climate and culture in some schools may not be conducive to supporting teachers and students.
- High levels of teacher mobility can be very disruptive to school cultures and the learning environment. Frequent turnovers can lead to lack of cohesiveness in the teaching community and increase the need for professional development services.
- The differences in mobility rates across schools in a district suggest possible inequities in levels of teacher resources available to a district's students.
- To the extent that level of experience differentially impacts student learning, large differences among schools in the percent of teachers with less than five years of experience may indicate inequitable distribution of learning resources for children.

## Data Gaps

In conducting the study, the researchers noted important factors that may influence teacher retention and mobility that are not readily available for analyses, such as school climate, school leadership, parental involvement, and teacher assignment and transfer policies. They also note that the absence of information such as teachers' certification, endorsements, and assignments limit our ability to understand completely the impacts of teacher resources on student learning.

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<sup>1</sup> This finding is based on SBE calculations using data provided by CSTP.

<sup>2</sup> This finding is based on SBE calculations using data provided by CSTP.

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# **Trends in Teacher Retention and Mobility in Selected Washington Middle and High Schools**

**A Technical Report Prepared for the  
Washington State Board of Education**

Prepared by:

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September 30, 2007



Understanding teacher workforce issues and the unique retention and mobility patterns within individual districts requires taking into account the many forces and conditions in the local community, student demography and the local policies that impact the movement of teachers. Data from individual schools and districts, as well as statewide trends, can be informative and offer a prompt for careful consideration of what might promote or inhibit supportive learning and working environments in schools.

This report provides a brief analysis of teacher characteristics, and teacher retention and mobility patterns in a selected sample of middle and high schools in Washington state. The purpose of this report is to provide the Washington State Board of Education with accurate information about the teacher workforce in the selected schools and districts as an analytic tool that can inform and enhance decision making. While not a representative sample of middle and high schools in Washington, this selected sample does include districts which vary by size, region of the state, student demographics and student performance on the WASL.

This analysis focuses on the middle and high school teachers in six districts. As a result of work previously commissioned by the Center for Strengthening the Teaching Profession (CSTP), we provide comparative trend data for the high school teachers in 15 additional districts. We also include statewide statistics for all teachers during the same time periods. Table 1 provides an overview of the districts and schools included in the study.

Districts	Retention and Mobility 1998 to 2002		Retention and Mobility 2000 to 2004	
	Middle Schools	High Schools	Middle Schools	High Schools
Seattle	X	X	X	X
Tacoma	X	X	X	X
Spokane	X	X	X	X
Highline	X	X	X	X
Yakima	X	X	X	X
Pasco	X	X	X	X
<b>Additional Districts with Comparative High School Data</b>				
Evergreen (Clark)		X		X
Lake Washington		X		X
Edmonds		X		X
Bellevue		X		X
South Kitsap		X		X
Bellingham		X		X
Richland		X		X
Olympia		X		X
Oak Harbor		X		X
Walla Walla		X		X
Aberdeen		X		X
Ephrata		X		X
Naches Valley		X		X
Winlock		X		X
Oroville		X		X

*\*All middle or high schools in the district are included as outlined above, where data is available. Districts are ordered by size unless otherwise noted.*

## Terms and Methodology

To investigate teacher characteristics, and teacher retention and mobility patterns, we examined records for all public school teachers over two time periods: 1998/99 to 2002/03 and 2000/01 to 2004/05. Teachers located in the selected sample of the state's middle schools and high schools are highlighted for analysis. We examined teacher retention and mobility patterns in relation to teacher characteristics, student demographics, measures of student learning in reading and mathematics and other school and district characteristics. These analyses indicate whether teaching staff stayed in their same school after five years, moved to another school within the same district, moved to a different district, or exited the Washington state system altogether.

For purposes of this analysis, teacher turnover includes both mobility and attrition – the extent to which teachers move to other schools and other districts, as well as leave the state's public education system. Using the Washington state personnel database (S-275), we located classroom teachers in each school and district under investigation during the initial school year, and also five years later to see if they were still in the Washington system of education. Some of the 1998 and 2000 teachers had changed duties, schools and districts, and some had exited the Washington education system. Since this analysis captures a snapshot of the workforce at two points in time, it is not possible to note gaps in employment during each of the five-year periods, nor is it possible to distinguish voluntary and involuntary departures.

This work includes retention and mobility analyses at several levels (state, district and school) and uses individual teacher data (both headcount and FTE) in calculations. Consequently it is important to clearly define the criteria for teachers included in these analyses.

- *Teachers* were defined as those public school teachers whose assignment is the instruction of pupils in a classroom situation and who have a designation as an elementary teacher, secondary teacher, or other classroom teacher.<sup>1</sup> Other teachers serving in specialist roles (e.g., reading resource specialist, library media specialist) were not included in these analyses.

In order to examine retention patterns, teachers are placed in one of four categories:

- “Stayers” – teachers assigned to the same school(s) in the initial school year and also five years later.
- “Movers in” – teachers who moved to other schools in the same district, or changed assignment (other than a classroom teacher) within the same district

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<sup>1</sup> As reported in the Office of the Superintendent of Public Instruction's personnel database (S-275), they are certificated instructional staff with a duty root designation of 31 or 32 or 33. Teachers whose full-time equivalent (FTE) designation was zero for the initial year were excluded from the analysis. This likely impacts those teachers who were on-leave for the 1998, and 2000 school years and consequently may slightly over-represent leavers from the Washington state education system.

- “Movers out” – teachers who moved to other districts or to private schools, either as a classroom teacher or in some other role
- “Leavers” – teachers who exited the Washington education system, either temporarily or permanently<sup>2</sup>

### **Research Questions and Organization of this Report**

The findings in this report are organized in 6 sections. Each section focuses on one or more of the following questions:

- What are the characteristics of teachers statewide compared with middle and high school teachers in the six selected districts, and high school teachers in 15 additional districts during the two time periods?
- What are the trends in teacher retention and mobility statewide compared with middle and high school teachers in the selected districts and comparative districts over the two time periods? How do these districts differ in the percentage of middle and high school teachers who stay at the same school, move within the district or to another district, or exit the Washington education system over a five-year period?
- What differences exist in the distribution of teachers by experience among these schools within districts?
- Is there a notable pattern between teacher retention and mobility and teacher experience, the level of school poverty, the racial/ethnic make-up of the students, and the students’ academic performance?

The report concludes with some final summary comments. Specific school-by-school tables for each district are located in Appendices A and B.

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<sup>2</sup> Leavers may have retired, re-entered the system in subsequent years, left Washington to teach in another state or completely left the profession.

## **Findings**

### Characteristics and Retention Patterns of the State's Teacher Workforce and Teachers in Selected Districts

While the primary focus of this analysis is on teacher characteristics, retention and mobility within middle and high schools in the selected districts, it is helpful to begin with an understanding of statewide trends and characteristics of the Washington teacher workforce. The state data includes all individuals who served as classroom teachers in Washington in 1998 and 2000, their characteristics and retention patterns. Aggregated data for the teachers in the middle and high schools from the six selected districts and high school teachers in 15 additional districts is provided for comparison.

A summary of the characteristics of Washington teachers in 1998 and 2000 is provided in Table 2. The increase in student enrollment statewide from 1998 to 2000 reflects a corresponding increase in the number of teachers in the workforce. Approximately 55 percent of teachers are between the ages of 31 and 50. The percentage of high school teachers over the age of 50 in the selected districts (37 percent in 2000) is somewhat higher than for teachers statewide or high school teachers in the other sample districts (29 percent). Additionally, the percentage of high school teachers in selected districts with 25 years or more of experience (21 percent in 2000) is slightly higher than teachers statewide or in the other sample districts (16 and 18 percent, respectively in 2000). Overall novice teachers (less than five years of experience) in the sample districts resemble their counterparts statewide and represent between 23 to 27 percent of the workforce in 2000.

It is important to note that the teachers in the selected districts are not a representative sample of the state's teacher workforce. This is perhaps most evident when examining teacher ethnicity. Teachers in the sample districts are among the districts in Washington with the largest and most diverse teaching staff (e.g., Seattle, Tacoma and Yakima). In particular, differences can be seen among middle and high school teachers in the sample districts in which 14 percent of their teaching staff represent minority teachers compared with 7 percent for the state as a whole.



Table 2: Characteristics of the Washington Teachers in 1998 and 2000  
All Teachers Statewide as Compared with Middle and High School Teachers in Selected Districts\* and Comparative Districts

	All Teachers Statewide		Middle School Teachers in Selected Districts (6 districts, 36 schools)		High School Teachers in Selected Districts (6 districts, 32/33 schools)		Additional High School Teachers (15 districts, 32/37 schools)	
	1998	2000	1998	2000	1998	2000	1998	2000
Student Enrollment	999,616	1,004,843	27,644	28,136	38,691	41,830	37,786	43,048
Number Teachers (headcount)	51,907	53,216	1,458	1,503	1,944	2,012	1,956	2,134
FTE Teachers**	49,489	50,735	1,434	1,481	1,883	1,940	1,861	2,018
<i>Age (in 1998 and 2000)</i>								
21-30	15.6%	16.3%	14.3%	16.4%	12.1%	13.9%	16.3%	16.3%
31-40	22.5%	22.6%	24.2%	23.5%	20.5%	20.5%	23.1%	24.6%
41-50	36.0%	32.3%	33.4%	29.3%	31.1%	28.7%	31.9%	30.4%
51-60	24.2%	26.8%	25.7%	28.0%	32.8%	32.6%	26.9%	27.0%
61+	1.7%	2.1%	2.4%	2.9%	3.5%	4.4%	1.8%	1.6%
<i>Ethnicity</i>								
Asian/Pacific Islander	2.2%	2.3%	3.8%	3.5%	4.6%	4.4%	1.8%	1.7%
African American	1.6%	1.6%	7.5%	6.9%	5.5%	5.7%	0.6%	0.7%
Hispanic	1.8%	2.0%	2.6%	3.0%	2.3%	2.7%	2.0%	2.2%
Native American	0.8%	0.8%	1.0%	1.0%	1.2%	1.0%	0.4%	0.6%
White	93.6%	93.4%	85.0%	85.6%	86.5%	86.1%	95.1%	94.8%
<i>Experience</i>								
0-4 years	21.2%	23.4%	23.0%	27.1%	20.7%	23.0%	22.0%	24.9%
5-14 years	36.0%	35.2%	37.0%	35.4%	31.7%	33.8%	33.1%	34.1%
15-24 years	27.4%	25.7%	23.7%	22.0%	23.2%	22.2%	24.5%	22.8%
25 yrs or more	15.4%	15.7%	16.3%	15.5%	24.4%	21.0%	20.3%	18.3%

\*Selected middle and high school teachers in the following six districts: Seattle, Tacoma, Spokane, Highline, Yakima, Pasco.

Additional high school teachers in the following 15 districts: Lake Washington, Bellevue, Olympia, Edmonds, South Kitsap, Richland, Naches Valley, Evergreen (Clark), Bellingham, Oak Harbor, Ephrata, Walla Walla, Aberdeen, Oroville, Winlock.

\*\*Duty root 31, 32 or 33 with FTE designation greater than 0 in 1998 and 2000. Teacher age, ethnicity and experience statistics based on headcount.

Overall, retention statistics for teachers in Washington state reveal that the largest percentage of teachers (60 percent in 2000) remain in the same school after five years (see Table 3). Statewide, close to 20 percent of the teachers exited the Washington education system during the two time periods. Relatively few teachers move from one district to another (7 to 8 percent), though there is somewhat more movement to other schools or positions within districts (13 percent statewide).

The retention and mobility patterns among middle school teachers in the selected districts reveal that 54 percent stay in the same school after five years, approximately 17 percent move to another school within the district, 6 to 8 percent move to another school district in Washington state and between 21 and 23 percent leave the Washington education system either temporarily or permanently. The percentage of stayers for the selected middle school teachers is slightly lower than the statewide profile and the percentage of movers within the district is higher than for teachers statewide.

For high school teachers in the sample districts, the percentage of stayers closely mirrors the statewide profile. A higher percentage of the high school teachers in the selected districts exited the system during both time periods, but it is important to keep in mind that a greater proportion of these teachers were over the age of 50 and had more than 25 years of experience.

**Table 3: Trends in Retention and Mobility of Washington Teachers**  
**All Teachers Statewide as Compared with Middle and High School Teachers in Selected Districts\* and Comparative Districts**  
**(Two-Point in Time Analyses: 1998-99 to 2002-03, and 2000-01 to 2004-05)**

	All Teachers Statewide		Middle School Teachers in Selected Districts (6 districts, 36 schools)		High School Teachers in Selected Districts (6 districts, 32/33 schools)		Additional High School Teachers (15 districts, 32/37 schools)	
	1998-02	2000-04	1998-02	2000-04	1998-02	2000-04	1998-02	2000-04
Student Enrollment	999,616	1,004,843	27,644	28,136	38,691	41,830	37,786	43,048
Number Teachers (Headcount)	51,907	53,216	1,458	1,503	1,944	2,012	1,956	2,134
FTE Teachers**	49,489	50,735	1,434	1,481	1,883	1,940	1,861	2,018
<i>Retention and Mobility (after 5 yrs)</i>								
Stayers (in same school)	57.8%	60.0%	54.3%	53.5%	58.0%	59.9%	55.4%	60.4%
Movers (in district)	13.6%	13.2%	16.4%	17.4%	10.0%	9.3%	9.8%	8.6%
Movers (out of district)	8.4%	7.3%	8.1%	6.3%	6.8%	6.4%	8.1%	8.1%
Exiters (not in WA ed system)	20.2%	19.4%	21.2%	22.8%	25.2%	24.4%	26.7%	22.9%

\*Selected middle and high school teachers in the following six districts: Seattle, Tacoma, Spokane, Highline, Yakima, Pasco.

Additional high school teachers in the following 15 districts: Lake Washington, Bellevue, Olympia, Edmonds, South Kitsap, Richland, Naches Valley, Evergreen (Clark), Bellingham, Oak Harbor, Ephrata, Walla Walla, Aberdeen, Oroville, Winlock.

\*\*Duty root 31, 32 or 33 with FTE designation greater than 0 in 1998 and 2000.

## Retention and Mobility Across and Within Districts

Next we turn to our analysis of the middle and high school teachers in the selected districts. By analyzing district- and school-level data we find that districts differ in the extent to which their teachers stay at the same school after five years, move or exit the system. Table 4 provides the retention and mobility trend data for middle and high schools in the six selected districts, aggregated by district. The two-point in time analyses show that the percentage of middle school teachers who remain in the same school varies by district from 36 to 71 percent from 1998 to 2002, and from 44 to 63 percent from 2000 to 2004. The percentage of high school teachers who stay in the same school after five years varies from 49 to 71 percent in the first time period and from 54 to 66 percent in the second.

Middle school teachers in Tacoma and Pasco move within the district at considerably higher rates than their counterparts in other districts (22 to 34 percent compared with an average 17 percent for all the selected districts). Both middle and high school teachers in Highline move to other districts at considerably higher rates (17 to 21 percent compared with an average of 6 percent for all the selected districts), though the statistics show slight improvement over the two time periods.

Generally speaking, when examining data from the two different time periods (1998-2002 and 2000-2004), few differences emerge at the aggregated district level. One exception is Yakima at the high school level, where the percent of exiters increased in the 2000-2004 period (from 23 to 32 percent). Another exception is Spokane at both middle and high school levels, where the percent of stayers dropped from 71 to 62 and 71 to 66 percent, respectively.

Table 4 : Retention and Mobility Trend Data for Middle and High Schools in Select Districts, Aggregated by District  
(Two-Point in Time Analyses: 1998-99 to 2002-03, and 2000-01 to 2004-05)

District	1998-2002				2000-2004			
	Stayers	Movers In	Movers Out	Exiters	Stayers	Movers In	Movers Out	Exiters
<b>Seattle</b>								
Middle Schools	49%	18%	6%	27%	49%	15%	8%	28%
High Schools	49%	14%	6%	32%	54%	12%	7%	27%
<b>Tacoma</b>								
Middle Schools	53%	22%	6%	19%	53%	22%	5%	20%
High Schools	61%	12%	4%	22%	64%	10%	4%	21%
<b>Spokane</b>								
Middle Schools	71%	7%	5%	17%	62%	11%	4%	22%
High Schools	71%	4%	4%	21%	66%	6%	5%	23%
<b>Highline</b>								
Middle Schools	36%	13%	21%	29%	44%	12%	17%	28%
High Schools	54%	6%	18%	22%	57%	7%	15%	20%
<b>Yakima</b>								
Middle Schools	62%	15%	9%	14%	63%	14%	6%	16%
High Schools	65%	7%	5%	23%	58%	7%	4%	32%
<b>Pasco</b>								
Middle Schools	48%	26%	11%	16%	47%	34%	5%	14%
High Schools	65%	13%	9%	13%	66%	11%	6%	17%

Note: In some cases, percentages will sum to more than 100% due to rounding.

## A Closer Look at High School Teachers

Washington high schools vary considerably in enrollment size (over a third have fewer than 400 students, and nearly a quarter have more than 1,500), location in the state (one-third in Eastern Washington), grade configuration (75 percent have a 9-12 arrangement), student characteristics (school poverty rates range from 1 to 94 percent), and student performance (schools range from 20 to 100 percent meeting standard on the 10th grade reading WASL). However, Washington's high school teachers do not vary much with respect to age, experience or race/ethnicity compared to the state's overall teacher workforce. Additionally, the proportion of high school teachers considered beginning (less than one year of experience) or novice (less than five years experience) is similar to all beginning and novice teachers statewide (Elfers, Plecki & McGowan, 2007).

Although the overall rate of high school teacher retention closely mirrors the state profile, some differences do emerge. Statewide, a smaller proportion of the high school teachers move within their district compared to all Washington teachers, and the percentage of high school teachers who move out of the district is slightly higher. The lower rate of movers within the district and higher rate out of district is attributable in part to the fact that many of Washington's small school districts have only one high school, thereby limiting opportunities for teachers to change to another school within the district, if they wish to remain teaching at the high school level.

This is important to keep in mind as the selected districts are not a representative sample of the state. In this regard it is helpful to compare the teacher data from selected districts with a broader sample of districts from across the state. In Table 5, high school data for each of the selected districts is grouped by district enrollment size in the upper portion. The lower part of the table provides additional comparative data for teachers in high schools in fifteen other districts, of varying sizes and with different demographic characteristics.<sup>3</sup>

As might be expected with a larger sample, there is greater variation in the percentage of teachers who stay, move or leave. Six of the districts in the larger sample retain 70 percent or more of their high school teachers after five years, while two retain 50 percent or fewer. The movement of teachers out of district is more pronounced for several smaller districts (Naches Valley and Winlock), but also for Highline.

A more detailed look at the data for individual high schools in the selected districts and additional districts can be found in Appendices A and B.

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<sup>3</sup> These fifteen districts are included because data about school-level teacher retention and mobility was available due to prior work commissioned by CSTP. These districts capture some of the variation in student, schools, and regional characteristics, but they are not intended as representative of the State of Washington.

Table 5: Trend Data for High School Teachers in Select Districts and Additional Districts  
Aggregated by District

	2000-2004				
	Number Schools	Stayers	Movers In	Movers Out	Exiters
<b>State High School Teacher Ave</b>	329	61%	9%	9%	22%
<b>Seattle Public Schools</b>					
High Schools	14	54%	12%	7%	27%
<b>Tacoma School District</b>					
High Schools	5	64%	10%	4%	21%
<b>Spokane School District</b>					
High Schools	6	66%	6%	5%	23%
<b>Highline School District</b>					
High Schools	4	57%	7%	15%	20%
<b>Yakima School District</b>					
High Schools	2	58%	7%	4%	32%
<b>Pasco School District</b>					
High Schools	2	66%	11%	6%	17%

**Additional Districts with Comparative High School Data**

<b>Evergreen (Clark)</b>					
High Schools	3	65%	9%	8%	18%
<b>Lake Washington</b>					
High Schools	6	54%	13%	12%	21%
<b>Edmonds</b>					
High Schools	5	57%	8%	9%	26%
<b>Bellevue</b>					
High Schools	6	44%	14%	11%	31%
<b>South Kitsap</b>					
High Schools	1	62%	10%	3%	26%
<b>Bellingham</b>					
High Schools	4	66%	10%	5%	19%
<b>Richland</b>					
High Schools	2	72%	11%	5%	12%
<b>Olympia</b>					
High Schools	2	64%	10%	4%	22%
<b>Oak Harbor</b>					
High Schools	1	54%	7%	8%	31%
<b>Walla Walla</b>					
High Schools	1	72%	6%	4%	18%
<b>Aberdeen</b>					
High Schools	2	70%	3%	12%	15%
<b>Ephrata</b>					
High Schools	1	50%	8%	16%	26%
<b>Naches Valley</b>					
High Schools	1	75%	0%	5%	20%
<b>Winlock</b>					
High Schools	1	74%	2%	15%	10%
<b>Oroville</b>					
High Schools	1	71%	6%	0%	24%

Note: In some cases, percentages will sum to more than 100% due to rounding.

## Comparing Retention Rates Among Schools Within the District

While the mean percentage of stayers at middle and high schools within a district enables us to make some general statements about individual districts (for example, in some districts, middle and high school retention rates are consistently higher than other districts), this metric also masks some important variation that takes place at the level of the individual school. When one compares schools within a district on their rates of retaining teachers, the following pattern emerges: there are even greater differences *between schools within a district than between districts*. As Table 6 demonstrates, middle and high schools within a given district can range from those that have considerable turnover of teaching staff across five years to those that retain nearly all of their staff. For example, the lowest rate of stayers for middle schools is 24 percent while the highest is 65 percent, within the same district.

The trend data for the two time periods enables us to see that the overall retention rates of teachers within the schools in their districts increased for some districts, but for the most, the retention patterns are quite consistent.

This initial examination of within-district variation, coupled with the variation among districts in poverty rate, student demographics, and size, highlights the importance of understanding the specific context of an individual district when analyzing retention and mobility of teachers. We begin to look at variations in district contexts through an analysis of differences in teacher experience levels.

Table 6: Percent Teachers Retained at the Same School, By District:  
Trend Data for Middle and High Schools in Select Districts

District	1998-2002					2000-2004				
	# Schools	FTE Teachers	Lowest % Stayers	Highest % Stayers	% Mean Stayers	# Schools	FTE Teachers	Lowest % Stayers	Highest % Stayers	% Mean Stayers
<b>Seattle</b>										
Middle Schools	10	406	36%	61%	49%	10	418	24%	65%	49%
High Schools	14	583	26%	59%	49%	14	606	37%	88%	54%
<b>Tacoma</b>										
Middle Schools	10	401	38%	76%	53%	10	438	41%	69%	53%
High Schools	5	378	59%	63%	61%	5	387	61%	66%	64%
<b>Spokane</b>										
Middle Schools	6	246	60%	80%	71%	6	250	50%	80%	62%
High Schools	5	405	64%	84%	71%	6	433	58%	76%	66%
<b>Highline</b>										
Middle Schools	4	138	27%	51%	36%	4	126	31%	59%	44%
High Schools	4	250	35%	68%	54%	4	228	46%	64%	57%
<b>Yakima</b>										
Middle Schools	4	152	50%	72%	62%	4	156	53%	68%	63%
High Schools	2	154	61%	70%	65%	2	159	52%	63%	58%
<b>Pasco</b>										
Middle Schools	2	93	43%	54%	48%	2	92	44%	51%	47%
High Schools	2	114	64%	85%	65%	2	128	56%	67%	66%



## Retention and Teachers' Experience

Whether or not teachers stay in their school of origin or move elsewhere is partially related to their experience levels. In broad strokes, the experience and retention patterns for Washington's teachers mirror those found in other parts of the United States. In other words, new teachers leave at higher rates than experienced teachers, while teachers with a considerable amount of experience also are more likely to exit the system (often due to retirement). As one might expect, the majority of teachers who fall in between those extremes are less likely to leave their schools.

Understanding the overall experience distribution of a district's workforce does help to account for patterns in teacher retention, while signaling particular aspects of the retention story that might deserve greater attention. For example, a situation in which a district with relatively high proportions of novice teachers (0 to 4 years of experience) retains only a small number of them suggests a potential problem. In some of the districts in the selected sample, there is considerable movement among the novice teachers (see Table 7). For example, the percentage of novice middle and high school teachers in Seattle and Pasco represent a larger proportion of their workforce (between 27 and 35 percent) than novice teachers in Spokane and Yakima (approximately 20 percent). Overall, only 25 percent of middle school teachers in Highline have more than 15 years of experience, compared with 48 percent of middle school teachers in Spokane. Across nearly all of the experience levels, middle school teachers are retained at lower rates than their high school counterparts, with the exception of Yakima.

The districts also vary with regard to the percentage of novice teachers who are retained at the same school after five years. Only Spokane retains more than 60 percent of its novice middle and high school teachers after five years, though Tacoma retains 60 percent of its novice high school teachers. Most of the districts retain fewer than half. It is important to note that many of these novice teachers moved to other schools within the same district or to other districts, and as such are not lost to the overall state workforce. However, at the individual school level, this means a greater potential for disruption as these teachers typically must be replaced.

More specific information about teacher experience levels by individual school is located in Appendix B.

Table 7: Retention and Mobility by Teacher Experience  
Retention Data for Middle and High Schools in Select Districts

2000-2004													
District	Total # Teachers 2000/01	0-4 Exp			5-14 Exp			15-24 Exp			25+ Exp		
		# Teachers	% Teachers	% Stayers	# Teachers	% Teachers	% Stayers	# Teachers	% Teachers	% Stayers	# Teachers	% Teachers	% Stayers
<b>Seattle</b>													
Middle Schools	420	147	35%	40%	130	31%	59%	79	19%	63%	64	15%	39%
High Schools	627	171	27%	46%	221	35%	61%	118	19%	69%	117	19%	38%
<b>Tacoma</b>													
Middle Schools	446	113	25%	44%	164	37%	51%	104	23%	62%	65	15%	51%
High Schools	400	78	20%	60%	133	33%	65%	90	23%	74%	99	25%	57%
<b>Spokane</b>													
Middle Schools	255	47	18%	60%	85	33%	67%	79	31%	77%	44	17%	30%
High Schools	454	91	20%	71%	155	34%	72%	117	26%	78%	91	20%	35%
<b>Highline</b>													
Middle Schools	128	38	30%	42%	58	45%	47%	17	13%	53%	15	12%	20%
High Schools	234	52	22%	42%	75	32%	69%	55	24%	69%	52	22%	42%
<b>Yakima</b>													
Middle Schools	157	34	22%	47%	56	36%	75%	36	23%	72%	31	20%	52%
High Schools	167	33	20%	42%	47	28%	70%	42	25%	69%	45	27%	40%
<b>Pasco</b>													
Middle Schools	97	29	30%	41%	39	40%	51%	15	15%	67%	14	14%	21%
High Schools	130	38	29%	55%	49	38%	71%	24	18%	79%	19	15%	47%

Note: In some cases, percentages will sum to more than 100% due to rounding.

## Teacher Retention and School Characteristics

Teacher retention often is related to the composition of the school's student population – in particular to the poverty level and racial make-up of students at the school. In a study of 20 Washington school districts, we found that schools serving a greater number of students in poverty tend to retain fewer of their teachers after five years. Schools with a greater percentage of white students tend to retain a greater percentage of their teachers. Schools serving a larger proportion of African-American students retain fewer of their teachers across the same period. In a mutually reinforcing pattern, school poverty, retention and school performance are linked to one another. Poverty rates also are strongly associated with student performance (Plecki, et al., 2005).

To investigate these relationships in the schools in the selected districts, we merged data about teacher retention and mobility with available school-level data regarding student characteristics and student achievement. To be sure, a host of other factors that may impact student learning are not included in the analysis, but the factors we considered are likely to capture some essential aspects of the retention story. Only data collected systematically for all schools in the sample was included. With regard to student performance measures, we used the school-level reading and mathematics scores on the 2004 Washington Assessment of Student Learning (WASL).

To begin, all 69 middle and high schools in the selected districts were examined, irrespective of the district in which they were located. Among all schools, student achievement (as measured by WASL reading and math scores) is strongly associated with poverty, race and ethnicity (see Table 8 below).

Table 8: All Schools in Selected Districts - Poverty, Retention and Student Performance

Poverty Range	Number of Schools	Percent Retained	2004 WASL Reading	2004 WASL Math	Percent White Students
0-29%	12	61%	78%	56%	67%
30-49%	20	59%	68%	45%	60%
50-69%	22	51%	43%	28%	40%
70%+	15	54%	47%	26%	33%

Table 8 examines the characteristics of schools by poverty range. It displays the average percent retention rate, the average WASL reading and math score for 2004 and the average percent of white students enrolled for each of the schools in the specific poverty range. Student achievement scores vary by as much as 31 points from schools in the lowest range of poverty to those schools in the highest poverty range and teacher retention rates appear to decline somewhat. Additionally, the largest percentage of white students is found in schools with the lowest poverty ranges.

Another way to examine these issues is by displaying the simple correlation between rates of teacher retention (in the same school) with indicators of the schools' student population and performance (see Table 9). When examining all 69 middle and high schools in the selected districts, there is correlational evidence to suggest that some kind of relationship between teacher retention, student characteristics and student achievement exists. The strength of the relationship between teacher retention, poverty, percent of white students, and WASL reading and math scores is stronger at the middle school level. That is, middle schools with lower teacher retention rates seem to have high poverty rates, lower WASL scores, and a smaller percentage of white students.

Table 9: Correlations with Teacher Retention by School Level and Student Characteristics (based on 2 point in time analysis for 2000-2004)

	All Schools	Middle Schools	High Schools
Number of schools	69	36	33
Teachers retained by percent...			
Poverty	-0.30	-0.34	-0.09
White students	0.47	0.54	0.41
WASL reading	0.30	0.51	0.04
WASL math	0.33	0.56	0.22

But this first look at all the schools obscures as much as it reveals. This analysis does not take into account the unique characteristics of each district in terms of their variation in overall levels of poverty, the distribution of poverty across schools within a district, or the variance in the composition of the student population. Nor does such an analysis take account of the differing means for the same poverty level. For example, some districts have a very limited range from "low" to "high" poverty, while others demonstrate a much wider variation in both overall poverty level and the way in which poverty is distributed among the schools in the district. A closer look at individual districts and individual schools affords an opportunity examine the connections among student characteristics, teacher retention and student performance in more detail, without the potentially confounding effects of differing district conditions. In Table 10, the middle and high schools in each district are displayed with school and student characteristics.

Table 10: School and Student Characteristics and Teacher Retention  
Trend Data for Middle and High Schools in Select Districts

2000-2004								
District	Student Enrollment	% All Teachers Retained	% Novice Retained	% White Teachers	% White Students	% Poverty	WASL Reading	WASL Math
<b>Seattle</b>								
Aki Kurose MS	681	45%	25%	68%	7%	72%	46.6	26.8
Denny MS	745	47%	20%	84%	24%	69%	43.1	26.4
Eckstein MS	1247	62%	76%	89%	65%	16%	88.8	79.4
Hamilton Int MS	767	57%	50%	92%	36%	54%	55.8	41.5
Madison MS	877	45%	37%	86%	46%	45%	61.4	43.3
McClure MS	615	36%	24%	87%	49%	41%	62.1	43.6
Meany MS	464	24%	11%	66%	18%	66%	41.9	23.9
Mercer MS	804	51%	41%	87%	7%	71%	55.9	33.1
Washington MS	992	59%	56%	72%	39%	37%	74.3	65.7
Whitman MS	1064	65%	67%	88%	63%	27%	76.2	61.1
Ballard HS	1620	66%	52%	92%	63%	23%	77.6	53.1
Cleveland HS	770	45%	9%	76%	11%	63%	56.8	23.2
Franklin HS	1500	52%	61%	68%	13%	46%	64.1	31.3
Garfield HS	1625	49%	41%	69%	43%	25%	76.1	56.0
Ingraham HS	1183	54%	40%	78%	35%	45%	65.6	39.5
John Marshall Alt	165	59%	44%	67%	33%	65%	30.2	4.9
MiddleCollege HS	236	40%	33%	46%	32%	36%	30.4	0.0
Nathan Hale HS	1073	48%	43%	89%	62%	17%	83.9	59.8
Nova HS	281	55%	33%	100%	82%	15%	86.7	46.7
Rainier Beach HS	521	37%	17%	79%	8%	69%	52.4	12.7
Roosevelt HS	1623	64%	61%	85%	59%	22%	80.6	62.4
Sealth HS	926	48%	39%	86%	27%	58%	55.4	25.0
South Lake HS	136	88%	100%	63%	13%	71%	23.1	5.3
West Seattle HS	1182	59%	55%	86%	47%	34%	70.5	38.6
<b>Tacoma</b>								
Baker MS	718	55%	69%	91%	43%	59%	47.7	28.4
Gault MS	414	49%	42%	68%	32%	87%	37.6	27.8
Gray MS	650	44%	40%	85%	47%	71%	41.5	16.2
Hunt MS	622	48%	22%	90%	46%	61%	54.0	34.5
Jason Lee MS	593	41%	38%	71%	42%	81%	55.0	30.3
Mason MS	834	68%	80%	86%	84%	28%	75.7	64.5
Mcllvaigh MS	474	52%	75%	86%	21%	85%	47.2	25.2
Meeker MS	747	56%	33%	89%	68%	16%	75.3	43.6
Stewart MS	591	43%	23%	63%	44%	71%	56.9	25.6
Truman MS	674	69%	50%	88%	72%	41%	72.0	46.7
Foss HS	1767	65%	65%	84%	45%	48%	64.1	36.0
Lincoln HS	1563	64%	69%	79%	38%	63%	46.4	18.8
Mt Tahoma HS	1818	61%	46%	89%	48%	52%	60.7	31.2
Stadium HS	1580	65%	47%	86%	68%	27%	73.0	50.8
Wilson HS	1610	66%	67%	81%	70%	30%	66.1	30.1

Table 10 Continued: School and Student Characteristics and Teacher Retention  
Trend Data for Middle and High Schools in Select Districts

2000-2004								
District	Student Enrollment	% All Teachers Retained	% Novice Teachers Retained	% White Teachers	% White Students	% Poverty	WASL Reading	WASL Math
<b>Spokane</b>								
Chase MS	873	57%	57%	94%	85%	41%	76.5	55.8
Garry MS	659	50%	29%	94%	81%	77%	61.1	39.4
Glover MS	822	67%	67%	90%	85%	64%	57.9	44.4
Sacajawea MS	946	67%	75%	95%	85%	33%	83.1	68.3
Salk MS	767	80%	100%	93%	91%	35%	71.8	58.1
Shaw MS	740	54%	44%	100%	81%	75%	54.1	40
Ferris HS	1818	66%	60%	93%	88%	24%	74.5	53.9
Havermale Alt	479	62%	40%	100%	76%	63%	39.3	9.0
Lewis & Clark HS	2021	76%	88%	93%	86%	30%	75.6	56.9
North Central HS	1583	58%	73%	92%	86%	46%	72.0	40.9
Rogers HS	1744	60%	76%	91%	83%	68%	63.7	33.2
Shadle Park HS	1726	72%	73%	94%	91%	32%	69.9	51.2
<b>Highline</b>								
Cascade MS	601	34%	43%	94%	29%	68%	51.4	29.1
Chinook MS	648	31%	38%	94%	31%	68%	44.5	29.2
Pacific MS	707	50%	40%	97%	51%	48%	72.7	44.2
Sylvester MS	709	59%	50%	91%	57%	45%	73.9	47.1
Evergreen HS	1219	51%	56%	84%	34%	55%	63.3	38.3
Highline HS	1519	64%	50%	97%	59%	35%	75.1	47.5
Mount Ranier HS	1345	64%	42%	95%	62%	29%	72.4	45.1
Tyee HS	1219	46%	26%	92%	37%	50%	56.5	21.5
<b>Yakima</b>								
Franklin MS	828	68%	75%	85%	37%	78%	52.7	39.7
Lewis & Clark MS	749	67%	45%	88%	39%	88%	45	21.4
Washington MS	746	66%	60%	86%	14%	91%	46.6	28.3
Wilson MS	780	53%	22%	94%	47%	64%	69.4	45.9
Davis HS	1688	52%	29%	85%	36%	67%	51.6	27.4
Eisenhower HS	1831	63%	50%	85%	52%	50%	65.8	33.3
<b>Pasco</b>								
Mclouglin MS	956	51%	31%	86%	55%	47%	61.8	48.7
Stevens MS	726	44%	54%	80%	11%	93%	40.9	22
New Horizons HS	185	56%	0%	100%	24%	85%	40.0	8.6
Pasco Senior HS	2774	67%	57%	88%	31%	66%	59.1	28.6

These results prompt us to suggest that the examination of teacher retention on a school-by-school basis is most informative when grounded in the individual context of the district (see Appendices A and B for individual data on all of the schools). Clearly the analyses presented here beg further questions about other district conditions that may be important to consider when examining differences in teacher retention at the school level. For example, what influence might school climate, school leadership, parental involvement or teacher assignment and transfer policies have on teacher retention in a specific district or school? While providing more detailed analyses of individual districts is outside the scope of this research, further research could delve into these questions.

The analyses presented here could also be more informative for policymakers and practitioners if data about teachers' certification, endorsements, and assignments were available. It would be helpful to know how middle and high school teacher retention rates vary by subject areas. For example, does a disproportionate share of math and science teachers leave their schools, districts or the Washington workforce? This type of data that provides reliable and consistent information about additional characteristics of the Washington teacher workforce would be very useful in designing recruitment and retention initiatives, and is fundamental to exploring important equity concerns regarding the extent to which all children in the state have access to well-qualified teachers.

## **Summary Comments**

This report examines teacher retention and mobility in Washington's teaching force at state, district and school levels, with particular emphasis on middle and high school teachers in six districts. We examine teacher mobility comparing patterns among districts and within districts. We also look at retention and mobility in relation to student demographics, measures of student learning in reading and mathematics and other school and district characteristics. We focus on middle and high schools in six districts: Seattle, Tacoma, Spokane, Highline, Yakima and Pasco.

In this selected, non-representative sample of Washington middle and high schools, we find that these middle and high school teachers are similar to the characteristics of all Washington teachers statewide in some respects, and differ somewhat in others. High school teachers in the sample were older and more experienced than other teachers, and both middle and high school teachers in this sample are more racially and ethnically diverse than teachers statewide. However, the percent of the sample of middle and high school teachers who have less than five years of teaching experience closely resemble all teachers statewide. Additionally, middle school teacher retention rates in this sample are lower than the statewide profile.

When examining teacher retention and mobility rates aggregated at the district level, we find that middle school teachers in Tacoma and Pasco move within the district at considerably higher rates than other teachers in the sample districts. Also, both middle and high school teachers in Highline move to other districts at considerably higher rates. Districts also vary in the percent of novice teachers that comprise the district workforce. In Seattle and Pasco, novice teachers represent a larger proportion of their workforce than in Spokane and Yakima. Across nearly all experience levels, middle school teachers are retained at lower rates than their high school counterparts, with the exception of Yakima. We also find that there are even greater differences in teacher retention rates between schools within a district than between districts.

We conducted a number of analyses to examine the relation between teacher retention, student characteristics and student performance in the selected districts. We found that student performance (as measured by WASL reading and math scores) is strongly associated with poverty, race and ethnicity of students, and the strength of this relationship is more pronounced at the middle school level. That is, middle schools with lower teacher retention rates seem to have higher poverty rates, lower WASL scores, and a smaller percentage of white students.

These results suggest that the examination of teacher retention on a school-by-school basis is most informative when grounded in the individual context of the district. The findings underscore the usefulness of developing appropriate, feasible and useful analytic tools and methods for conducting accurate retention and mobility analyses. Data-based analyses of teacher retention and mobility can help sharpen the questions that state and district policymakers need as they consider ways to improve the equity of access to a high quality education for all of Washington's school children.

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