

Professional Growth Plans for Clock Hours:  
Effects of Washington State Education Policy On Student Outcomes

Anne Cameron

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## **Abstract**

Since 1987 Washington State has mandated a set number of hours of continuing education from approved providers for teachers to maintain certification. In 2005, in an effort to link teacher professional development more closely to personalized student learning and stronger student achievement, Washington's Office of Superintendent of Public Instruction began allowing districts to offer teachers the option of earning continuing education clock hours through individualized professional growth plans. Professional growth plans are thought to have characteristics indicative of high quality professional development that can positively impact student gains, and were developed to support Washington State goals for transitioning teachers from continuing education that is measured in "seat-time" to a performance-based system driven by teacher and student needs. This study examines the effects of this policy on student outcomes at the school level. Because low participation rates among teachers in Washington preclude a statewide study of the effects of the Professional Growth Plan for Clock Hours policy, this study involves Kennewick School District, the only district currently using professional growth plans for clock hours with any regularity. The study compares schools in the top and bottom quartiles of teacher professional growth plan participation rates, using school level Kennewick School District student achievement data, and finds mixed evidence of positive outcomes at the school level from the 2005 Washington State policy adoption allowing professional growth plans for accruing clock hours.

## **Purpose**

Since 1987 Washington State has mandated a set number of hours of continuing education for teachers to maintain certification. In 2005, in an effort to link teacher professional development more closely to personalized student learning and stronger student achievement, Washington's Office of Superintendent of Public Instruction (OSPI) began allowing districts to offer teachers the option of earning continuing education clock hours through Professional Growth Plans. This capstone project investigates whether there is evidence of positive student outcomes at the school level from the 2005 Washington State policy change allowing the use of Professional Growth Plans for accruing professional development clock hours. For the purposes of this study, the terms professional development, staff development, continuing education, and in-service training are considered synonymous. In addition, because the term, professional growth plan, is used in different contexts within the Washington state education system, it is capitalized here when referring specifically to Professional Growth Plans for Clock Hours, and not capitalized when referred to in a generic sense.

## **Background and Significance**

### *Concern for Washington students*

Washington State has been involved in educational reform efforts for nearly two decades, yet widening achievement gaps and overall inadequate student outcomes remain significant concerns (OSPI, 2006, OSPI, 2009). Though the knowledge and skills students learn in school are needed to prepare them to participate as adults in the economy and in democracy, by many measures Washington students are not demonstrating the level of educational attainment that society wishes for them. In 2009, 58.3% of 10<sup>th</sup> graders failed to pass the math portion of the High School Proficiency Exam (HSPE), 35.4% of 6<sup>th</sup> graders failed the reading section of the

Measurement of Student Progress (MSP), and 66% of 5<sup>th</sup> graders failed the MSP science section. Only 73.5% of Washington high school seniors graduated on time in 2009, or in other words, more than a quarter of the students who started 9<sup>th</sup> grade together didn't finish with their cohort (OSPI, 2010).

There are also persistent disparities between demographic groups within Washington. Between 1998 and 2007 there was no progress in closing the gap between low-income and high-income student scores on the NAEP Grade 4 Reading exam, and the gap widened for minority students compared with others (The Education Trust, 2009). Eighth grade NAEP math scores were similar, indicating the challenge for our education system in preparing all children for higher education and future contributions to society as citizens and leaders.

Lifetime opportunity costs to students, associated with lower economic skills, can be significant, as can aggregated costs for Washington State resulting from disparities in student outcomes, both from increased public assistance and lost economic gains. In addition, a consequence of student failure to meet educational standards is that local industry often has to look outside the state to find new employees with competitive skills and education.

### *Improving teacher quality*

Increasingly, the focus of national, state, and district level policy of the last few decades has centered on finding ways to turn achievement gap trends around, and successfully educate students of every background. Because student achievement is thought to correlate with high quality teaching, strengthening teacher effectiveness is a potential influence for improvement in student outcomes (Desimone, Porter, Garet, Yoon, & Birman, 2002). While a whole host of factors contribute to the varying degrees of success a school experiences, it can be safely said that no school will be successful without its main function working well: teaching students. As a

result, a key element of the debate over student achievement levels concerns educational policy governing aspects of teacher quality. To raise standards for students requires raising standards for teachers.

Extensive research does confirm that supporting increased teacher effectiveness is an appropriate policy approach for ensuring that all students learn essential educational elements needed for success in K-12 and post-secondary education (Goldhaber, 2002). The most common educational strategy traditionally used for strengthening teacher quality is to provide those already in the profession with staff development for keeping up with advances in the field, strengthening content knowledge, and refining the skills an educator already possesses. With the emphasis in Washington State on positive educational outcomes for all students, educators and policymakers have focused on teacher in-service training as the primary tool for improving teacher quality (OSPI, 2006; PESB, 2008a).

#### *High quality professional development*

As in other states, continuing education for teachers in Washington is mandated for maintaining teaching credentials (Loeb, Miller, & Strunk, 2009). The state requires certified teachers to complete 150 clock hours of continuing education every five years (OSPI, 2009). Avenues for earning continuing education credits are determined by the state and have typically been workshops and classes offered through school districts, Educational Service Districts (ESDs), and university schools of education. Traditionally, districts have provided the majority of in-service opportunities for staff (Knapp, Elfers, Plecki, Loeb, & Azhir, 2005). A study of thirty districts in California indicated that 80% of professional development funds and decisions come from the district level (Little, 1989). Teachers can choose their own professional development options when paying their own costs, but in general each school district institutes

its own professional development practices according to its own perceived needs, resources, and areas of interest.

While continuing education for teachers should support the needs of students and instructors, and address challenges in the classroom, typically choices are made in a more haphazard fashion. Districts, often supported only by vague policy as to the function of professional development, can struggle to choose and implement appropriate continuing education opportunities with meaningful impact on teacher practices or student achievement. While there are bright spots, in general staff development offerings are not evidence-based and educators often consider the time spent in continuing education to be arbitrarily decided and unconnected to their classroom challenges, confirming that professional development frequently lacks the necessary characteristics to change teacher practices in the classroom (Grossman & Hirsch, 2009; Hill, 2009). In addition, current studies corroborate what most teachers express themselves: adequate time for reflection, dialogue and implementation is rarely made available after a professional development opportunity (Darling-Hammond, Chung Wei, Andree, Richardson, & Orphanos, 2009; Hill, 2009). In a 2005 study reporting on educational reform in Washington State there was some good news as 83% of teachers stated that their continuing education was “somewhat” or “very” useful and nearly two-thirds reported working collaboratively with colleagues. However, only 55% felt the in-service training received at school met their teaching needs, and only 59% indicated that their staff development met student needs (Knapp, Elfers, Plecki, Loeb, & Azhir, 2005).

Given the increasing recognition that professional development has the potential to improve teaching quality and student achievement, educational reform advocates often call for the restructuring of state professional development policies, with the intent to improve the

quality of in-service training at the district level (Hill, 2009). Professional development that is not high quality wastes limited education resources and doesn't fulfill its purpose to help teachers build capacity for understanding and addressing student learning needs. States are encouraged to develop research-based standards for informing policy decisions, improved data collection systems to understand links between staff development and student achievement, and appropriate incentives for teachers to participate in high quality professional development to ensure that all teachers acquire the support essential to meet the diverse needs of all students (Grossman & Hirsch, 2009).

#### *Professional development policy in Washington State*

In 2003, after extensive research, nine characteristics were identified by OSPI as indicators of high performing schools. In 2007, a review of the original characteristics and their definitions were reaffirmed and enhanced with concepts from recent literature and additional implementation ideas. “Focused Professional Development” was one of the characteristics identified, which is defined as ongoing staff development grounded in student and teacher needs, and aligned with school and district goals (Shannon & Bylsma, 2007). Despite this stated emphasis on high quality professional development, Washington State professional development policy does not require evidence that teachers are participating in continuing education that has the characteristics found to improve teacher effectiveness or student achievement, nor does the state incentivize participation in high quality professional development. The Office of Superintendent of Public Instruction fails to collect data concerning teacher in-service except for tabulating the number of clock hours accrued; information on content, frequency, types and quality of professional development opportunities is not gathered (OSPI, 2006). The evaluation of past staff development choices and their link to student achievement is difficult without such a

data collection system, leaving teachers, schools, and districts with little guidance concerning what constitutes high quality professional development, which opportunities are most useful for any particular teacher, or which types would most benefit specific students under the teacher's care.

This lack of attention to educator professional development policies and data is incongruent with stated OSPI goals for improving student outcomes. In the 2006 publication, *Washington State Professional Development IN ACTION: Linking Professional Development to Personalizing Student Learning*, OSPI clearly outlines that educators need to “directly and intentionally address” the individualized learning needs of students. “Personalizing student learning statewide is fundamental to achieving our state reform goals of providing a quality education for each student and closing the achievement gap (OSPI, 2006).”

Attempts by OSPI to encourage personalized student learning sprang from changing educational views that value “evidence-based outcomes rather than time-based events (inputs).” Initially this concept was applied to student learning only, but eventually it came to define the state's intent for educator learning as well (OSPI, 2009). The state acknowledged that providing students with instruction based on evidence of student outcomes would require a “shift in teacher practice.” As students are challenged to learn more complex analytical skills, teachers will need to continually be learning to build the capacity necessary to meet student needs.

Unfortunately, in the decades-long transition from continuing education that is measured in “seat-time” to a performance-based system, the state has shown little progress. State professional development policy is meant to direct professional development practices at the state, district and teacher level to improve teacher quality and student achievement, yet the current policy emphasis of seat-time for clock hours remains at odds with stated policy



outcomes, and consequently misdirects educator resources. The sole requirement for a certain number of clock hours provides little support or incentive for teachers to do anything but the bare minimum. In a report of two case studies of high achieving Washington elementary schools, the authors note that for reform efforts to be successful, initiatives must incorporate both pressure and support:

Pressure sends the message that the state is serious about the importance of the reform initiative; it helps to ensure that schools place the reform at the top of their priority lists. Support addresses issues of capacity, providing resources such as personnel, time, materials, and learning opportunities that schools may need to enact the reform vision. Pressure without support may lead to resistance and alienation. Support without pressure run the risks of lack of focus and wasted resources (Fullan, 1991, as cited in Borko, Wolf, Simone, Uchiyama, 2003).

If current Washington State regulations governing professional development lack specific support for individualized student learning and do not coincide with documented best practices they should be considered insufficient to bring about the stated goal of improved student achievement through greater teacher quality.

#### *Professional growth plans for clock hours*

One state professional development policy with the potential to impact teacher quality and student achievement is neither well known nor widely used. In 2005, in an effort to link teacher professional development more closely to personalized student learning and stronger student achievement, the Office of Superintendent of Public Instruction began allowing districts to offer teachers the option to develop and complete a Professional Growth Plan (PGP) for credits toward a portion of the mandatory continuing education requirement. Up to 60 clock

hours of continuing education credits can be earned every 2 years from teacher initiated Profession Growth Plans.

The PGP is a departure from the traditional avenue of workshop seat-time in exchange for clock hour credits. In theory, it offers teachers a means of participating in staff development with more of the characteristics that are considered indicative of high quality professional development. A PGP is job-embedded and data-driven, using information that teachers have collected about their own practice and student outcomes. It is meant to be focused on the specific content areas that a teacher instructs, and to be aligned with school, district, or state goals (OSPI, 2009). The design of a PGP can be tailored to a teacher's own learning style, promoting change in teacher practices as well as learning, and it can facilitate more equitable access to professional development as educators are not restricted by geography or individual district budgetary constraints.

An initial pilot program using PGPs for clock hours was begun in 2001 in the Vancouver School District and due to the encouraging response from participants, the state broadened the pilot in 2003 to include five diverse districts from around the state. In like fashion, the response was positive, so in 2005 the Professional Growth Plans for Clock Hours program was offered to teachers statewide as a professional development option (OSPI, 2009). Though participants of the pilot program reported positive results, in the intervening years few of the State's 295 districts have chosen to make the PGP option available to their teachers. And within those districts that do make it available, few teachers choose to participate (PESB, 2008b). This is unfortunate given that professional growth plans are the state's only method developed to encourage performance-based continuing education.

In 2009, OSPI released the publication *Professional Growth Planning for Clock Hours* as

a guideline for educators, covering all aspects needed for districts to gain the approval necessary to offer PGPs for a clock hours award and for teachers to successfully develop and complete a PGP for clock hours. However, many districts and teachers not only remain unaware of the publication, they are unaware of the program in its entirety. In fact there are districts in the state that already require their teachers to use a form of professional growth plans, yet because the state program isn't set up in their districts those teachers don't have the option to be awarded clock hours for their efforts and are spending additional time and funds to still meet the continuing education requirements for certification. This lack of awareness among educators could result from the fact that oversight for the PGP program has changed hands since its inception and that a process for promoting the program was never developed. Though the PGP policy was first piloted and implemented at OSPI, current oversight shifted in 2009 to the Professional Educators Standards Board, and PESB, like OSPI before, lacks a systematic method for promoting the program to educators.

### *Significance of study*

An emerging body of research suggests that PGPs represent the type of in-service training that can improve teaching quality, and by extension student achievement, as they embody the characteristics found to be indicative of high quality professional development (Grossman & Hirsch, 2009; Darling-Hammond et. al., 2009; Hill, 2009). If this is the case, one would expect state professional development policy changes that reflect best practices, such as the introduction of PGPs for clock hours, to impact student improvement as reflected in commonly measured indicators such as graduation rates and standardized test scores. However, this premise has yet to be investigated with respect to the PGP for Clock Hours 2005 policy adoption. Considering the extent of resources devoted statewide to staff development, and the

need to use state education funds and teacher resources efficiently, it is important to understand whether this policy has its intended effect when applied, and if so, how the state can maximize the policy's potential.

This study contributes to the growing body of knowledge about the link between professional development and student achievement, and to the state's understanding of such, as it relates to the 2005 professional development policy adoption. The initial pilots collected observational responses from participants and the only subsequent follow-up by the state has been a phone survey conducted in November 2008 which asked a small percentage of districts to report whether or not they were participating, and to comment on the program (PESB, 2008b). While this information is valuable, it should be complemented with a closer look at the possible impact on student achievement of this policy adoption.

In addition, the use of Professional Growth Plans for Clock Hours has not been the significant policy lever that it could be and this study can contribute to the state's understanding of how to support the increased use of PGPs so that districts and teachers are more likely to choose this professional development option for earning clock hour credits. The ultimate gain will be increased student growth for the children of Washington, particularly for low-income and minority students who stand to benefit most from improvements in teacher effectiveness (Sanders and Rivers, 1996; DeAngelis, White, & Presley, 2010).

## **Review of Literature**

### *Linking teacher quality to student achievement*

Though the causes are not always understood, it has come to be generally acknowledged, based on extensive research, that effective teaching is the key component contributing to student outcomes at the school level, accounting for approximately 21% of the variation in student gains

(Goldhaber, 2002). Having a highly skilled teacher in the classroom is the strongest predictor of student outcomes, from all factors within the school system. Teacher effectiveness makes a greater contribution to student outcomes than other widely recognized influences on student learning such as class size, school size, and after-school programs (Goldhaber, 2002; McKinsey, 2004; Gates Foundation, 2010). Goldhaber (2002) does mention the greater influence of fellow students on a child's learning outcomes; however, student body composition is rarely in a school's control.

Early research in this area demonstrates that differences in teaching quality have substantial, cumulative, and long-lasting effects on students (Sanders & Rivers, 1996). The difference for two similar students, one with a high-performing teacher the other with a low-performing teacher, can be equivalent to an entire grade level (Goldhaber & Anthony, 2004). Elementary students are particularly susceptible to poor outcomes from having low-performing teachers. Students in younger grades who have low-performing teachers several years in a row aren't likely to make a recovery in later grades. Unfortunately, schools with higher numbers of low-income and minority students are the very ones that have difficulty attracting high quality teachers (Sanders & Rivers, 1996).

If high quality teaching has the greatest effect on student outcomes, then improving teaching is the most valuable approach available within the Washington State school system for increasing student growth. Federal No Child Left Behind (NCLB) guidelines require states to collect data on the percentage of students being taught by a highly qualified teacher, including separate categories for low-income and minority students, given that they disproportionately experience core classes taught by out-of-field, inexperienced, or emergency certified teachers (The Educational Trust, 2010). However, aside from the NCLB policy definition of teacher

effectiveness there has not been widespread consensus on what exactly constitutes a high quality teacher and what methods are appropriate for measuring the effectiveness of a teacher. Standard measures of educator competence, such as degrees awarded, or state licensing scores, have not been reliable predictors of student achievement (Goe & Stickler, 2008; Goldhaber & Anthony, 2007). Goldhaber (2002) estimates that only 3% of teacher contributions come from these easily quantifiable measures; this would mean that less than 1% of student outcomes is associated with traditional measures of teacher competence.

With recent standards-based accountability reforms, states and districts are under pressure to develop teacher evaluation methods, with the incorporation of student growth components, but as yet there are not agreed upon methods (Gates Foundation, 2010). A large, multi-year study with several school systems around the country is currently being conducted by the Gates Foundation to determine appropriate measures of teacher effectiveness. Information from such measures can then be used to help those responsible for student learning focus in on specific areas of improvement for teachers.

In a synthesis of research conducted between 2000 and 2007 on teacher quality, Goe & Stickler (2008) sorted factors related to teacher quality into four categories:

- Qualification, such as certification and subject matter knowledge
- Characteristics, including attitudes and attributes
- Practices in the classroom
- Effectiveness: the increase to student achievement scores, above predicted values, that a student gains from being in a particular teacher's class

The synthesis revealed that research is fragmented and insufficient to reconcile contradicting conclusions and provide stronger evidence of measures of teacher quality. However, there were

a few consistent predictors, including level of experience, and subject matter knowledge in math. The authors reported that for the first four or five years before leveling off, teacher contributions to student outcomes tend to increase with each year, and a teacher's knowledge of mathematics was a strong predictor of student achievement in math, particularly at the secondary level.

Goldhaber (2002) suggests many of the same findings. Student achievement is more strongly associated with educators who are teaching in their field, and subject matter knowledge accounted for by advanced degrees, is a predictor in math and science, though the same is not observed in other fields. Both researchers found mixed evidence on the issue of state certification with some studies suggesting that it is an indicator of teacher quality and others that it is not. Again, the strongest associations are in the subject field of mathematics. It is suggested that the lack of evidence in other subjects merely reflects the lack of funding for studies in those subjects in contrast to the more abundant funding for studies in the fields of math and science.

#### *Linking professional development to teacher quality and student achievement*

An estimated \$9 billion is spent on educational professional development each year across the United States (Grossman & Hirsch, 2009). The rationale for such substantial expenditures on staff development is the widely held belief that such activities support teachers' efforts to improve their craft, and by extension improve student outcomes. Yet, while continuing research supports the idea that professional development impacts teacher practices, the further link between teacher professional development and student achievement is still being documented (Wallace, 2009; Grossman & Hirsch, 2009).

The practice of educator professional development, though long-standing and widespread as an educational policy device for improving teacher effectiveness, has not been supported by substantial evidence about what types of professional development most likely facilitate high

quality teaching that translates into student gains. In addition, it is still not well understood how long it might take for improvements in teaching quality to show up in student achievement or how long the effect might last. In one study, Harris & Sass (2007) found three years of middle school math improvements following in-service training focused on math content (as cited in Loeb, Miller, & Strunk, 2009). Unfortunately, few studies in this area have been rigorous enough to be conclusive (Grossman & Hirsch, 2009). Wallace (2009) notes the complexity of developing a reliable model linking professional development with teacher practice, then to student achievement. Her study tested the effects of professional development on teacher math and reading practices, and then extended those effects to ensuing student gains. The study used six databases, including National Assessment of Educational Progress exams in Mathematics and Reading, with  $n = 1,550$  to  $6,408$  students nested within  $n = 168$  to  $1,029$  teachers. Controlling for teacher characteristics and preparation programs, the results showed moderate effects of professional development on teacher practices, small to moderate effects on average student mathematics achievement, and inconsistent results for student reading gains.

Though more research needs to be done in this area, what is consistent in findings, is that the current approach to professional development does not generally have the basic elements needed to impact student outcomes positively, suggesting that actual state and district policies and practices do not contribute to student achievement as intended (Hill, 2009; Odden, 2007). In several large surveys, less than half of teachers considered the content and quantity of their professional development opportunities to be adequate (Lieberman & Pointer Mace, 2008). While some studies note that changes in teacher practice and knowledge from continuing education are not maintained after teachers return to the classroom, other professional development studies show several emerging elements identified as making a positive



contribution to student growth (Goldschmidt & Phelps, 2009; Darling-Hammond et. al., 2009).

These elements can be considered the current indicators of what constitutes high quality professional development, and can help educators and policymakers evaluate continuing education practices.

- Student learning needs should be the driving force behind teacher professional development needs (OSPI, 2006; Hill, 2009). When teachers maintain documentation of student performance it can be used to determine areas of focus for future professional development. Teachers can use their own professional growth plans or complete the needs assessment tool that the Washington State Office of Superintendent of Public Instruction has created. However, it is unclear how many teachers benefit from this self-assessment as the state does not require the use of it. Whether it is used and by whom is left to the discretion of districts (OSPI, 2006).
- Professional development should be focused on increasing teacher's content knowledge (Grossman & Hirsch, 2009; Odden, 2007). Given that the most significant results to date in teaching effectiveness studies find that a teacher's content knowledge can have a positive impact on student gains, professional development opportunities should be relevant to an instructor's subject area or meet other individualized teacher needs in pedagogy, classroom management, or technology use (Goldhaber & Anthony, 2007; Jakes, 2006).
- Professional development opportunities should be sufficient in duration and intensity for significant, positive impact (Grossman & Hirsch, 2009). In *Professional Learning in the Learning Profession*, a report jointly produced by the National Staff Development Council and Stanford's School Redesign Network, it states that staff development with

significant effect on student gains lasts for a minimum of 14 hours. The same report suggests that high quality professional development providing teachers with 50 hours or more can raise student test scores an average of 21 percentage points (Darling-Hammond et. al., 2009). This would rule out many of the one-day workshops that lack follow up, which are so prevalent in district staff development offerings.

- Continuing education should be job-embedded and ongoing (Grossman & Hirsch, 2009; Odden, 2007; PESB, 2008a). Teachers need time to implement and practice what they learn. Some schools establish professional learning communities (PLC) within schools or across the district by grade level or subject matter to give teachers opportunities for collaborative learning and feedback from peers concerning teaching practices. To be effective, a PLC needs regularly devoted blocks of time that are highly structured and not just time spent together for talking (Darling-Hammond et. al., 2009). Dedicated time demonstrates the school system's commitment to teacher learning (Jakes, 2006).
- Professional development content should be connected to long-term teacher, school and district goals (Grossman & Hirsch, 2009; Darling-Hammond et. al., 2009; PESB, 2008a). Staff development that is not associated with school system goals can end up being at cross-purposes with other initiatives and undermine prior teacher, school, or district progress (Hill, 2009). When teachers are members of staff development committees, they can contribute to in-service plans that meet their needs.
- Administrative support should exist for follow up on strategies learned. School and district administrators set the tone for learning within schools by budgeting adequate resources for in-service training, ensuring sufficient time is allotted for implementation after staff development opportunities, and by using effective teacher evaluation methods

that help teachers determine areas of focus for improving skills and knowledge (Odden, 2007; Hill, 2009). The level of administrator engagement indicates the culture of learning within a school system and provides teachers with a model of personal learning.

- Decisions regarding teacher professional development needs should be data driven and reflect positive impact on student learning (Grossman & Hirsch, 2009; Odden, 2007; Hill, 2009). Districts should keep a profile of all continuing education participation including targeted outcomes for teachers (Jakes, 2006).

- Program Evaluation should be used to determine effectiveness of professional development in changing teacher practices linked to positive student outcomes.

Unfortunately, funding is rarely made available for an adequate evaluation after a staff development opportunity (Hill, 2009; PESB, 2008a). Valuable teacher feedback about a staff development opportunity should supplement a school or district's own internal evaluation, including data gathered about organizational support and change, participants' reactions, learning, and use of new knowledge, as well as student learning (Jakes, 2006).

#### *State and district professional development policy*

When there is no clear indication that continuing education contributes to improved teacher practices and student learning then teachers will lack the incentive to fully embrace their own learning opportunities (Hill, 2009). Since "policy shapes practice," if teachers are to benefit from high quality professional development, states must develop policy frameworks that promote high quality professional development choices (Chung Wei, Darling-Hammond, & Adamson 2010). The pace of research and the proliferation of educational information are happening at an accelerated rate making it difficult for any given teacher, school, or even district to keep abreast

of current findings. Without appropriate evidence-based guidance from state policy concerning professional development best practices it will remain unclear to schools and districts whether staff development choices contribute to student achievement or not (Grossman & Hirsch, 2009, 2009; Odden, 2007). This would be particularly true for small districts, rural districts, and those with a high number of students with diverse needs.

A recent study by the Stanford Center for Opportunity Policy in Education (SCOPE), released in conjunction with the National Staff Development Council (NSCD) took an in-depth look at four states with above average scores on NAEP exams, and high levels of teacher participation in a variety of professional development approaches (Chung Wei, et al., 2010). The report of these case studies does not claim causal links between the states' education policy frameworks, teacher effectiveness, and student gains, but suggests that policymakers and education reform advocates can use the information to explore areas that might be successful in their own state. Common aspects of the four states' professional development policies and systems included a professional standards board overseeing licensing, teaching standards, and professional development. All four states, Colorado, Missouri, New Jersey, and Vermont, have professional development standards and offer programs and incentives to support the choice of high quality staff development. In addition to requiring minimum levels of continuing education for maintaining credentials, most also require teachers to develop professional development plans that engage teachers in data-driven continuing education that is grounded in student needs assessments and builds teacher capacity to meet those needs.

The report suggests several factors deemed critical to ensuring that teachers benefit from high quality professional development:

- Multiple policies and structures that reinforce state standards for high quality professional

development at the state, district and school levels, most importantly state licensing policies

- Effective methods for monitoring the quality of in-service training, such as establishing professional development committees at local, district, or regional levels to hold professional development providers and participating teachers accountable for their activities
- A comprehensive network that links state efforts to regional and local systems, external providers, and university schools of education so that teachers benefit from many areas of expertise
- Dedicated funding for professional development

Given that Washington State professional development policies and practices have few elements in common with these high achieving states suggests that there is potential in our school system for policy improvements to promote high quality professional development choices that strengthen educator effectiveness and contribute to stronger student achievement.

## **Methodology**

### *Research goals*

If professional growth plans represent the type of in-service training that can improve teaching quality and student achievement, then it is reasonable to expect the use of PGPs for clock hours to impact student outcomes as reflected in commonly measured indicators such as standardized test scores. The original intent of this study was to investigate differences in statewide teacher Professional Growth Plan use and subsequent student outcomes both pre- and post-policy implementation. However, through communication with the Professional Educators Standards Board, which has current oversight for the PGP policy, I learned that there are only 18

school districts of 295 statewide that have completed the simple approval process needed to offer teachers PGP for Clock Hours (see Appendix A). Furthermore, even of the approved districts, few have teachers who are taking advantage of this continuing education option. In fall 2008, PESB conducted a phone survey of participating districts and found that only 6 districts had teachers using PGPs for clock hours, with five of the districts having a combined total of just 27 teachers participating.

#### *Kennewick School District*

The only district PESB found as really implementing this program is the Kennewick School District (KSD) located in the Tri-Cities area of southeast Washington. Kennewick had 124 educators (approximately 16% of teachers) begin a PGP for Clock Hours project in fall 2008. Consequently, this study focuses on that district, seeking to answer the question: Is there evidence of positive student outcomes in Kennewick School District following the implementation of the Washington State policy allowing districts to offer teachers Professional Growth Plans for accruing professional development clock hours?

At nearly 16,000 students in 2009-10, Kennewick is in the top 10% of Washington school districts by size, a percentile that happens to include all districts with 10,000 students or more. In the 2009-10 school year, Kennewick had:

- 15,969 Students
- 822 Classroom teachers
- 14 Elementary Schools
- 4 Middle Schools
- 3 High Schools
- 3 Alternative Schools

In many respects Kennewick School District demographics are similar to state numbers:

	<u>Kennewick</u>	<u>WA State</u>
Average years of teacher experience	13.6	12.4
Teachers with at least a Master's degree	68.6%	65.8%
Minority students	39.1%	36.3%
Free or reduced meals	48.1%	42.3%

*Data collection and analysis*

According to the Assessment and Staff Development Coordinator at KSD this is the fourth year the PGP policy has been in use; they began offering teachers this option in 2007-08. The school district shared three years of school level data, 2007-08 through 2009-10, sans teacher identification, that provided me with the number of Professional Growth Plans started and completed at each school. A small percentage of educators begin projects each year that are not completed, and for which they are not awarded clock hours, so I did not included them in the statistical analysis. For the analysis I only worked with the number of PGPs where there were actual clock hours awarded for completion of a project. Using publicly available Washington State Report Card data of the number of teachers at each school in each year I began by calculating the percentage of teachers who used PGPs at each school in each year in order to rank the schools by their participation rates. I also determined how many teachers from each school were repeat participants from year to year. In addition, I calculated participation rates for the district as a whole to observe the variation from one year to the next, and I grouped the schools by primary and secondary grade spans to observe those differences.

The analysis used one-way ANCOVA to determine if there was a statistically significant difference in Washington Assessment of Student Learning (WASL) passing rates between the

schools in the top & bottom quartiles of teacher Professional Growth Plan for Clock Hours use within Kennewick School District. ANCOVA is appropriate for a “two-group pre-test/post-test” analysis with small sample sizes, in situations where the groups are composed of existing subjects as opposed to having been randomly assigned (Pallant, 2007). The model controls for WASL passing rates prior to PGP implementation, and for student and teacher demographic characteristics. The tests were conducted at a standard 95% confidence level.

- Independent variable: School PGP participation rates – top & bottom quartiles in KSD
- Dependent variable: WASL passing rates in 2008-09 after two years of district PGP use
- Covariates: Pre-PGP WASL passing rates, school level demographic factors

Because different grade spans vary in the number and types of tests required of students, for the comparisons to be meaningful I put together a stratified group of schools representing the top and bottom quartiles of each grade span. I ranked the schools according to the rates of PGP participation by teachers within grade spans, using the combined count of each teacher who used a PGP in each year. There is one high school, one middle school, and three elementary schools in each quartile. I chose not to include the alternative schools in the analysis given their relatively small numbers of students and teachers, individualized curriculum, and yearly fluctuations in student composition, which make them not representative of the overall district. In addition, there were instances where their passing rates were not reported. For privacy reasons, the state does not report passing rates for tests taken by less than 10 students.

Kennewick District WASL passing rates going back to the 2000-01 school year were retrieved from state data files on the OSPI website to allow a look at long-term trendlines in addition to the intended statistical analysis. Though the district had shared three years of teacher PGP data with me (07-08 through 09-10), unfortunately, for the statistical analysis I was unable



to include 09-10 data because that year the state switched from the WASL test to new exams (MSP & HSPE).

The WASL exam includes four subject matter tests that vary depending on the grade:

3 <sup>rd</sup>	Reading	Math		
4 <sup>th</sup>	Reading	Math	Writing	
5 <sup>th</sup>	Reading	Math		Science
6 <sup>th</sup>	Reading	Math		
7 <sup>th</sup>	Reading	Math	Writing	
8 <sup>th</sup>	Reading	Math		Science
10 <sup>th</sup>	Reading	Math	Writing	Science

**Figure 1: WASL Subject Matter Tests by Grade Level**

The OSPI data files report WASL passing rates for each subject matter test within a grade level, so I had to compute aggregated passing rates for each school. To do so, I used the number of students for which a score was reported when that number differed from the number of students tested. Passing rates for the Listening test, discontinued in 2004, were not included in the aggregated rates used for trendlines.

There were some difficulties with attributing all passing scores to the correct year when calculating the high school passing rates. For three years from 06-07 to 08-09 some high schools allowed 9th graders the choice of taking the test early, so the state reported two numbers for the 10<sup>th</sup> graders: percent meeting standard and percent meeting standard without previous passing. Occasionally those figures were the same for any given test, but often they were different. Considering that the year is an important variable linking teacher PGP participation rates with WASL passing rates, this created the dilemma of either using the right number of students passing the test, though some of the scores might be attributed to the wrong year, or excluding a portion of the passing rates. A plot showed the most pronounced difference for Southridge High (See Appendix B), ranging from 4 percentage points in 06-07 to 17 percentage points in 08-09,

whereas Kamiakin High had at most a difference of 5 percentage points. For the analysis I chose to use the figures that included all students who had met standard. My reasoning was that though some of them may be reported in the wrong year, in the other case, it would be definite that the passing rates would be inaccurate.

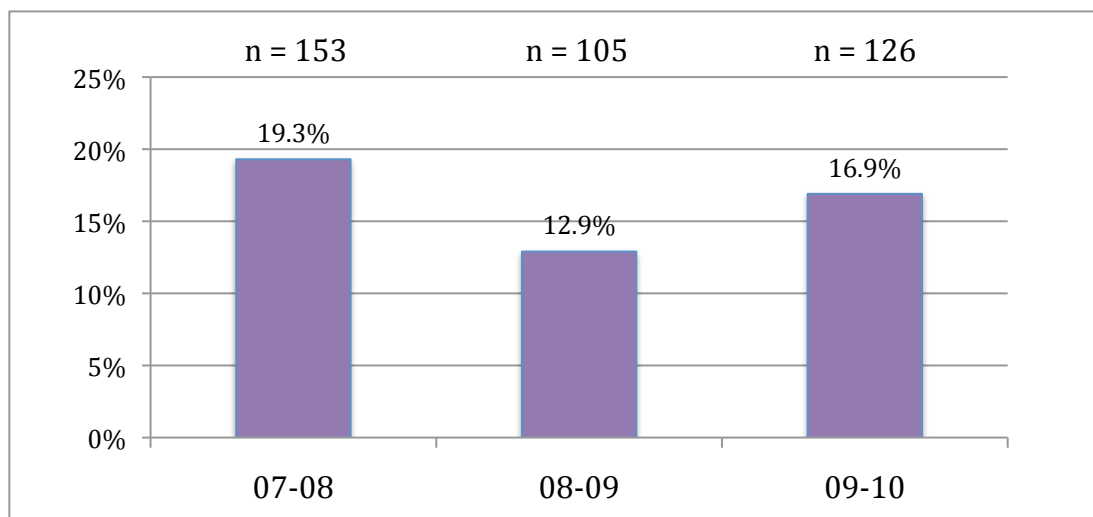
Student and teacher demographic information was also retrieved from state data files on the OSPI website. Scatterplots and correlation coefficients of these variables, and the dependent and independent variables were explored for linearity and strength of relationship. In the district, WASL passing rates correlate strongly with both free or reduced meal percentages ( $r = -.811$ ) and minority student percentages ( $r = -.831$ ). However, these variables both correlate very highly with each other ( $r = .966$ ), so to avoid multicollinearity problems, for the analysis I tested first controlling for free or reduced meals and then again controlling for minority percentages. Also, I considered percentage of teachers with master's degrees, and average years of teacher experience as potential covariates. Both variables correlated moderately with WASL passing rates ( $r = .337$ , and  $r = .315$ , respectively) though surprisingly, they did not correlate with each other ( $r = -.099$ ). I conducted ANCOVA tests with these variables combined and separated to determine the best model.

In addition to the above tests, to further explore the possible relationship between Professional Growth Plan use and WASL passing rates at the school level, I also completed an ANCOVA test using passing rates aggregated only by grade level, and not by subject matter, for each school to increase the sample size and to investigate the potential that the dependent variable might be influenced by PGP participation rates differently depending on the subject matter. I also was able to complete a test of difference of proportions between two elementary schools with similar WASL passing rates and demographic characteristics.

## Results and Discussion

### *District professional growth plan participation*

Of the more than 800 teachers in the district, an average of 128 completed Professional Growth Plans for clock hours each year. The first year, participation at the high school level was highest at 27%. The next two years saw the highest participation at the middle school level with 26% and 22% respectively. In the second year of PGP use, nearly half of the teachers participating were repeat participants from the first year. The third year had 28% repeat participation, some from the previous year and some from the first year. An additional 21% were completing their third project using a PGP. Figure 2 looks across the whole district at PGP participation rates broken down by school year showing it has varied roughly between 13-20%.



**Figure 2: District Professional Growth Plan Participation**

Of district schools at the elementary level, 5 of the 13 had greater than 15% participation in two of the three years for which I had data. Only one school, Southgate Elementary, had 20% or greater participation all three years. All four middle schools had 15% or greater participation in at least two of the three years, with both Desert Hills and Horse Heaven Hills having 20% or greater in all three years. Southridge High School had greater than 20% participation all three

years; the other two high schools had participation rates greater than 15% in only one of the three years.

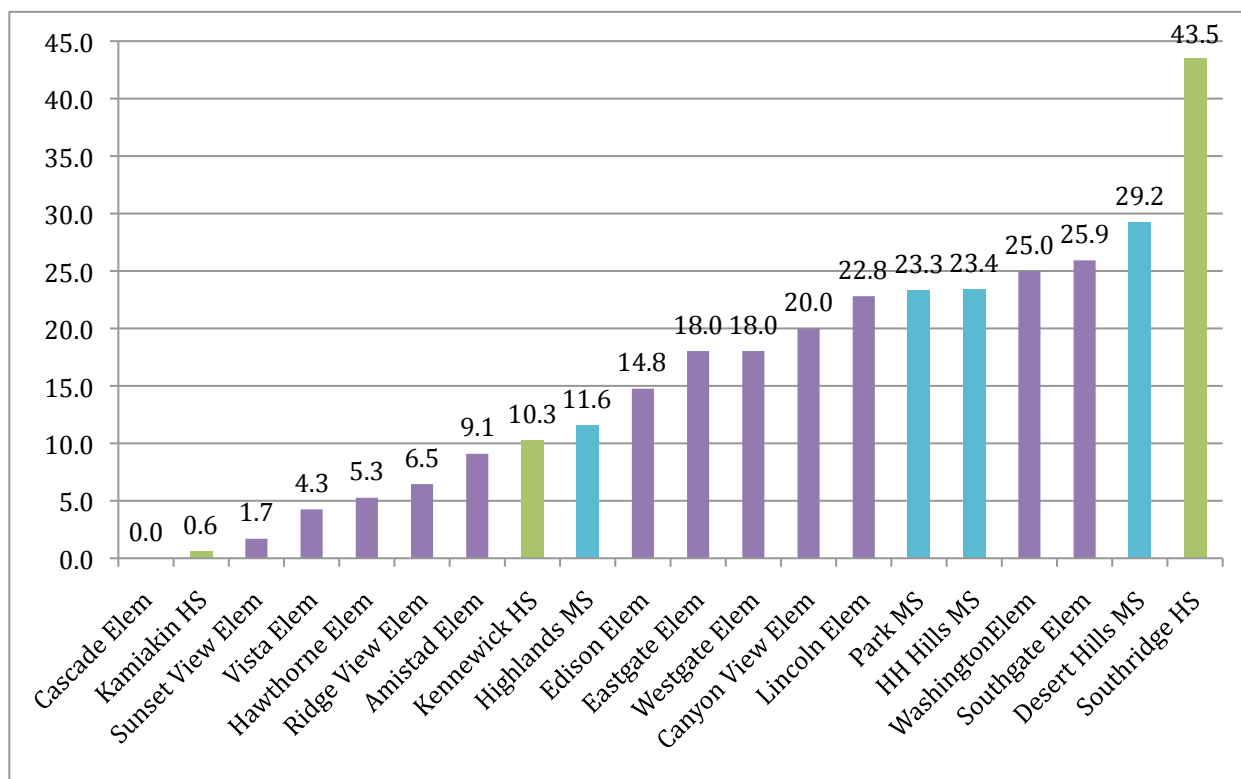
Considering these participation rates in terms of the intended consequences of the Professional Growth Plans it brings up the question of what would be a sufficient level of PGP use to realize the goals of improving student achievement. These are not very high participation rates in what, as far as we know, represents the best approach to teacher continuing education. And this is the district in Washington with the most PGP for Clock Hours use, so it also brings up the question of whether voluntary participation, which is the way it is now, could ever be expected to reach the percentage of teachers that might be needed to have a significant statewide effect.

#### *School level professional growth plan participation*

Figure 3 ranks Kennwick schools by their PGP participation rates for the two years of data used in the statistical analysis, giving an indication of the distribution of teacher participation across individual schools. Elementary schools, (purple columns) are represented across the quartiles from one school with no participation to another which had 25% or greater in each year. Four elementary schools, Canyon View, Lincoln, Southgate, and Washington, each had 20% or greater participation in both 07-08 and 08-09. Middle schools (blue columns) show their stronger participation relative to the whole group; three schools of four: Desert Hills, Horse Heaven Hills, and Park Middle School all had 20% or greater participation during the two years. As noted above, Southridge was the only high school with 20% or greater participation in the same time frame.

Again, considering this program in terms of its intended outcomes for the student population: one would think it important to have fairly consistent participation rates across the

grade levels to improve the odds of a student having a PGP teacher. Conceivably, even with much higher rates of PGP use, depending on how the teachers are distributed across schools and across grade levels, an individual student might pass from K-12 grade without the benefit of ever having a teacher who has used this form of professional development meant to improve student outcomes. Indeed, for the vast majority of Washington students that is the case. If the total state PGP participation rate was included on this graph for comparison purposes, it would be essentially zero as there were only about 150 of the more than 50,000 teachers in Washington that used Professional Growth Plans for clock hours in 2008-09 and 124 were from Kennewick District.



**Figure 3: Teacher PGP Participation Averages by School for 07-08 & 08-09**

The participation of Southridge High School is notable in comparison to the other schools and is explained by the fact that during the first year of district PGP use Southridge had a

principal-led effort. With encouragement from the principal, 73% of teachers began a Professional Growth Plan at Southridge in 2007-08 and 65% completed their projects for clock hour awards. Park Middle School had a similar principal-led effort in 2008-09, though their higher-than-district-average participation is masked by the lower-than-average participation of the previous year. In 2008-09, the principal's encouragement at Park Middle School led to over 40% of teachers using PGPs for clock hour awards. This suggests that an effective approach for schools and districts is to involve building or district administration in encouraging teachers to develop and complete Professional Growth Plans as a means of strengthening teacher quality.

#### *WASL passing rates in Kennewick District*

Kennewick's WASL passing rates compare favorably with state averages. In 2008-09, of the 20 subject matter tests within the various grade levels, Kennewick students scored slightly higher than state averages for 12 tests (See Figure 4). The passing rate for the 4<sup>th</sup> grade Writing test was a full percentile higher than the state average.

Grade	Reading		Math		Writing		Science	
	KSD	State	KSD	State	KSD	State	KSD	State
3rd	72.6%	71.4%	64.4%	66.3%				
4th	73.9%	73.6%	58.1%	52.3%	70.5%	60.4%		
5th	77.0%	74.0%	63.0%	61.9%			47.0%	44.9%
6th	72.5%	72.0%	48.6%	50.9%				
7th	55.4%	59.3%	50.1%	51.8%	66.0%	69.8%		
8th	66.0%	67.5%	51.0%	50.8%			53.5%	51.1%
10th	82.8%	81.2%	46.5%	45.4%	85.6%	86.7%	31.4%	38.8%

**Figure 4: 2008-09 WASL Passing Rates for Kennewick and Washington State:**

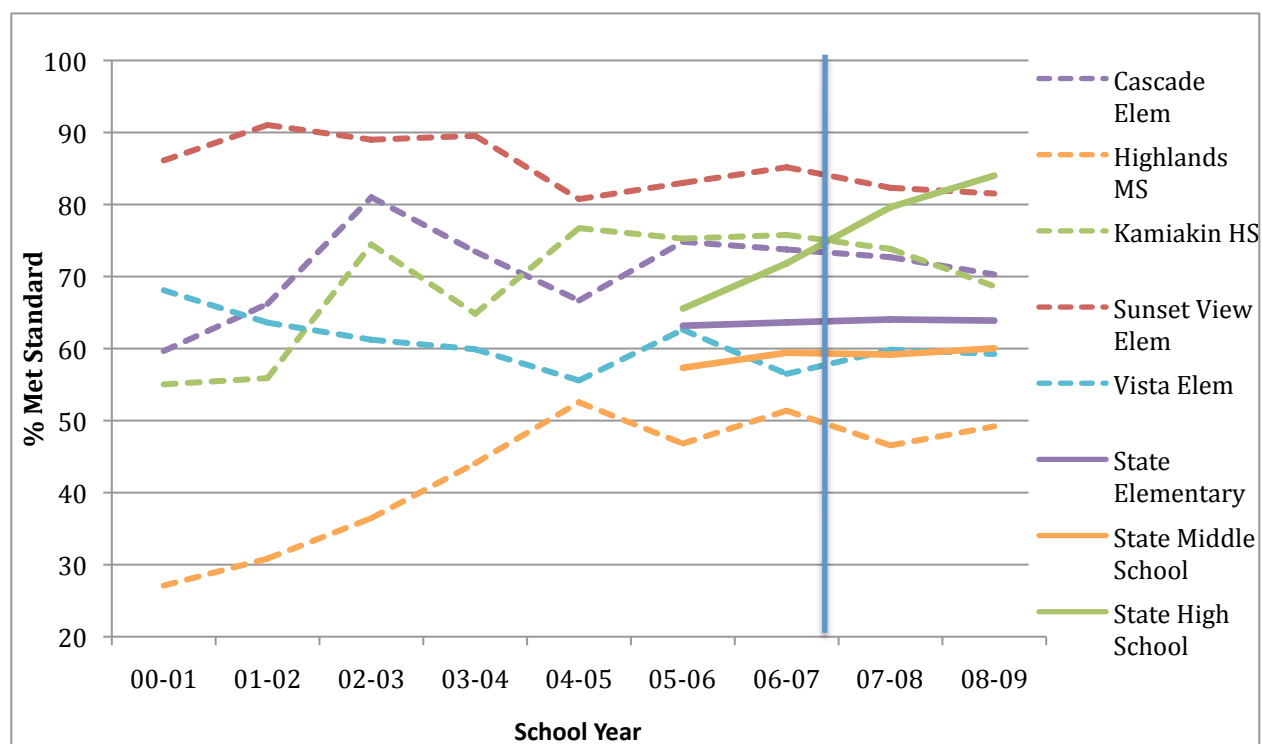
Highlighted percentages indicate tests on which Kennewick students outperformed state averages

Kennewick 10<sup>th</sup> and 4<sup>th</sup> graders have consistently scored above state average on Reading, Math, and Writing tests going back to 2000-01. Though Science has been a struggle for 10<sup>th</sup> graders in the last four years, most grades have mirrored the trends of state averages (See Appendix C for KSD/State trendlines).

### *WASL passing rates for schools in the top and bottom quartiles of teacher PGP participation*

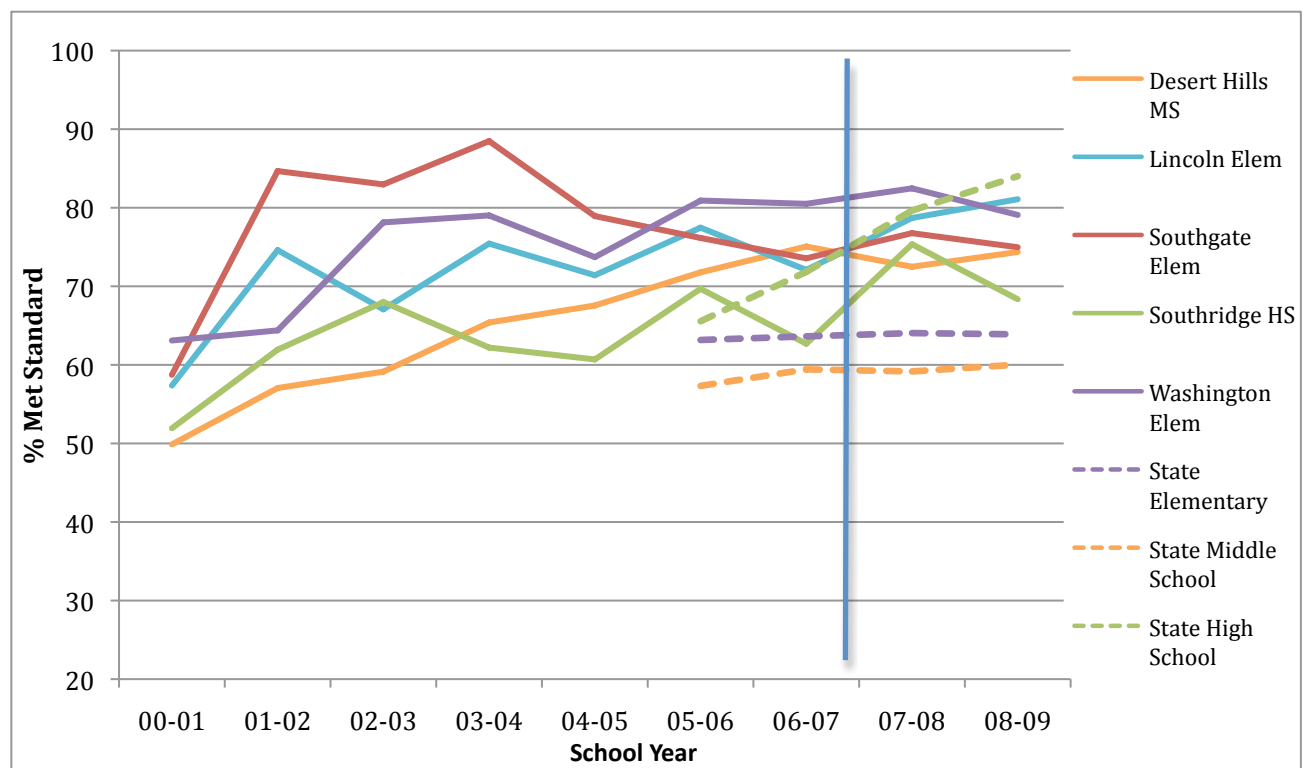
Graphs of WASL passing rates going back to 2000-01 (Figures 5 & 6) for the top and bottom quartiles of school PGP participation show overall trends and the variability from year to year that might be expected given yearly adjustments to test content, and that each year is a different cohort. One of the challenges with trying to determine an association over time is that influencing factors are also not likely to remain constant (Gupta, 2011).

The change in WASL passing rates, and not absolute rates, is the variable of interest, so the analysis design controls for prior year passing rates (2006-07). The bottom quartile (see Figure 5) shows fairly flat trends with just 1 of the 5 schools having a positive change in passing rates from the year prior to PGP implementation through the two years before the exam changed.



**Figure 5: WASL Passing Rates by School: Bottom Quartile PGP participation**  
With State Average WASL Passing Rate Comparisons (state data only available after 2005-06)

In comparing the bottom quartile schools with state averages, Highlands Middle School had passing rates 10 percentage points below the state middle school average. Kamiakin High WASL passing rate crossed the state high school average at the time of district PGP implementation and then diverged, dropping 15 percentage points below the state average in two years. Two of the three elementary schools in the bottom quartile had passing rates higher than the state elementary average with Sunset Elementary more than 17 percentage points above state average.



**Figure 6: WASL Passing Rates by School: Top Quartile PGP participation**  
With State Average WASL Passing Rate Comparisons (state data only available after 2005-06)

In the top quartile (see Figure 6), 3 of the 5 schools had positive changes for the same time frame. All top quartile elementary schools outperformed state elementary averages, with Washington Elementary more than 15 percentage points higher both years. Desert Hills Middle School passing rate was more than 13 percentage points higher than the state middle school



average both years. Southridge High, though similar in passing rate the first year, diverged to over a 15 percentage point difference, as the state high school average continued to climb.

#### *ANCOVA test results*

As noted previously, in addition to WASL passing rates prior to PGP implementation, the analysis took into account possible effects from student and teacher demographics. Of the various models considered, the model which best prevented the lagged dependent variable from accounting for most of the variance included covariates for the percentage of minority students and percentage of teachers with Master's degrees:  $F(1, 5) = 2.4$ ,  $p\text{-value} = .18$ .

<b>Descriptive Statistics</b>			
Dependent Variable: % WASL passing rate 08-09			
Quartile	Mean	Std. Deviation	N
Bottom Quartile Schools	65.7826	12.18684	5
Top Quartile Schools	75.5708	4.9143	5
Total	70.6767	10.16639	10

Figure 7a: 2008-09 mean percent WASL passing rate for top and bottom quartile schools using PGPs for clock hours

<b>Tests of Between-Subjects Effects</b>				
Source	df	F	Sig.	Partial Eta Squared
Corrected Model	4	14.149	0.006	0.919
Intercept	1	0.092	0.774	0.018
wasl_pre	1	21.013	0.006	0.808
minority	1	0.087	0.78	0.017
masters	1	0.773	0.42	0.134
quartile	1	2.421	0.18	0.326
Error	5			
Total	10			
Corrected Total	9			
a. R Squared = .919 (Adjusted R Squared = .854)				

Figure 7b: ANCOVA results based on mean 2008-09 WASL passing rate for top and bottom quartile schools using PGPs for clock hours, with school minority percentage and percentage of teachers with master's degrees as covariates

After adjusting for prior year WASL passing rates and school demographics the ANCOVA test showed no significant difference between WASL passing rate means of the top and bottom quartiles. None of the combinations of covariates produced a statistically significant difference in average test scores between schools with the most and least teachers participating in the PGP program. At the 95% confidence level there is not sufficient evidence to reject the null hypothesis of no difference between WASL passing rates for schools in the top quartile of PGP participation and the bottom quartile. As expected, there was a strong association between prior year WASL passing rates and the dependent WASL passing rates, with prior rates influencing 81% of the variance in the dependent variable in this model.

#### *Subject matter ANCOVA test results*

Using the above analysis design of prior WASL passing rates, percentages of teachers with master's degrees, and percentage of minority students as covariates, I also conducted an ANCOVA test with WASL passing rates for each school aggregated only by grade, but not by subject matter (Reading, Math, Writing, and Science), which increased the sample size four fold. Potentially, effects from the use of professional growth plans could be stronger on one subject matter than another, which could influence the dependent variable differently. Indeed, the results did indicate a statistically significant difference between the means of the schools in the top and bottom quartiles of district PGP participation ranking:  $F(1, 35) = 5.66$ ,  $p\text{-value} = .02$ .

<b>Descriptive Statistics</b>			
Dependent Variable:% WASL passing rate 08-09			
Quartile	Mean	Std. Deviation	N
Bottom Quartile Schools	63.116	19.80628	20
Top Quartile Schools	75.4295	13.21063	20
Total	69.2728	17.74867	40

Figure 8a: 2008-09 mean percent WASL passing rates, aggregated by grade but not by subject matter for top and bottom quartile schools using PGPs for clock hours

<b>Tests of Between-Subjects Effects</b>				
Source	df	F	Sig.	Partial Eta Squared
Corrected Model	4	34.323	0.000	0.797
Intercept	1	0.117	0.735	0.003
wasl_pre	1	98.598	0.000	0.738
minority	1	0.586	0.449	0.016
masters	1	0.065	0.801	0.002
quartile	1	5.656	0.023	0.139
Error	35			
Total	40			
Corrected Total	39			
a. R Squared = .797 (Adjusted R Squared = .774)				

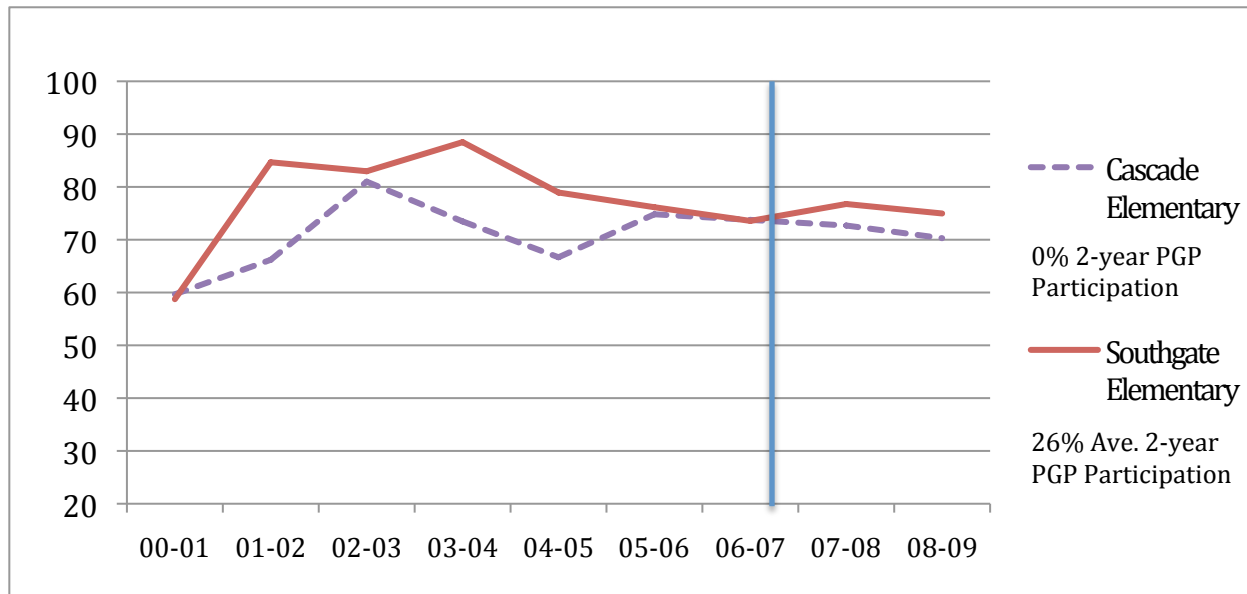
Figure 8b: ANCOVA results based on mean 2008-09 WASL passing rates, aggregated by grade but not by subject matter for top and bottom quartile schools using PGPs for clock hours, with school minority percentages and percentage of teachers with master's degrees as covariates

At the 95% confidence level this test provides evidence to reject the null hypothesis of no difference between WASL passing rates aggregated only by grade and not by subject matter for schools in the top quartile of PGP participation and the bottom quartile. However, given that teacher PGP data from Kennewick wasn't tied to the content of PGP projects or the subject matter each PGP teacher instructs, it is not truly possible to understand the nature of this relationship. To help confirm whether PGP participation influences some subject matters more than others, more information would be needed about which subjects PGP educators teach and the particular focus of the Professional Growth Plan that each teacher completed.

#### *Test of difference of proportions*

Interestingly, two of the elementary schools, Southgate and Cascade, had similar enrollment and demographics with, 552 students at Southgate, 531 students at Cascade, and respectively, 22% vs. 25% minority students and 28% vs. 31% of students qualifying for free or reduced meals during the two years covered by the statistical analysis. One also happened to be the elementary school with the highest overall PGP participation at 26% and the other had zero participation. In addition, their WASL passing rates for the two years prior to the program

implementation were nearly identical as is shown in Figure 7. Southgate teachers had an average of 14 years of teaching experience with 83.3% holding a master's degree and Cascade teachers had an average of 13.4 years with 64% holding a master's degree.



**Figure 9: WASL Passing Rates for Lowest & Highest PGP Participating Elementary Schools**

Given the similarity of the variables that might influence WASL passing rates, I conducted a one-tailed difference of proportions test. Without the strong effects from prior year passing rates, the results, with  $Z = 2.0596$  and a p-value of .0197, also showed sufficient evidence at the 95% confidence level to reject the null hypothesis of no difference between the schools.

## Conclusion

There is mixed evidence to the question of positive student outcomes in Kennewick School District following the implementation of Professional Growth Plans for Clock Hours. In a comparison of just two schools where the difference of PGP participation was 26%, there is evidence of an effect that could be a result of teacher Professional Growth Plan use. The same is

true for the ANCOVA test of schools in the top and bottom quartiles of PGP use when WASL passing rates are separated by subject matter. However, in the original ANCOVA test, with a comparison of aggregated WASL passing rates for schools in the top and bottom quartiles of the district where the mean PGP participation was 33% and 4% respectively, there was no evidence of an effect on average WASL passing rates.

It could be this policy does not have the potential to improve teaching quality and by extension student gains, and the state should not waste resources on promoting or monitoring it. However, that conclusion seems at this point to be obscured. Given that the state's 2005 Professional Growth Plan for Clock Hours policy has many characteristics of high quality professional development indicates its potential to improve student outcomes. However, to evaluate that potential the state would need to take a more systematic approach to promoting and tracking the results of the policy.

Though the state implemented the PGP for Clock Hours policy with the aim to promote performance-based professional development, it was not accompanied by a means for ensuring that all districts and teachers were familiar with this option and aware of its value to them and their students, or for rigorously assessing the results to determine if the policy was meeting the goal as intended. The results of this study are a reminder that when new policies are established, thoughtful mechanisms for monitoring and assessing the results are needed as well.

A potential means of encouraging PGP participation was highlighted in the study by the schools which had principal-led efforts. In both instances, the participation rate for the principal-led efforts were three times what the average district participation rate was for that year, suggesting the value of encouragement from building administrators, or even the potential influence of well-placed district encouragement.

### *Limitations and recommendations for further research*

With greater numbers of teachers using PGPs, and an annual collection of data about its use by individual teachers, opportunities for additional policy evaluation would expand. Collected data linking teachers using PGPs with student achievement data would allow for further research including longitudinal studies following common indicators of student achievement such as standardized test scores or graduation rates of students associated with teachers who are PGP participants compared with teachers who do not use PGPs. As suggested in the analysis, this could include information about the subject matters PGP educators teach and the particular focus of the Professional Growth Plan that each teacher completes to help confirm whether PGP participation influences some subject matters more than others.

Some teachers in Kennewick were repeat PGP users while others were not; a study to understand their reasoning for making that choice could provide information needed to properly incentivize the program. Some KSD teachers worked on collaborative projects with colleagues, while other teachers worked on their PGP plans individually. Collaborative work is allowed by the program as long as teachers complete their own initial reflection and final evaluation. A study investigating if there were substantially more repeat participants in one group than another might also provide the state and districts with information for promoting PGPs.

One of the limiting factors of the study was the overall low rates of participation. Even though Kennewick district has the highest participation in the state, three of the schools in the top quartile, which ranked schools by PGP use, had rates of participation shy of 15%. A systematic investigation into why district and state participation rates are so low would be a useful next line of research. One theory about why PGP participation is low suggests that it is expensive and cumbersome for both districts and teachers, however, that theory is based on a

small number of anecdotal comments from districts, many of which haven't used the program yet (PESB, 2008b; PESB, 2010). Considering the strong evidence that professional growth plans represent our current best approach to educator professional development, it would not be wise to draw conclusions from these perceptions alone. More likely, the voluntary nature of the PGP program doesn't provide sufficient incentive for its widespread use. As noted previously, a policy initiative needs both pressure and support to be successful (Borko, et al., 2003).

Currently, the state doesn't have a set method for promoting this policy, so determining that approach would be a first step toward enticing more districts to complete the approval process and more teachers to develop and complete a PGP project. The state could also easily broaden the number of participating educators given that some districts already have professional development committees established and contractually require their teachers to use professional growth plans as a self-assessment tool. In order for the state to target those districts that information would have to be collected because the state is currently unaware of which districts have committees or use professional growth plans.

An explanation for the mixed results of the study might come from the lagged dependent variable. Prior rates as covariates can have a dominant effect in statistical models, making it difficult to observe any variance contributed by other variables. That could be the case here where the pre-PGP WASL passing rates obscure any effects from PGP participation. A more sophisticated model would be needed to make that determination.

An additional consideration to keep in mind is that changes in student achievement might lag behind the adoption of a professional development policy change. Studies linking professional development to student achievement are in their infancy and it is still not well

understood how the two concepts are linked, nor how long it might take for improvements in teaching quality to show up in student achievement.

Given that this policy is not widely used throughout the state, this study only looked at its potential impact on one district. Though informative for this district, statewide generalizations from the study are not supported. If this policy had gone in to full force around the state in 2005 when it was adopted, there would have been the potential to investigate the impact on teacher professional development and subsequent student outcomes both pre- and post-policy implementation. In addition, many variables other than the adoption of PGPs for Clock Hours could contribute to changes in student outcomes within the district, so this study purports no causal indications. The variability in passing rates displayed in the quartile trendlines suggest that observed differences could be due solely to chance.

Appropriate support for teachers is necessary to help them build capacity to meet the demands of an increasingly diverse student population. Education for students is progressively inquiry-based and teacher professional learning will need to mirror that trend. The 2005 Washington State policy adoption allowing districts to offer teachers the use of Professional Growth Plans for Clock Hours shows potential as a valuable approach to furthering that movement.



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## Appendix A

### **Washington school districts approved to offer the Professional Growth Plans for Clock Hours option:**

Clover Park  
Colville  
Dieringer  
Elma  
Kennewick  
Manson  
Methow Valley  
Oroville  
Rochester  
Sequim  
Tukwila  
Vashon Island  
Walla Walla  
West Valley  
White Pass  
White River  
Wishram  
Zillah

### **Educational Service Districts approved to offer PGPs:**

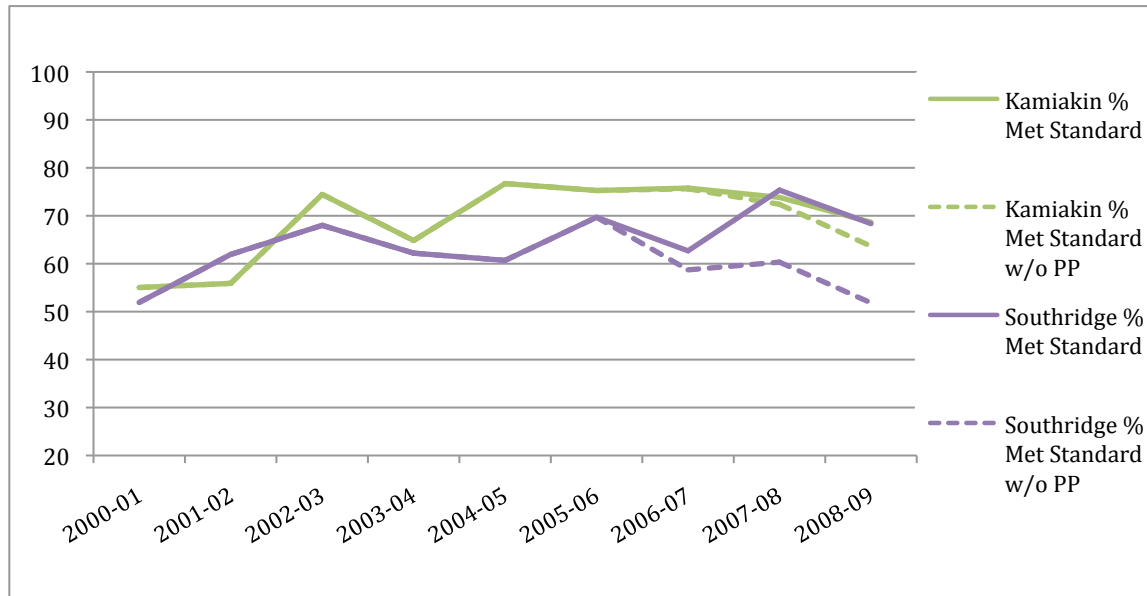
ESD 113  
Northwest ESD 189  
Puget Sound ESD

### **Private schools approved to offer PGPs:**

Giddens School (Seattle)  
The Northwest School (Seattle)

This list comes from an email received from the Program Specialist at the Professional Educators Standards Board, which has current oversight for the PGP policy. I noted in our communication that Vancouver School District, the initial pilot study participant, is not on the list of approved schools maintained by PESB, though they clearly have offered PGPs to their teachers in the past. Also, of the five schools in the second pilot study, two: Walla Walla and West Valley are still on the list, but Franklin Pierce, Mount Vernon, and North Shore are not. PESB was not aware of the reason why these schools weren't listed. I learned in a subsequent phone conversation with Dr. Rick Maloney, who was with OSPI Professional Education and Certification at the time of the pilots and was instrumental in the PGP policy adoption, that the pilot schools were not required to go through the formal approval process. He suggested that is the likely reason that those districts aren't listed as approved in the PESB records.

## Appendix B

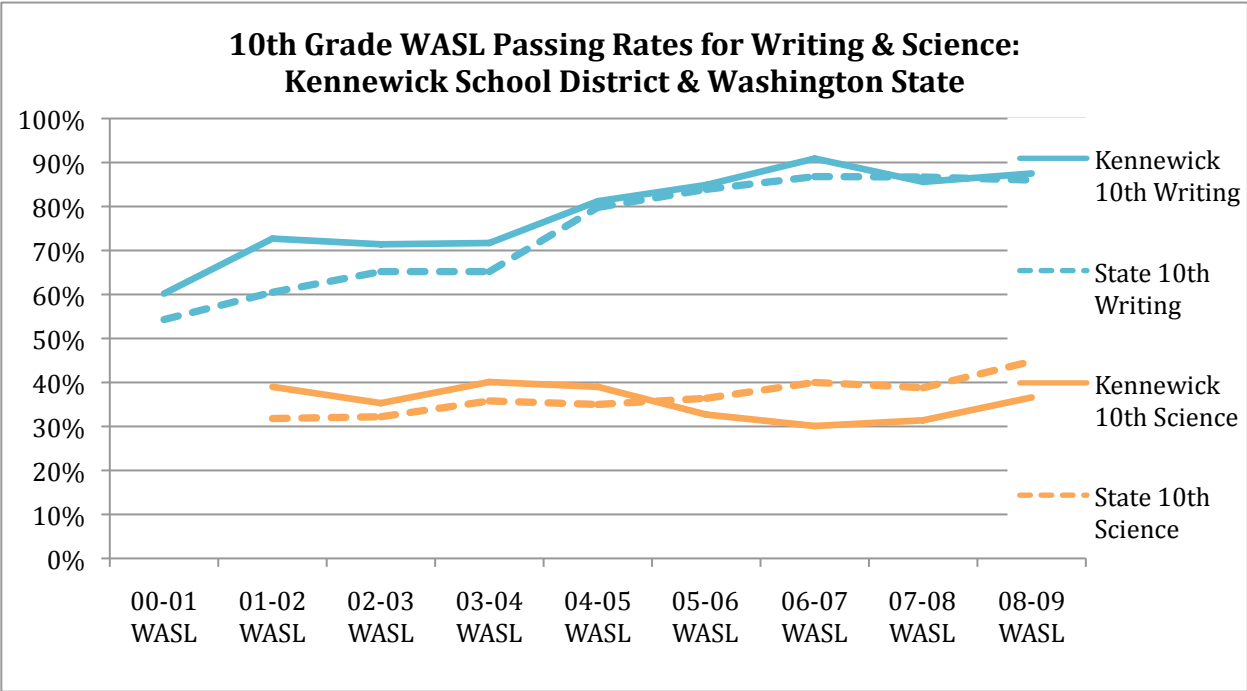
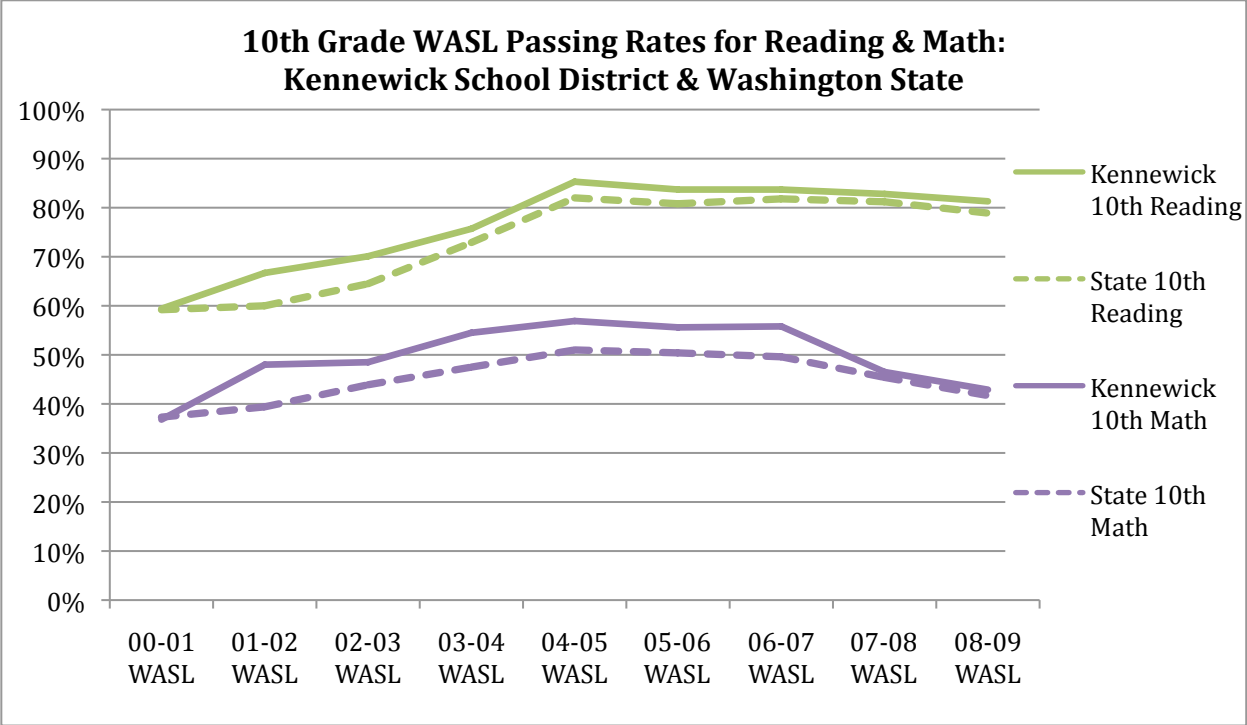


### **Difference in Passing Rates between Met Standard and Met Standard Without Previously Passing (w/o PP) for Southridge High and Kamiakin High from 2006-07 to 2008-09**

The state reported both Percent Meeting Standard and Percent Meeting Standard Without Previous Passing for 10<sup>th</sup> graders during the years 06-07 to 08-09 because some high schools allowed 9<sup>th</sup> graders the choice of taking the test early.

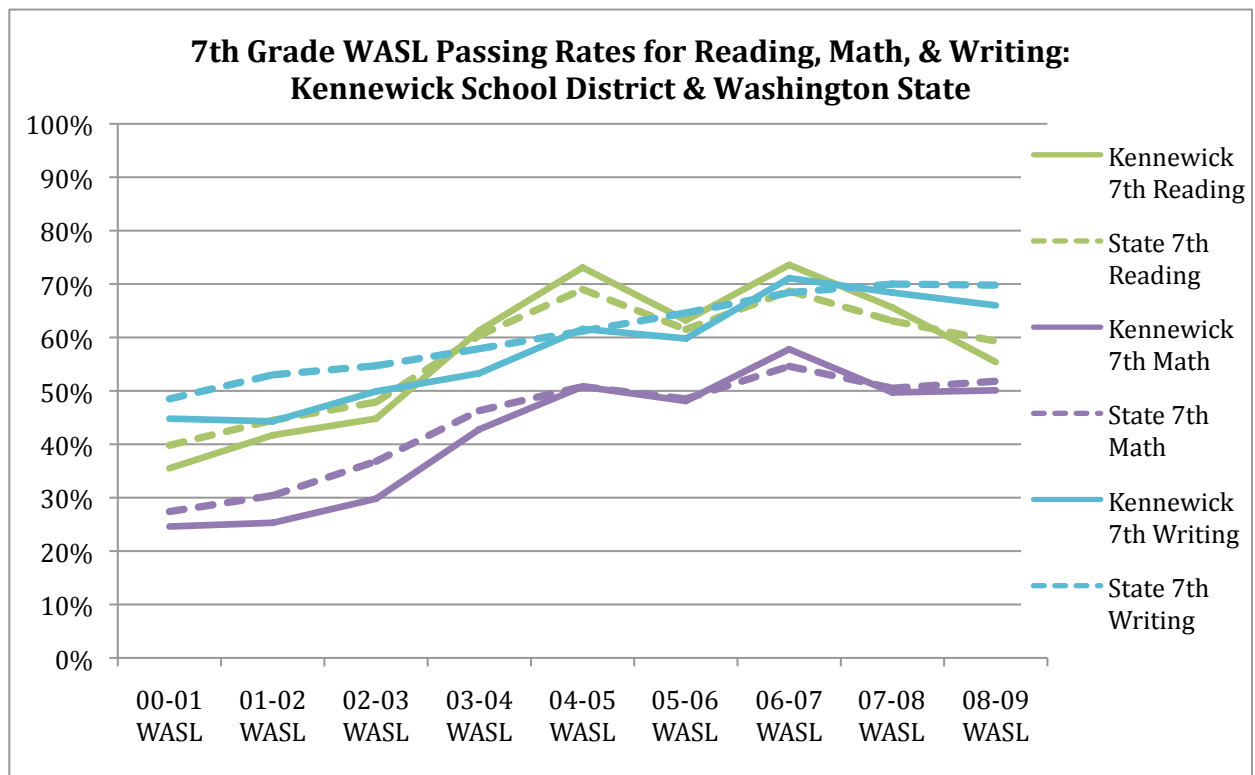
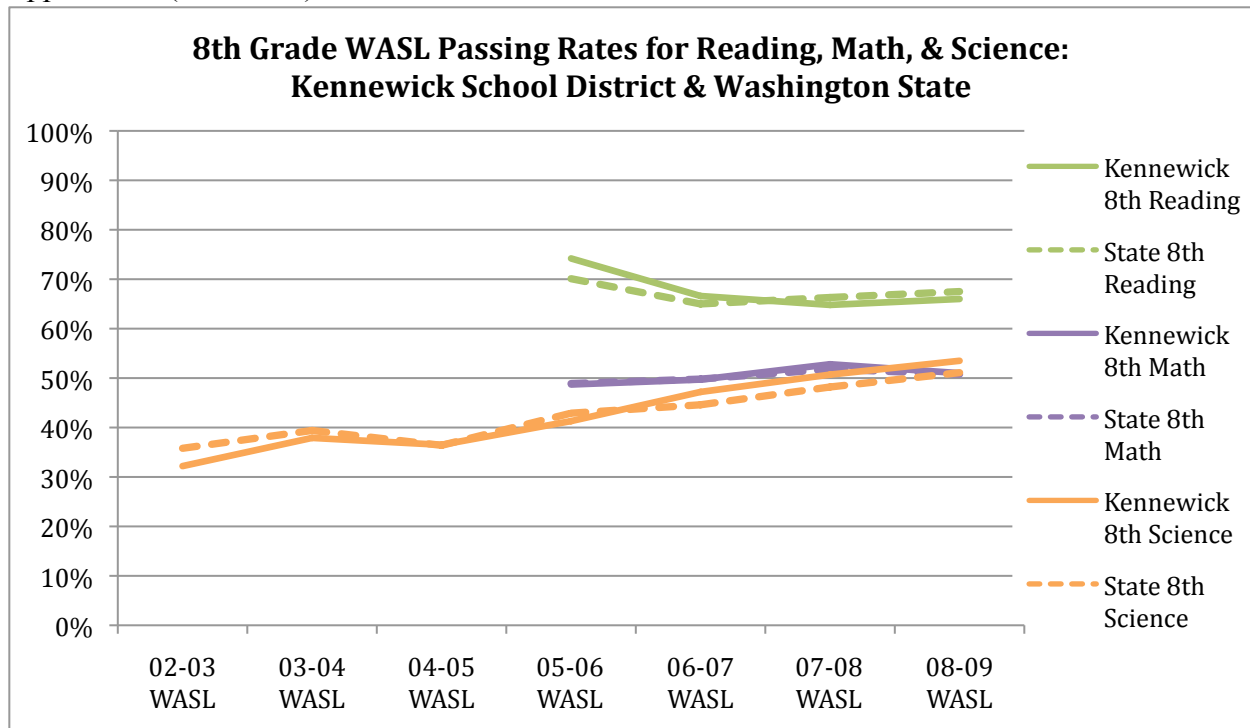
The Assessment and Staff Development Coordinator in the Kennewick District noted that Southridge seemed to more actively encourage their 9<sup>th</sup> grade students to take the WASL early, likely accounting for the larger difference in Met Standard rates vs. Met Standard without Previously Passing.

Appendix C

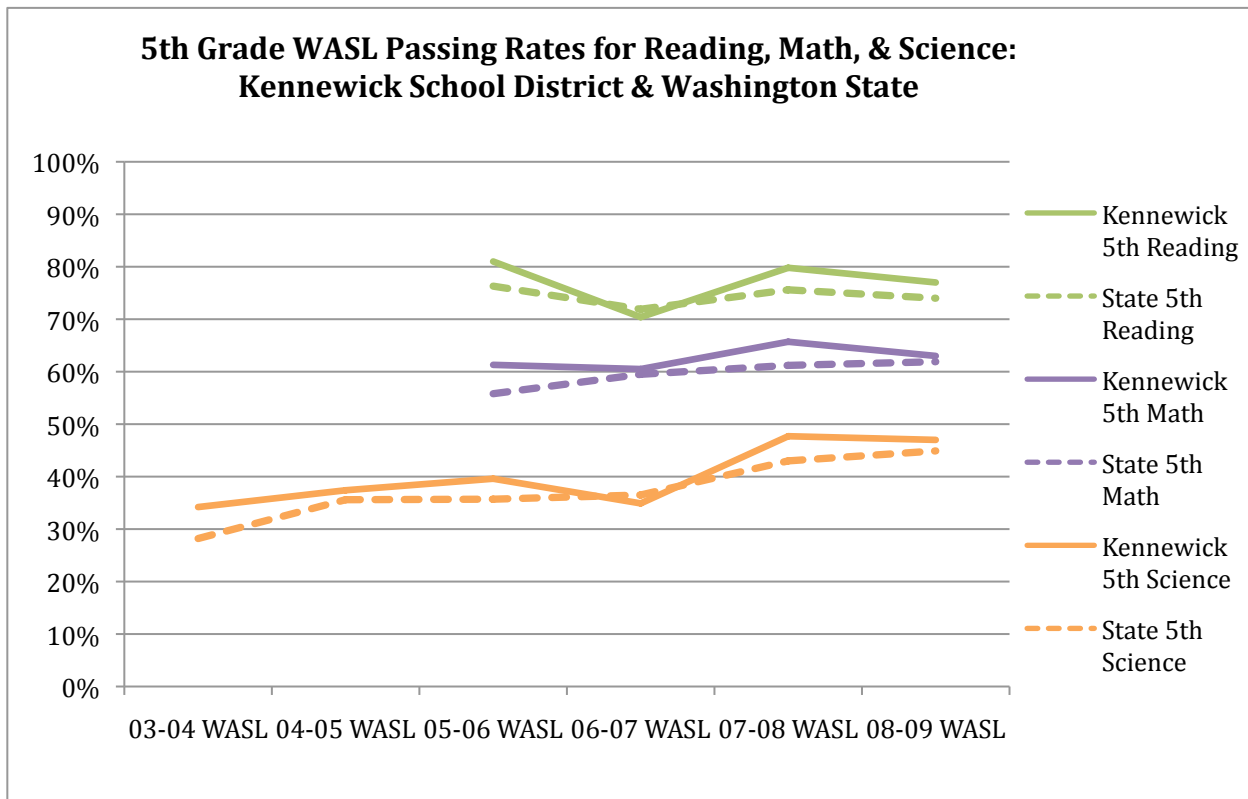
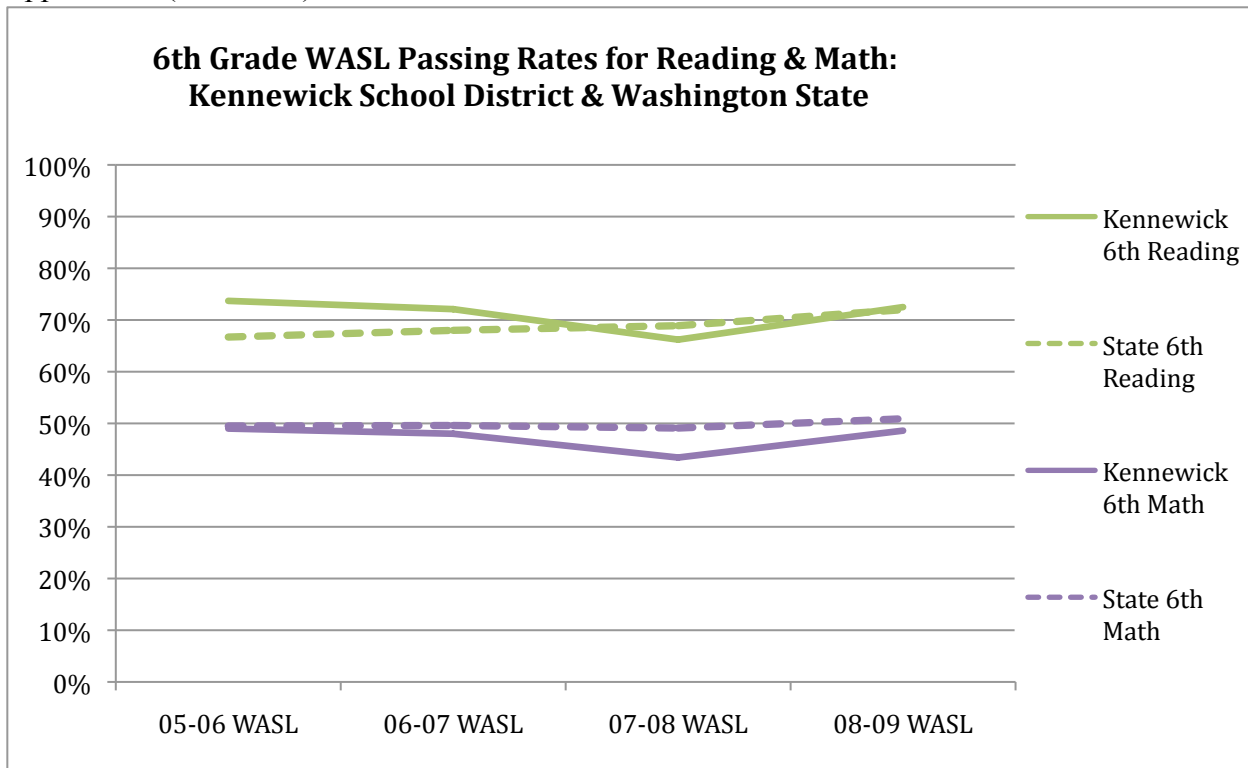




Appendix C (continued)



Appendix C (continued)



Appendix C (continued)

