

**Should the Mountain View Whisman School District Adopt a
Pay-for-Performance Program?
An Evaluation of Potential Effects and Implementation Issues**

Prepared for the Mountain View Whisman School District

Authors:

Alexandra Dunlap • Cindy Guan • Lucas Johnson • Raylene Poppino

Undergraduate Public Policy Senior Practicum
Stanford University

March 2011

Executive Summary

Pay-for-performance (PFP) is a controversial topic that has received much media attention in recent years. It offers an alternative to current salary schedules by rewarding teachers with bonuses for demonstrable teaching performance improvement and high-quality teaching. While proponents of performance pay systems suggest that they increase teacher retention, collaboration, and student performance, critics point to possible perverse incentives (e.g., teaching to the test), increased competition, and high financial and political implementation costs.

Although many districts across the United States are experimenting with variations of PFP systems, few have yielded conclusive results on the system's effectiveness regarding student achievement, teacher retention, and other relevant measures. We find that although most domestic studies show little success, PFP has been found to be successful internationally and appears to have been quite successful in a district in Idaho, although no third-party has critically evaluated that program's effects.

Unlike most studies done on PFP systems, we conduct a prospective rather than retrospective analysis. We first examine case studies of domestic PFP programs and gather information from experts. From this research, we determine five *areas of effect* and five *design elements* of PFP systems.

We then combine this information with district characteristics to determine whether adding a PFP component to current teacher salary schedules would be an effective and feasible policy option in the Mountain View Whisman School District (MVWSD). In addition, we address MVWSD teacher preferences for different system design elements. For this part of the analysis, we also rely on interviews with members of district leadership, interviews with principals, an in-depth discussion with two MVWSD teachers, and a survey administered to MVWSD teachers.¹

Potential Effects

Listed below are five main areas that PFP systems have the potential to affect.²

¹ We do not include international examples in our analysis of the feasibility of a PFP system for MVWSD because cultural and cross-country difficulties complicate the comparison process. Additionally, we do not include the unpublished example of PFP in the New Plymouth School District in Idaho because no third party has evaluated the program; the lack of such a study makes it difficult to evaluate this PFP example in an unbiased manner.

² "Student achievement" refers to the change in a pre-established measure of classroom achievement for students in a given time period. "Teacher recruitment" refers to the increase or decrease of the teacher applicant

For each effect, we summarize the findings from the case studies and combine them with MVWSD findings to offer recommendations to the district. (In Table 1, we present a breakdown of area of effect findings per case study.)

1. **Student Achievement:** Evidence from the case studies suggests that PFP has a minimal effect on increasing student achievement, an area in which MVWSD has room to improve. Based on our findings however, we do not recommend MVWSD implement PFP at this time as a means to improve student achievement.
2. **Teacher Recruitment:** Only two case studies measure teacher recruitment - one indicates a small effect and the other a moderate effect. Teacher recruitment is also not a current concern for MVWSD. Therefore, we presently recommend that the district not pursue a PFP program for recruitment purposes.
3. **Teacher Retention:** The current literature suggests that PFP has, at best, a marginal effect on teacher retention. Taking this into account and since MVWSD does not have significant retention issues, we do not recommend MVWSD adopt PFP to address teacher retention at this time.
4. **Hard to Staff:** Most of the case studies do not measure this effect, but those that do generally find a low effect. Currently we do not recommend the district use PFP to address its hard-to-staff needs.
5. **Teaching Practices:** Most of the case studies found that PFP has a moderate positive effect on teaching practices. However, due to limitations of our study indicated in our report, we do not recommend MVWSD implement PFP as an incentive for teachers to change their teaching practices at this time.

Table 1. Breakdown of Number of Case Studies per Effect Level, for the Five Areas of Effect

	Student Achievement	Teacher Recruitment	Teacher Retention	Hard-to-Staff Positions	Teaching Practices
No Effect	2	0	0	1	0
Very Low	3	0	2	0	0
Low	2	1	2	2	2
Medium	1	1	2	0	4
High	0	0	0	1	1
Not Measured	1	7	3	5	2
Total number of cases	9	9	9	9	9

pool per position at a given school or district within a given time period. “Teacher retention” refers to the number of teachers who stay in or leave the district within a given time period. “Hard-to-staff positions” refers to the difficulty of filling teaching positions that are historically or currently undesirable, require special certification, or are otherwise viewed as difficult. “Teaching practices” refers to the level that teachers begin to engage in new methods of teaching, including but not limited to classroom methods, assessment measures, and collaborative efforts with other teachers.

System Design Elements

We also examine five important PFP system design elements that were identified in the literature, listed below.³ Our report does not offer specific recommendations for system design elements. Instead, we note how the case studies have addressed the design elements and report MVWSD teacher opinion on them. (In Table 2, we present a breakdown of the number of case per option of each system design element.) If MVWSD chooses to pursue a PFP system in the future, we expect this information to be useful in their discussion of its design.

1. **Vehicle for Award:** Research suggests that a supplemental bonus is the most effective vehicle because it encourages sustained motivation to meet project goals year after year. Also, the majority of case studies utilize a bonus distribution format.
2. **Measures of Performance:** The majority of case studies use test scores and evaluations to measure performance. Teachers at MVWSD most favor principal evaluations as measures of performance, though many also support gains in test scores and peer teacher evaluations.
3. **Groupings of Award Recipients:** Teachers in MVWSD prefer awarding bonuses in groups, specifically at the school-wide level, rather than awarding them at the individual level. They also support awards for teachers in hard-to-staff positions and those in their earlier years of teaching. However, research suggests that grade/subject-level groupings to be more effective than school-level rewards.
4. **Amount of Awards:** The award amounts distributed by the case studies range from \$0 - \$15,000. However, of the MVWSD teachers who reported award amounts, most indicated a preference for bonuses under \$5,000.
5. **Professional Development Opportunities:** Many case studies examine professional development either as a part of PFP or separately. However, a majority of MVWSD teachers indicate that a PFP system would not encourage them to engage in more professional development.

³ “Vehicle for award” is the form by which the reward is dispersed. “Measures of performance” are the different ways teacher effectiveness can be evaluated. “Groupings of award recipients” refers to the person or group of persons the award is given to. “Amount of award” is the monetary value of the award. “Professional development opportunities” is the extent to which opportunities for increased professional development is a part of, or supplement to, a PFP system.

Table 2. Breakdown of Number of Case Studies per Option of Each System Design Element

Award Vehicle		Performance Measures			Groupings			Award Amounts	Presence of Professional Development Opportunities	
Bonus	Salary	Test Scores Only	Test Score Plus Evaluative Factor	Not Discussed	Individual	School-Wide	Combination	Range	Yes	No
8	1	2	6	1	4	1	4	\$0-\$15,000	5	4

PFM Moving Forward in MVWSD

In our report we show that few definitive conclusions can be drawn regarding PFM’s effectiveness from the domestic case studies. We also show that MVWSD teachers are split in their support for a PFM system and have a number of concerns with it. Thus we recommend that MVWSD not implement a PFM system *at this time*.

However, we believe MVWSD should still keep PFM in mind as an option in future years because: future domestic studies may provide additional evidence of PFM’s effectiveness, there is support for the general principles behind PFM, and international examples also show beneficial effects of PFM policies in education.

Due to these factors, we suggest steps for MVWSD to take if strong evidence of PFM’s effectiveness in the U.S. later becomes available. We offer the following sets of recommendations for initiating and having a productive conversation on PFM systems.

1. **Teacher Involvement:** MVWSD should increase teacher awareness and engagement with PFM by including a link on the district website to unbiased websites detailing the purposes and components of PFM systems. District leadership should also include teachers and administrators in the early stages of discussing a PFM system by hosting an open forum dedicated to the topic.
2. **System Design:** Our recommendations for additional elements of a PFM system are largely based on our conversation with Idaho’s New Plymouth School District Superintendent, Ryan Kerby. From hearing about his district’s positive experience with implementing and running PFM over the last eight years, we identified four design elements that had not been highlighted in the literature. If MVWSD considers

a PFP system in the future, we recommend they consider these four system design elements as well as the five elements previously discussed.

- a. **Pay-for-performance system test run:** If MVWSD decides to implement a PFP system, it should first conduct a test run on just one school where the majority of teachers show interest in trying out the program. If the program is successful, the district can promote and expand it to all schools in the district.
 - b. **Teacher’s autonomy:** If MVWSD decides to implement a PFP system, it should allow teachers to set their own performance targets. Additionally, it should consider having the rigidity of the targets be evaluated and altered by a committee composed of experienced teachers, school administrators, district officials, and other education leaders.
 - c. **Sliding scale bonus:** Pay-for-performance bonuses and incentives should not be an “all or nothing” effort. If MVWSD decides to implement a PFP system, it should also reward teachers for increasing their efforts by rewarding them with fractions of the total bonus for partially meeting goals.
 - d. **Ample district support:** If MVWSD decides to implement a PFP system, the district should provide ample support to teachers who do not meet their targets in consecutive years. Principals, superintendents, and other teachers should engage in conversations with teachers to discover what resources, tools, and advice different teachers need.
3. **Financial Considerations:** If MVWSD considers a PFP program, it will need to explore additional funding sources. Potential sources include a possible increase in property tax revenue from the Shoreline Community, expected future reimbursements from the state, grants from the Department of Education, and private foundation grants. In the report, we also provide a range of estimates for how much a PFP program might cost.

The advantage of the controversial nature of PFP is that ideas, criticisms, and suggestions are constantly being generated on the design of an optimal system. If MVWSD considers a PFP system in the future, we expect that it can use the takeaways from this report and any future research findings to begin fruitful discussions on creating a narrowly tailored and homegrown program that helps to effectively address the needs of the district.

Table of Contents

Introduction	1
Phase I: Pay-for-Performance Background Research	3
Literature Review and Interview with Experts	
Background Information on Case Studies	
Pay-for-Performance Areas of Effect	
Pay-for-Performance System Design	
Phase II: Pay-for-Performance Specific to MVWSD	14
Background Information on MVWSD	
MVWSD Interviews and Teacher Survey	
Pay-for-Performance Areas of Effect in MVWSD	
Pay-for-Performance System Design in MVWSD	
Phase III: Roadmap of Future Considerations	27
Teacher Involvement	
System Design	
Financial Considerations	
Appendices	33
Appendix A: New Plymouth School District PFP	
Appendix B: New Plymouth School District Oversight Committee	
Appendix C: Area of Effect Matrix	
Appendix D: System Design Elements Matrix	
Appendix E: MVWSD Principal Interview Protocol	
Appendix F: MVWSD Survey Solicitation Email	
Appendix G: Open-Ended Responses, MVWSD Survey	
Appendix H: Survey Response Data	
Bibliography	55

Acknowledgments

The authors would like to thank Stanford’s Public Policy program for giving us this opportunity. A special thank you goes to Senior Lecturer Mary Sprague for her prompt and invaluable late-night edits and feedbacks, as well as unwavering support and morale boosting. We would also like to thank the Mountain View Whisman School District, Superintendent Craig Goldman, and the numerous teachers, principals, and district officers for giving us the opportunity to learn from their experience and seek their advice in conducting our study. Additional gratitude goes out to Professor Eric Hanushek, Professor Susanna Loeb, PhD Candidate Maria “Cuky” Perez, and Idaho’s New Plymouth School District Superintendent, Ryan Kerby, for sharing their deep insight and offering invaluable advice on multiple stages of our research process. Finally, we would like to thank Dan Blocksom for late night grammar counsel and for introducing us to Superintendent Kerby. This project would not have been possible without everyone’s support and advice.

INTRODUCTION

Pay-for-performance⁴ (PFP) is a fairly new topic in education reform that has garnered much attention in recent years. Generally, PFP systems award bonuses on top of base salaries to reward demonstrable teaching performance improvement and high-quality teaching. Proponents of PFP argue that the opportunity to receive an increase in pay will incentivize teachers to improve teaching practices, and be more collaborative and innovative in addressing difficulties. As a result, education quality and student achievement will improve.⁵ On the other hand, opponents argue PFP could increase competition among teachers, create perverse incentives,⁶ and potentially impose high implementation and political costs.⁷ However, due to inconsistent PFP policy designs across districts and limited years of data collection, no study in the U.S. conclusively confirms these supporting or opposing arguments.

Our report differs from numerous existing PFP studies in that it evaluates the effectiveness and feasibility of PFP systems *before* rather than after an actual system is implemented. To perform this prospective evaluation, we analyze different potential *areas of effect* and potential *system designs* of PFP in order to determine whether a school district might want to implement their own PFP system. Specifically, we examine the attractiveness and feasibility of

Analysis Overview

Phase 1: Examining current research to determine areas of effect and design elements of PFP systems

- Nine district and state experiences
- International experiences
- Expert Interviews
- New Plymouth School District experience

Phase 2: Evaluating the effectiveness and design options of a PFP system in MVWSD

- Areas of effect
- System design elements

Phase 3: Roadmap for MVWSD

- Teacher Involvement
- System Design
- Financial Considerations

⁴ Pay-for-Performance is also commonly referred to as merit pay, incentive pay, or performance pay.

⁵ Podgursky, Michael J., and Matthew G. Springer. "Teacher Performance Pay: A Review." *Journal of Policy Analysis and Management* 26.4 (2007): 909-949. Print.

⁶ "Perverse incentives" may include, but are not limited to, teaching to the test, cheating on tests, and misreporting performance.

⁷ Glaeser, Edward L. "The Uncertain Impact of Merit Pay for Teachers - NYTimes.com." *Economix*. New York Times, 8 June 2010. Web. 02 Mar. 2011. <<http://economix.blogs.nytimes.com/2010/06/08/the-uncertain-impact-of-merit-pay-for-teachers/>>.

implementing a PFP system in addition to the normal teacher salary schedule in the Mountain View Whisman School District (MVWSD). Our analysis occurs in the following three phases.

In Phase I, we conduct background research on PFP using a variety of sources that include case studies on existing domestic and international PFP systems, theoretical literature on PFP effects, and interviews with experts and practitioners in the public education sector. We use this research to determine five potential *areas of effect* and five *design elements* of PFP performance systems.

In Phase II, we combine information gathered in Phase I with MVWSD characteristics to evaluate whether PFP can positively address the district's needs. We also discuss the district's receptiveness to the different system design options. For this phase, we rely on interviews with members of district leadership, interviews with principals, an in-depth discussion with two MVWSD teachers, and a survey administered to MVWSD teachers.

Finally, in Phase III we offer a roadmap and recommendations for MVWSD should they decide to implement a PFP system in the future, based on key takeaways from Phases I and II.

In our report, we find that the background research suggests little to no conclusive evidence in support of PFP effectiveness in improving student achievement. Additionally, from a combination of interviews with district leadership, principals, and the teacher survey, we find that MVWSD teachers have mixed opinions about the effects of implementing a PFP system in the district, though they support certain system designs over others. Based on these Phase I and II findings, we do not believe a PFP system within MVWSD is feasible *at this point in time*.

However, international lessons and the experience of a domestic PFP program that appears to have had some success indicate that PFP systems, at the very least, warrant further consideration as more research becomes available. Our report thus offers suggestions on how MVWSD could approach the design and implementation of a PFP system in the future.

PHASE I: PAY-FOR-PERFORMANCE BACKGROUND RESEARCH

Examining current research to determine areas of effect and design elements of PFP systems

In Phase I of our study, we examine the effects and system design elements of existing domestic and international PFP programs. First, we rely on literature and interviews with education experts to identify several areas of potential effects to use to evaluate PFP programs. We then evaluate nine different domestic PFP programs under these areas of effect. We also use the experiences of these nine programs to identify system design elements that are important components of PFP programs.

Literature Review and Interviews with Experts

We consulted a variety of sources to learn what previous PFP research results have shown about the level of success in past programs, how success was measured, and how implementation occurred. Our initial findings discovered the broad and theoretical advantages and disadvantages of PFP programs mentioned in the introduction. However, many of the sources were strictly theoretical and offered few real life examples to support their claims.

Therefore, we decided to focus our research and base our conclusions on evaluative studies involving in-progress or recent examples of PFP systems in the U.S. This narrowed our review to nine different case studies conducted in various locations across the country.⁸ Stanford University education experts Eric Hanushek and Maria Perez verified that the studies we included accurately reflect the current national landscape of PFP case studies.⁹

As we will discuss later, we found inconclusive results in the nine domestic case studies. However, we would like to note that more positive findings exist in studies of international PFP systems. Studies in India showed that PFP systems were the most cost effective method to significantly improve student test scores, especially in areas of low-level learning.¹⁰ Another study conducted on the British system-wide PFP program also

⁸ We examined the Mission Possible study, the POINT study, the TEEG study, the TAP study, the Hillsborough study, the DATE study, the ACPP study, the ProComp study, and the New York School wide study.

⁹ Eric Hanushek is a Paul and Jean Hanna Senior Fellow at the Hoover Institution. Maria Perez is a Ph.D. candidate in the Economics of Education program at Stanford University and is studying teacher reactions to pay-for-performance systems.

¹⁰ Muralidharan, Karthik, and Venkatesh Sundararaman. "Teacher Performance Pay: Experimental Evidence from India." NATIONAL BUREAU OF ECONOMIC RESEARCH 15323 (2009). 30

yielded “statistically and economically significant student progress.”¹¹ Furthermore, Israeli PFP studies showed similar results: schools and teachers participating in PFP programs experienced higher value-added contributions to student achievement than the non-participating control group.¹² None of these studies found evidence of teachers manipulating student scores. Finally, a survey study conducted using all international case studies found that even after adjusting for various “socioeconomic, resource, and system measures at the student, school, and national levels,” countries using PFP systems yield higher student achievement than countries that do not.¹³ However, because of significant differences in education culture and practice across nations, we choose not to include these international examples with the domestic case studies in our analysis of PFP effects.

For further understanding of PFP systems, we consulted three Stanford education policy experts: Eric Hanushek, Susanna Loeb and Maria Perez. They gave us additional background information on the theory of PFP. As our research continued, they also helped verify the scope of our literature review and the areas of effect we chose. Each expert offered a different and unique perspective, which provided us with a broad understanding of the PFP field.

Lastly, we contacted Ryan Kerby, the Superintendent of New Plymouth School District (NPSD) in New Plymouth, Idaho. For the past eight years Superintendent Kerby has been overseeing the development and implementation of a district-wide PFP system in NPSD. Since its implementation, NPSD has experienced an increase in student performance and teacher collaboration.¹⁴ Superintendent Kerby showed us what components go into designing a successful system and shared lessons he has learned as a result of the implementation process. We do not include his district in our collection of case studies because a formal evaluative study on this PFP system has not been published. Therefore, we cannot conclusively attribute the increase in test scores to the new PFP system.

¹¹ Atkinson, Adele, Simon Burgess, and Bronwyn Croxson. "Evaluating the Impact of Performance related Pay for Teachers in England." Centre for Market and Public Organisation (2004). Print.

¹² Lavy, Victor. "Performance Pay and Teachers' Effort, Productivity, and Grading Ethics." *The American Economic Review* 99.5 (2009): 1979-2021. Print.

¹³ Woessmann, Ludger. "Merit Pay International." *Education Next* 11.2 (2011): 73-77. Print.

¹⁴ Refer to Appendix A for more information on the NPSD PFP system.

Background Information on Case Studies

In this section we provide background information on the nine case studies that we will later use to evaluate PFP system effects and design elements. The information is compiled into two matrices located in Appendix C and D. The first includes information on study publication, study location, program goals, structure and performance measures, system performance on all five areas of effect, and funding mechanisms. The second focuses on the five PFP system design elements, which we will discuss later.

There are many weaknesses in the existing domestic case studies. Mainly, information on effects of PFP systems is extremely limited because only nine relevant case studies have been evaluated. In addition, the districts and specific PFP systems used in the case studies vary widely, contributing to differences in interpretations and relevancy of results. Also, all domestic studies evaluate PFP systems that have been in place for only a few years at the most, so there may not have been enough time for credible and significant results to take place. Therefore, it is difficult to compare the studies directly and make generalizations about PFP effects. However, despite these weaknesses, we find it informative to examine these nine case studies because they help us identify some general findings and obtain an initial sense of the effects and designs of PFP systems.

The studies we used are Mission Possible,¹⁵ Teacher Advancement Program (TAP),¹⁶ New York City School-Wide Performance Pay Program,¹⁷ Hillsborough Merit Pay Program,¹⁸ Achievement Challenge Pilot Program (ACPP)^{19,20} ProComp,²¹ Project

¹⁵ Rowland, Cortney. *Mission Possible: A Comprehensive Teacher Incentive Program in Guilford County, North Carolina*. Rep. Center for Educator Compensation Reform. Print.

¹⁶ "Evaluating the Teacher Advancement Program in Chicago Schools." *Mathematica Policy Research Home*. N.p., n.d. Web. 16 Jan. 2011. <<http://www.mathematica-mpr.com/education/tapchicago.asp>

¹⁷ Goodman, Sarena, and Lesley Turner. "Study Provides Evidence That the New York City Bonus Program Did Not Lead to Marked Gains in Student Achievement." *Education Next: A Journal of Opinion and Research about Education Policy*. Education Next, 03 Feb. 2011. Web. 13 Feb. 2011. <<http://educationnext.org/study-provides-evidence-that-the-new-york-city-bonus-program-did-not-lead-to-marked-gains-in-student-achievement/>>.

¹⁸ Stein, Letitia. "Hillsborough's merit pay experiment benefits affluent schools." *St. Petersburg Times*. N.p., 24 Feb. 2008. Web. 16 Jan. 2011. <www.sptimes.com/2008/02/24

¹⁹ Ritter, Gary W., Marc J. Holley, Nathan C. Jensen, Brent E. Riffel, Marcus A. Winters, Joshua H. Barnett, and Jay P. Greene. "Year Two Evaluation of the Achievement Challenge Pilot Project in the Little Rock Public School District." Department of Education Reform, College of Education and Health Professions, University of Arkansas. 2008.

²⁰ The Hillsborough project looked at test scores from multiple subject areas; teachers were only compared against teachers in the same subject area. The ACPP project only looked at math test scores, and therefore, only looked at math teachers.

on Incentives to Teaching (POINT),²² Texas Educator Excellence Grant (TEEG),²³ and District Awards for Teacher Excellence (DATE).²⁴ In Table 3 we provide a list of these studies, their program goals, institutions that conducted the studies, and district locations. The variations in program goals demonstrate how PFP systems are tailored to fit different districts' specific needs.

Table 3. Program Goals, Researchers, and Location per Case Study

Study Name	Program Goals	Study Done By	District Location(s)
Mission Possible	Improve school performance to meet adequate AYP standards, raise student achievement, and decrease teacher turnover.	Guilford County Schools	North Carolina
POINT	Test if PFP would raise test scores.	NCPI (Vanderbilt)	Nashville, Tennessee
TEEG	State program to fund PFP in high poverty, high performing districts.	NCPI (Vanderbilt)	Texas
TAP	Increase student achievement and retain effective teachers.	Mathematica	Chicago, Illinois
Hillsborough	Reward outstanding teachers.	St. Petersburg Times	Hillsborough County, Florida
DATE	State program to fund locally designed PFP systems.	NCPI (Vanderbilt)	Texas
ACPP	Reward teachers whose students experienced gains in test scores.	University of Arkansas	Little Rock, Arkansas
ProComp	Link teacher pay to the district's mission statement.	University of Colorado	Denver, Colorado
NYC School-Wide	Increase student achievement in high need schools.	RAND	New York, New York

²¹ Wiley, Ed, Matthew Gaertner, Eleanor Spindler, and Amy Subert. "Denver ProComp Evaluation: A Mixed-Method Evaluation of Denver's Alternative Teacher Compensation System, Year 1 Report." University of Colorado, School of Education, ProComp Evaluation Team.

²² Springer, Matthew G., et al. Teacher Pay for Performance: Experimental Evidence from the Project on Incentives in Teaching. Rep. Nashville: National Center on Performance Incentives, Vanderbilt, 2010. Print.

²³ Springer, Matthew G., et al. Texas Educator Excellence Grant (T.E.E.G.) Program: Year Three Evaluation Report. Rep. Nashville: National Center on Performance Incentives, Vanderbilt, 2009. Print.

²⁴ Springer, Matthew G., et al. District Awards for Teacher Excellence (D.A.T.E.) Program: Final Evaluation Report. Rep. Nashville: National Center on Performance Incentives, Vanderbilt, 2010. Print.

Pay-for-Performance “Areas of Effect”

Using the nine studies above, we discuss to what extent PFP systems impact the following five *areas of effect*. This will help us gauge the effectiveness of these PFP systems. The areas include the effect of PFP systems on:

1. Student achievement
2. Teacher recruitment
3. Teacher retention
4. Hard-to-staff positions
5. Teaching practices

“Student achievement” refers to the change in a pre-established measure of classroom achievement for students in a given time period. “Teacher recruitment” refers to the increase or decrease in the teacher applicant pool per position at a given school or district within a given time period.²⁵ “Teacher retention” refers to the number of teachers that stay in or leave the district within a given time period. “Hard-to-staff positions” refers to the difficulty of filling teaching positions that are historically or currently undesirable, require special certification, or are otherwise viewed as difficult. “Teaching practices” refers to the level that teachers begin to engage in new methods of teaching, including but not limited to classroom methods, assessment measures, and collaborative efforts with other teachers.

We selected these areas for the following reasons: (1) our literature review highlighted the potential for PFP to affect these areas; (2) many evaluative studies of PFP systems, analyzed how, if at all, PFP affects these areas and (3) our conversations with experts confirmed that an evaluation of these areas would provide a thorough analysis of the effectiveness of a PFP system design.

²⁵ Senior Hoover Fellow Eric Hanushek also notes that it is important to evaluate recruitment effects in terms of attracting *good* teachers, not just the number of teachers. For simplicity in our study, we focus only on the number of teachers.

Table 4. Case Study Results on Areas of Effect

	Student Achievement	Teacher Recruitment	Teacher Retention	Hard-to-Staff Positions	Teaching Practices
Mission Possible	Very Low	Not Measured	Very Low	High	Not Measured
POINT	Very Low	Not Measured	Not Measured	Not Measured	Low
TEEG	No Effect	Not Measured	Low	Not Measured	Medium
TAP	No Effect	Not Measured	Very Low	Not Measured	High
Hillsborough	Not Measured	Medium	Not Measured	Low	Not Measured
DATE	Low	Not Measured	Low	Not Measured	Low
ACPP	Medium	Not Measured	Not Measured	Not Measured	Medium
ProComp	Low	Low	Medium	Low	Medium
NYC School-Wide	Very Low	Not Measured	Medium	No Effect	Medium

Table 4 displays what we determine the nine case studies show across the five areas of effect. When evaluating a PFP system’s effect, we summarize the findings in the study by labeling the *size* of the observed effect. For example, POINT found that PFP had no effect on test scores when pooled across all years and grades, except in one instance - fifth grade displayed a test score increase.²⁶ We describe this as a “very low” effect on student achievement. Meanwhile, TAP indicated increases in motivation, collaboration, and interest in professional development, which is why we assigned it a “high” effect on teaching practices.²⁷ Given the differing methodologies employed by the different studies, our determinations of effect *size* are approximate and follow no rigid formula. Table 5, on page 16, shows a summary of the number of case studies per effect level.

Eight out of nine studies measured effects of PFP on improving **student achievement**: two studies found no effect, three studies reported a very low effect, two studies reported a low effect, and one study reported a medium effect. Only two studies measured effects of PFP on improving **teacher recruitment**: one study found a low effect, the other found a medium effect. Six studies measured effects of PFP on

²⁶ Springer, Matthew G., et al. Teacher Pay for Performance: Experimental Evidence from the Project on Incentives in Teaching. Rep. Nashville: National Center on Performance Incentives, Vanderbilt, 2010. Print.

²⁷ "Evaluating the Teacher Advancement Program in Chicago Schools." *Mathematica Policy Research Home*. N.p., n.d. Web. 16 Jan. 2011. <<http://www.mathematica-mpr.com/education/tapchicago.asp>>

improving **teacher retention**: two studies reported a very low effect, two studies reported a low effect, and two studies reported a medium effect. Four studies measured effects of PFP on filling **hard-to-staff** positions: one study reported no effect, two studies reported a low effect, and one study found a high effect. Seven studies measured effects of PFP on changing **teaching practices**: two studies found a low effect, four studies found a medium effect, and one study found a high effect.

From evaluating the results across the studies, we conclude that current PFP systems generally appear to have a low effect on student achievement, a low to medium effect on teacher retention, and a medium effect on changing teaching practices. Regarding the other two areas of effect, only two to four studies examine the effects of PFP on teacher recruitment or filling hard-to-staff positions, and they generally indicate low effect. Again, our conclusions do not speak definitively on the effects of PFP because there are so few case studies so far and the studies have examined PFP effects for a few years at the most.

Pay-for-Performance “System Design”

Each of the cases utilized a differently designed PFP system. We did not find studies comparing the different systems, so we cannot definitively rank particular designs over others. Instead, we divide “system design” into five *design elements* extrapolated from our research and conversations with experts and practitioners. The following discussion will describe what options exist within each element and possibilities of what distinguishes successful elements from others.²⁸ The five *design elements* are:

1. *Vehicle* for award (bonus vs. salary increase)
2. *Measures* of performance (e.g. test scores, principal evaluations)
3. *Groupings* of award recipients (e.g. individual vs. groups by grade/subject/school)
4. *Amount* of awards (a range of award amounts)
5. *Professional development opportunities* (enabling teachers to earn awards)

²⁸ In Phase II, we will discuss the district’s perspectives on the various system design elements and make recommendations on which options to consider. In Phase III we will further discuss how some of these elements should be considered moving forward.

Discussion of Design Options

Through a conversation with Stanford education policy expert, Eric Hanushek, we found that the most effective award *vehicle* (i.e., payment mechanism through which teachers earn extra pay) is a supplemental bonus, because it encourages sustained motivation to meet project goals year after year. A salary increase, on the other hand, rewards a teacher for the rest of her or his career based on performance in just one time period. Unless districts can support annual salary increases, teachers lose the financial incentive to meet goals in later years. Indeed, all but one of the case studies awarded bonuses.²⁹ Therefore, the remainder of our study only considers supplemental bonuses as the award vehicle for MVWSD.³⁰

The second element, *measures* of performance, refers to the different ways teacher effectiveness can be evaluated. In our general research, we came across several measures that can be used to gauge teacher effectiveness, such as test scores, gains in test scores, outside credentials like the National Board Certification,³¹ and evaluations by principals, peer teachers, parents and students. All but one of the case studies indicates that they evaluate teacher effectiveness using standardized testing results, though some use additional measures like classroom observations and performance evaluations.³² However, using standardized testing as the sole measure for student achievement is a controversial topic. An alternative way to incorporate test scores into evaluations is through value-added modeling,³³ which is shown to be a more effective method in determining a teacher's individual contributions to student achievement.³⁴ Though we note these testing controversies, we do not conduct a thorough analysis of the pros and

²⁹ For more detailed information on which studies included which design elements, see Appendix D.

³⁰ When an award is a salary increase, it means the award appears in every paycheck, while an annual bonus shows up once a year. This suggests a sixth *design element*: frequency of award. We do not discuss this potential design element because schools sort students into annual groups and thus annual awards appear to be the most natural design.

However, it would be interesting to consider more frequent awards (by trimester, for example) if student performance measurements are recorded often enough.

³¹ This is also referred to as NBCT, a rigorous and high standard of certification. For more information see: National Board for Professional Teaching Standards: National Board for Professional Teaching Standards. Web. 02 Mar. 2011. <<http://www.nbpts.org/>>.

³² The DATE study does not specify measures of performance because it studies a state program that funds districts for implementing various versions of PFP.

³³ Value-added modeling seeks to identify an individual teacher's contributions to improved student achievement over the course of a year, rather than more cumulative effects that result from the student's own educational history and socioeconomic background.

³⁴ Lavy, Victor. "Using Performance-Based Pay to Improve the Quality of Teachers." *The Future of Children* 17 (2007): 87-109. Print.

cons of all measurement methods we find in the literature. Instead, we will investigate the stance of MVWSD on a variety of measurement methods.

Award recipients can be **grouped** in several ways: all teachers in the district can receive awards for district-wide achievements, or awards can be given to everyone in a school, in a grade-level or subject, to teachers in hard-to-staff areas, or solely to individual teachers. Almost all of the case studies awarded bonuses to individual teachers, though a few of them also distributed awards to entire schools. One gave awards to teams of teachers and another gave higher salaries to teachers in hard-to-staff areas. In our interview with Stanford Ph.D. candidate in education, Maria Perez, she explained that her research indicated that most teachers are inequity averse, meaning they do not like feeling unequal to other teachers and will usually choose group bonuses over individual ones. Economic and theoretical literature also speaks to the possible benefits of group work, including greater accountability among peer teachers and collaborative improvement endeavors.³⁵ Many of the case studies distribute awards on the individual level, but research indicates groups might also be beneficial. Because of this, we will consider a variety of grouping options in our study of MVWSD.

The nine case studies indicate that bonus **amounts** can be as high as \$15,000, but are most often closer to \$3,000. One study, POINT, theorized that to truly have an effect, bonuses must reach large sums such as \$15,000. However, Superintendent Kerby's experience suggests that bonus amounts under \$1,000 can also be successful.³⁶ Kerby focused on the importance of using a sliding bonus scale, where teachers earn fractions of the total bonus for partially meeting goals. He argues that otherwise teachers might become disheartened when they miss a goal by a small amount. Given that the districts in the case studies have employed a variety of bonus amounts, we will investigate how a range of bonus amounts might be feasible for MVWSD.

We incorporate **professional development opportunities** as a system design element because theoretical literature explains that, in PFP systems, opportunities to improve one's performance must exist to ensure that all employees might be able to earn

³⁵ Podgursky, Michael J., and Matthew G. Springer. "Teacher Performance Pay: A Review." *Journal of Policy Analysis and Management* 26.4 (2007): 909-949. Print.

³⁶ The New Plymouth School District (NPSD) offers a maximum bonus of \$1000; the superintendent recognizes that this is a small amount, but reports the PFP system has motivated positive changes in teaching practices.

awards.³⁷ Superintendent Kerby's district follows this principle in its PFP system design.³⁸ However, this design element is the most flexible because professional development includes many forms. Our background research suggests they can include but are not limited to: the district providing formal opportunities for further training, improving the management of professional learning communities inside a school so time is used more effectively, and the district providing learning tools that teachers might want to use with their students.

Few of the case studies explicitly included professional development in their system design. Instead, some asked the teachers whether PFP had encouraged them to engage in professional development opportunities that the district normally provided. Rather than investigate all of the various options for professional development, we will explore how receptive teachers in MVWSD are to the concept of a PFP system being used to encourage improvements in their teaching.

Table 5 gives a breakdown of the different design options used in the nine case studies.

³⁷ Heneman, Robert L.. *Merit pay: linking pay increases to performance ratings*. Reading, Mass.: Addison-Wesley Pub. Co., 1992. Print.

³⁸ See, "Why it Works" under Appendix A: New Plymouth School District PFP.

Table 5. Case Study Results on System Design Element Options

	Award Vehicle	Performance Measures	Groupings	Award Amounts	Presence of Professional Development Opportunities ³⁹
Mission Possible	Bonus	Test scores and goals	Individual	\$2,500-\$10,000	Yes
POINT	Bonus	Test scores	Individual	\$5,000-\$15,000	No
TEEG	Bonus	Test scores and collaboration	Individual and team-wide	Under \$3,000	Yes
TAP	Bonus	Test scores and observations	School-wide and individual	\$0-\$6,320	Yes
Hillsborough	Bonus	Test scores and evaluations	Individual	\$2,100	No
DATE	Bonus	Not discussed	Individual, team and school-wide	\$30-\$15,000	Yes
ACPP	Bonus	Test scores	Individual	\$100-\$10,000	No
ProComp	Salary increase	Test scores and goals	Individual and school-wide	1%-6.4% salary increase	Yes
NYC School-Wide	Bonus	Test scores, goals, and evaluations	School-wide	\$1,500-\$3,000	No

³⁹ The “presence” of opportunities refers to whether the district includes professional development in its PFP system *or* if the evaluation of the PFP system examines how much teachers participated in professional development.

PHASE II: PAY-FOR-PERFORMANCE SPECIFIC TO MVWSD

Evaluating the effectiveness and design options of a PFP system in MVWSD

In this phase, we combine the information gathered in Phase I with characteristics of MVWSD in order to evaluate whether PFP might be able to positively impact the district. We also investigate which system design options are the most favored by teachers.

Background on MVWSD

Mountain View Whisman School District (MVWSD) is located in Mountain View, California, in Silicon Valley.⁴⁰ It is home to seven elementary schools and two middle schools. In the 2008-2009 school year, the district had a total of 236 teachers, teaching 4,460 students. The two largest ethnicities are Latino and Caucasian, which comprise 41% and 33% of the student body respectively; close to 44% of the student body is categorized as English Language Learners. The district has a bimodal distribution of students from low income and middle-income families.⁴¹ This socioeconomic difference is reflected in state standardized testing performance: students from lower-income families averaged a 50% proficiency rate on state standardized tests, whereas students from higher-income families scored a 75%-95% proficiency rate on state standardized tests.⁴²

Regarding more general academic performance indices, performance in the district varies widely by school. The percent of a MVWSD school's student body found to be proficient in meeting adequate yearly progress (AYP) ranged from 42% to 71% in language arts and from 48% to 86% in math. Of the seven elementary schools, two schools have been placed in Program Improvement,⁴³ and only two schools have met the AYP standards in *both* English/language arts and math.

⁴⁰ Statistics from this section come from Ed-Data website for MVWSD for 2009-2010.

⁴¹ Approximately 46% of students are enrolled in the Free/Reduced Price Meals program.

⁴² Goldman, Craig. Personal interview. 7 Jan. 2011 and 2 Feb. 2011.

⁴³ Schools receiving Title I funds are placed in Program Improvement (PI) if they fail to meet AYP for two consecutive years for the same factor. If schools remain in PI for additional years drastic action is taken. However, our district leadership sources indicated this is not a major concern for MVWSD. "Understanding the AYP." Education Data Partnership Home Page. Ed-Data, Jan. 2011. Web. 02 Mar. 2011. <[http://www.ed-data.k12.ca.us/Articles/Article.asp?title=Understanding the AYP#programimprovement](http://www.ed-data.k12.ca.us/Articles/Article.asp?title=Understanding%20the%20AYP#programimprovement)>.

The district's compensation system follows a salary schedule based on years of experience and number of post-bachelor degree units. The superintendent remarked that there is relatively little pay change in the first five years of teaching, during which time there is also the highest turnover rates. In past years, MVWSD has offered a lower base salary, but greater health care benefit packages to teachers than surrounding districts. However, in FY2010, the district renegotiated the contract with the Mountain View Educator's Association to include a higher base salary with employees paying a greater share of health care benefits in subsequent years. However, despite this pay increase, MVWSD still has lower average teacher salaries than many neighboring districts.⁴⁴

MVWSD Interviews and Teacher Survey

In order to conduct our analysis, we gathered information on MVWSD from district officials, principals, and teachers in the district. Each source provided us with different types of information regarding the attractiveness and feasibility of a PFP system in MVWSD.

We consulted with the district's superintendent, Craig Goldman, and other district leadership.⁴⁵ Through these interviews, we gained an understanding of general characteristics of the district as a whole, each official's perspective regarding the potential effects of implementing a PFP system in the district, as well as potential implementation issues.⁴⁶

We conducted phone interviews with four of the nine principals working in MVWSD.⁴⁷ The principals informed us of their views regarding the pros, cons, and practical concerns of implementing a PFP system in their respective schools.⁴⁸ The principals provided unique perspectives from being in the middle ground between teachers and district leadership.

⁴⁴ Goldman, Craig. Personal interview. 7 Jan. 2011 and 2 Feb. 2011.

⁴⁵ In the interviews with the district officials, we did not have an interview protocol from which the researcher read. All interviews took the form of an open-ended discussion.

⁴⁶ We recognize that the more subjective information we gathered from the officials is limited in scope, because we spoke with so few district officials. In addition, we only spoke with a board member referred to us by the superintendent.

⁴⁷ Three of the four principal phone interviews used the interview protocol found in Appendix E.

⁴⁸ We recognize that the information gathered from our principal interviews may not be fully representative of the district, because we only interviewed 44% of the principals. Additionally, all participating principals were referred to us by the superintendent.

Lastly, we contacted all MVWSD teachers through a confidential and anonymous district-wide survey.⁴⁹ The survey provided us with the teachers' perceptions of different components of their current compensation system, as well as their opinions regarding different aspects of PFP systems.⁵⁰ We consulted Stanford education policy expert Susanna Loeb and two MVWSD teachers in designing our survey.⁵¹

We received responses from 41% of the teaching population, giving us 102 total responses.⁵² Respondents varied proportionately from elementary and middle school, included a wide range of years of experience, and had varying levels of involvement in the employee association.⁵³

Although the response rate is relatively high, and the responses provided much insight, the survey also has several flaws. First, it is subject to selection bias and sought answers from teachers who, at the very minimum, were already interested in PFP systems. Second, not all respondents provided answers to every question, and the lack of a "neutral" response makes it difficult to tell what these omissions indicate. Third, the conclusions drawn from the survey might not have lasting value – the opinions teachers express in the survey could change. This is partly because results do not show that large numbers of teachers have "strong" opinions – less than 30% of teachers said they either "strongly agreed" or "strongly disagreed" with over three quarters of the questions. The lack of a "neutral" or "do not know" option in our questions also means we do not capture the degree to which teachers may still be forming their opinions, since PFP is a relatively new topic. Nonetheless, due to the relatively high response rate and the demographic distribution of responses, we expect that the survey is largely representative of teacher opinions in the district at this point in time.

⁴⁹ We asked for survey responses via an email forwarded by the superintendent to all MVWSD teachers. We assured teachers of the anonymity of their responses in order to foster an environment that encouraged them to freely express their opinions. However, it is possible that some teachers censored certain answers to caution against the district making decisions based on the results.

⁵⁰ For our survey solicitation email, the survey's open-ended responses, and its questions and responses, see Appendices F, G, and H.

⁵¹ The teachers were referred to us by the president of the district's teachers' union.

⁵² The survey, conducted electronically with SurveyMonkey, received 108 visitors, 101 of whom "completed" it. We removed six sets of responses where the teacher stopped before answering many questions, but retained one "unfinished" set where the teacher had clearly answered most of the questions. We calculate the response rate based on the *current* number of teachers, 247, told to us by the superintendent.

⁵³ Demographic statistics are discussed in more detail in Appendix H.

Pay-for-Performance Areas of Effect in MVWSD

Each PFP program has been adopted with the goal of achieving objectives like increasing student achievement or rewarding effective teachers. As discussed in Phase I, we focus on five areas that PFP systems are believed to have the potential to effect: student achievement, teacher recruitment, teacher retention, filling hard-to-staff positions, and changing teaching practices. By combining our previous findings with MVWSD characteristics, we assess whether a PFP program in MVWSD would have much, if any, impact on the five areas. We also note the district's need and desire to have an effect on those areas. Based on this assessment of the effects of PFP and the needs of the district, we determine whether the district should consider a PFP program at this time.

Student Achievement

Evidence from the case studies suggests that PFP has a minimal effect on increasing student achievement. Two studies found no effect on student achievement while five found low or very low effects. However, the studies do not indicate that PFP *hurts* student achievement, and as we discussed earlier, some international evidence suggests PFP can help student achievement.

In examining MVWSD, we find that there is room to improve student achievement. As mentioned earlier, low socioeconomic students average only a 50% proficiency rate on standardized state tests and significant portions of some schools are not meeting adequate yearly progress (AYP). We also find that most principals and teachers are not confident in the ability of a PFP system to increase student achievement. Multiple principals think that a PFP system might increase student achievement, but said it would have to use more than just test scores to measure their achievement.⁵⁴ In addition, 73% of teachers do not think that PFP would “increase student achievement.”⁵⁵

⁵⁴ Additionally, when we gave principals an open-ended opportunity to decide how they thought student achievement could be improved at their school, they did not reference PFP as an option. Instead, principals suggested things like a reduction in class size and improving teacher instruction to fit the needs of changing demographics.

⁵⁵ This percentage includes the number of respondents who chose both “strongly disagreed” and “disagreed.” Note that for most of our survey questions, respondents were asked whether they strongly agreed, agreed, disagreed, or strongly disagreed. Throughout the rest of the report, we will combine respondents who agreed and strongly agreed as well as combine respondents who disagreed and strongly disagreed. If there is a noteworthy percentage of respondents who *strongly* agreed or disagreed we will indicate that as well. For a full breakdown of all the responses, see our survey results in Appendix H.

Since the domestic research does not point to significant achievement gains, we do not recommend MVWSD implement PFP at this point *as a means to improve student achievement*. If future research begins to indicate otherwise and MVWSD decides to pursue a PFP system, it will be important for the district to communicate to teachers the demonstrated positive effects on student achievement, because most of them currently do not think PFP would help in that area.

Teacher Recruitment

Only a couple of the case studies examine the effects of PFP on teacher recruitment. Of those two, we determine that one indicates a small effect and the other a medium effect.

In addition to this little amount of support from the literature regarding PFP effects on teacher recruitment, the school district does not appear to currently have a problem with teacher recruitment. Our interviews with principals indicated that they are able to easily hire teachers if needed. There is a formal job posting and selection process, but a position can usually be filled very quickly. Recent teacher recruitment efforts have been made even easier by the poor economy and California's 12.3% unemployment rate.⁵⁶ However, we would like to caution that even though recruitment is not a current problem, future economic conditions could cause recruitment issues.

MVWSD teachers are split on the effect of PFP on recruitment – a small majority of 53% agrees that, “if teachers received bonuses for being highly-effective, it would make MVWSD more attractive to new teachers.” However, it might be difficult for teachers who are currently employed by the district to see the potential attractiveness of PFP through the perspective of someone applying for an available position.

A key component of teacher recruitment is a district's attractiveness compared to nearby districts. Two principals report that MVWSD is competitive in hiring high-quality teachers, but that it can be difficult to compete monetarily with other districts. Historically, MVWSD has had a lower base salary but better health benefits than nearby districts. Sometimes, applicants might not be aware of the extra benefits or they might

⁵⁶ "Unemployment Rates, California LaborMarketInfo." *Educational Development Department, State of California*. N.p., n.d. Web. 24 Feb. 2011. <<http://www.labormarketinfo.edd.ca.gov/?pageid=1006>>.

prefer a higher salary to better benefits, which makes it difficult for the district to compete solely on the basis of salary schedules. Therefore, PFP's bonus payments could help bring the district closer to compensation parity. For recruiting purposes, however, it may be more effective to use those extra funds for increasing beginning salaries rather than PFP bonuses.

Considering that the current literature gives little indication that PFP has an effect on teacher recruitment and that teacher recruitment is not a current concern for MVWSD, we presently recommend that the district not pursue a PFP program for recruitment purposes.

Teacher Retention

The current literature demonstrates that PFP has at best, a marginal effect on teacher retention. Three of the case studies do not examine teacher retention, and of the ones that do, we determine that four studies indicate very low or low effects, and only two indicate medium effects.

Mountain View Whisman School District does not have a consistent problem with teacher retention. The principals do not indicate an abnormal number of teachers leaving.⁵⁷ Additionally, we find that current district compensation systems around the area incentivize teachers to *stay* in a district after working there for 7-8 years.⁵⁸ If teachers transfer into another district after this time period, they effectively receive a pay cut because they must restart accumulating the higher pay associated with years of seniority.

Given the incentive in the compensation structure to stay in the district after 7-8 years of teaching, we only asked MVWSD teachers whether they would stay in the district during their earlier years of teaching if the district incorporated a PFP system. The teachers responded with mixed opinions. A majority (58%) disagrees that they, themselves, "would be more likely to stay in the district in [their] first few years of teaching if they received bonuses for being highly effective." However, a similar number (55%) would also "support a PFP system that awarded bonuses ... to teachers who

⁵⁷ Mainly, principals said teachers usually leave for family reasons, i.e. having and raising children.

⁵⁸ This timeframe was provided by the in-depth discussion with two MVWSD teachers.

remain in MVWSD for their first 3-5 years.” Though question wording clearly affected the responses, there was not a large majority of teachers favoring or against PFP to retain teachers in their early years.

Taking into account that the literature does not definitively support PFP as a means to retain teachers and MVWSD does not have significant retention issues, we do not presently recommend MVWSD adopt PFP to address teacher retention.

Hard-to-Staff Positions

The literature is thin on whether a strict performance-based system could help with filling hard-to-staff positions. Only four of our case studies examine the subject and most often find a low effect. One study, ProComp, uses a system design that gives a *salary* increase to teachers for filling hard-to-staff positions, except it does not take *performance* into account when awarding the extra pay. However, the study showed a low effect on filling hard-to-staff positions.

In MVWSD, three of the principals we spoke with reported that they do have certain positions that can be more difficult to fill, like special education, certain grade levels or subjects, depending on the school.⁵⁹ Our discussion with the two MVWSD teachers also touched upon the fact that some of the schools in the district are more difficult to teach in, due to their student demographics, which can subsequently sometimes discourage teachers from working in those schools.

Teacher opinion within the district was mixed on whether a PFP system would help fill hard-to-staff positions. In the survey, small majorities of teachers reported that they would be more likely to teach in hard-to-staff positions (51%) and that they would support a system that awarded bonuses to teachers who filled these positions (57%). However, teachers could have interpreted our question wording to mean that bonuses are given simply for *moving* to that position, which is not strictly *pay-for-performance*.

Generally, there is thin literature on whether *pay-for-performance* can help fill hard-to-staff positions. Also, because the survey results have potentially multiple interpretations, we do not currently recommend the district use PFP for its hard-to-staff

⁵⁹ Some hard-to-staff positions might require extra training, like special education. If there is a shortage of teachers with the necessary training, PFP might not be useful.

needs. Although, since ProComp provides an example of another form of pay incentives that might help with staffing issues, and since many teachers are open to bonuses for filling hard-to-staff positions, the district might want to explore payment options that are not related to performance.

Teaching Practices

Many of our case studies find an effect of PFP on teaching practices, seeming to indicate that PFP can encourage teachers to spend more time engaging in activities such as utilizing assessment data, instructional planning, tutoring, and participation in professional development.⁶⁰ Two studies do not measure teaching practices, but we determine that four demonstrate a “medium” change while one shows a “high” amount of change and one, “low.”

Since teachers use a wide variety of methods, we did not broach the specifics of how MVWSD teachers go about their work in the teacher survey or principal interviews. Instead we focused on whether a PFP system might change how teachers teach.

The district is currently not overly optimistic about PFP as a means to encourage improvement in teaching practices. Only 35% of district teachers said that the possibility of a bonus would motivate them to seek out more ways to improve their teaching practices. Additionally, teachers were pessimistic about how PFP might specifically affect collaboration: 67% thought it would *not* lead to more collaboration and 68% thought it would create counterproductive competition.⁶¹ One principal was worried that PFP would create competition, while another expressed the concern that it would need to be structured in a way that takes collaboration into account.

Though the case study literature indicates that PFP can encourage teachers to change their teaching practices, MVWSD teachers appear to think the changes would not be positive. Furthermore, since we do not examine the types of practices that might be encouraged, we cannot speak qualitatively about the merits of those changed teaching practices, especially since the effects of PFP on student achievement were low.

⁶⁰ These examples in particular were mentioned in the TEEG study.

⁶¹ Almost all teachers (95%) said they currently get along well with each other.

Therefore, we do not recommend MVWSD implement PFP as an incentive for teachers to change their teaching practices at this time.

Areas of Effect: Conclusion

Our collection of case studies suggests that PFP has a minimal effect on student achievement and that it can change teaching practices. The few studies that address teacher recruitment, retention, or filling hard-to-staff positions provide little evidence that PFP can help with those areas of effect. Most importantly, since there are only nine studies, our findings about the effects on achievement and teaching practices are preliminary. Therefore, the case studies provide inconclusive evidence that PFP increases student achievement, recruits and retains more teachers, fills hard-to-staff positions, or improves teaching practices. Given the state of the research at this time, we do not encourage the district to implement a PFP system to address these issues at this time.

However, if more persuasive research or information on the ability of PFP to positively affect these areas emerges, the district should reconsider a PFP system as a policy option. A PFP system may be able to help with some of the issues the district currently faces, namely student achievement and filling hard-to-staff positions. If the district later develops issues with teacher recruitment or retention, PFP may be able to help address those concerns as well.

Pay-for-Performance System Design in MVWSD

Even though the evidence does not point to implementing a PFP system right now in MVWSD, future evidence might do so. Because the prevailing literature and case studies already indicate PFP is best administered with a bonus system, we will explore teacher support for four system design elements the district should consider if adopting a PFP system in the future: measures of performance, groupings of award recipients, award amounts, and professional development opportunities.

Measures of Performance

Most of the case studies use student test scores to measure teacher performance, though some also use measures like teacher evaluations or the ability to meet a preset

goal. Currently, MVWSD uses two types of performance measures that could be used in a PFP system – student test scores and principal evaluations. For test scores, the district uses a variety of state and district generated assessments. For principal evaluations, the district has created a formal rubric for principals to use and teachers are evaluated every other year. The principals we spoke with also mentioned the use of informal methods to evaluate teachers, such as walking through classrooms and talking with students.

We gauged teacher opinion on different measures of performance in two ways: we asked teachers what measures they thought were the most “appropriate measures of teacher effectiveness” and whether they “would support a pay-for-performance system that awarded bonuses based on” the different measures. Regarding how “appropriate” the measures are, the teachers overwhelmingly (95%) believe principal evaluations are appropriate, while many also said that *gains* in student test scores (71%) and evaluations conducted by peer teachers (68%) would be appropriate. On the other hand, the majority of teachers do *not* think that student test scores (69%), parent evaluations (64%), National Board Certification (62%), or student evaluations (55%) are appropriate measures of teacher effectiveness.

As for teacher “support” of different performance measures, a majority (58%) favors a PFP system that relies on principal evaluations. Small majorities would *not* support systems that relied on gains in test scores (53%) or peer-teacher evaluations (53%). Larger majorities would also not support systems that relied on student or parent evaluations (84% and 80%), test scores (79%), or obtaining National Board Certification (62%).

In conclusion, the district’s teachers appear to most often trust that their principals would be good evaluators of teachers’ effectiveness in a PFP system, though the district’s teachers were also somewhat receptive to gains in student test scores and peer evaluations.⁶²

Groupings of Award Recipients

Regarding groupings of award recipients, we asked teachers for their preferences in two ways. First, we asked them to state their support for using various groupings to

⁶² Note that only 56% of teachers think it is “fair to hold teachers accountable for student achievement.”

award bonuses (i.e., individual teachers, teams of teachers by grade level or subject matter, and the entire school). Then we also asked whether they would support systems that gave awards to different groups for meeting “learning goals.”⁶³

More teachers indicate a preference for bonuses awarded to an entire school than for bonuses awarded to individual teachers, teams of teachers, or the entire district. Specifically, 62% of teachers say they would support a system where “all teachers in a school receive a bonus for reaching school-wide learning goals” though majorities also support bonuses to all teachers in the *district* for reaching district-wide goals (56%) and to all teachers within a school’s *grade/subject area* for reaching grade/subject learning goals (54%).⁶⁴ Fewer teachers say they would support the various systems when we word the questions based on “groupings” and not “learning goals,” though the relative rankings of their preferences are similar.⁶⁵

Additionally, majorities say they would support a PFP system that awards bonuses to teachers in two other group types discussed previously: to those who staff hard-to-staff positions (57%) and to those who remain in the district for their first 3 to 5 years (55%).

Thus a majority of teachers in MVWSD prefer a PFP system that distributes awards to groups, rather than individuals. However, we caution that it might be better for bonuses to be distributed based on subject or grade rather than to the entire school, even though teachers expressed slightly different preferences. We say this because, from our review of the case studies, the New York City School-Wide Performance Pay Program indicates that school-level groupings cause diffused responsibility in the teaching staff, making little impact on student achievement.⁶⁶

⁶³ For example, the question wording asked them how much they would support a PFP system where “All teachers in a school receive a bonus for reaching school-wide learning goals” or where “all teachers in the district receive a bonus for reaching district-wide learning goals.” For all question wordings, see Appendix H.

⁶⁴ A sizable minority of 46% also support bonuses to individual teachers for reaching classroom learning goals.

⁶⁵ Specifically, when we ask if they “would support a PFP system that used the following groupings to award bonuses, 49% agree with “the entire school,” while fewer agree with “individual teachers” (44%), “teams of teachers by grade level” (37%), and “teams of teachers by subject matter” (35%).

⁶⁶ Goodman, Sarena, and Lesley Turner. "Study Provides Evidence That the New York City Bonus Program Did Not Lead to Marked Gains in Student Achievement." *Education Next: A Journal of Opinion and Research about Education Policy*. Education Next, 03 Feb. 2011. Web. 13 Feb. 2011. <<http://educationnext.org/study-provides-evidence-that-the-new-york-city-bonus-program-did-not-lead-to-marked-gains-in-student-achievement/>>

Amount of Awards

We asked teachers to volunteer an annual bonus amount that would do each of the following: incentivize them to “seek out more ways to improve [their] teaching,” to make them feel “that the quality of teaching is being rewarded,” and “to improve student achievement” at their school. Though the response distribution differs slightly between the questions, the range of bonus amounts corresponds roughly with the examples in the case studies – of the teachers who report non-zero amounts, most range from \$500 to \$10,000.⁶⁷ When asked what amount might encourage a change in their teaching practices or increase student achievement, half of the teachers volunteer amounts greater than \$0 but less than \$3,000, while 75% suggest \$5,000 or less. Teachers also report higher amounts, on average, when asked how much would make them feel their “quality of teaching is being rewarded.”

It is important to note, however, that 15-26% of the responses to the three questions indicate a value of \$0. We do not believe that a \$0 response necessarily indicates that teachers believe bonuses would not impact their behavior; but rather, it could indicate general disagreement with PFP as a concept and/or disagreement with the question wording itself. It is also noteworthy that these survey results concerning bonuses are less reliable than the rest because 40% of the teachers abstained from responding.⁶⁸ See Appendix H for a breakdown of the bonus amount responses for each question.

Based on the comparatively low response rate and variable interpretations of responses, we do not recommend the district base any decisions of bonus amounts on these reported amounts. However, one useful takeaway is that the survey indicates MVWSD teachers might be receptive to bonuses around \$3,000.

Professional Development Opportunities

As discussed in Phase I, professional development can take many forms, but opportunities to improve one’s teaching need to be made available to teachers who do not initially earn awards.

⁶⁷ We received four responses of \$20,000 and one of \$15,000.

⁶⁸ The percentages discussed in this section only refer to the number of teachers who gave responses of dollar amounts to these questions. We do not consider the ~40% who did not respond in our calculations.

The Mountain View Whisman School District already incorporates a pay incentive for a form of professional development, though it is one that is not necessarily linked to improving one’s teaching: earning graduate degrees regardless of subject matter.⁶⁹ Teachers appear to recognize that this incentive does not achieve its desired aim: only 36% think teachers with “advanced degrees are generally more effective at teaching” than those without them.⁷⁰

However, we find that most teachers are not very receptive to the idea of linking pay increases to additional professional development opportunities. When asked whether a bonus would “motivate [them] to seek out more ways to improve [their] teaching practices,” only 35% of teachers agreed that it would. It is possible that we asked the question in a very broad manner—if we had specified certain professional development opportunities, more teachers might have supported pay increases, especially because just under half (46%) of the teachers say they are “satisfied with the district’s current “step and column” teacher compensation system.”⁷¹

Unfortunately, since we did not look in depth into types of professional development options, we cannot recommend certain ones over others. But it appears that pay-for-performance might not motivate MVWSD teachers to pursue professional development at this time.

System Design in MVWSD: Conclusion

Based on the survey results regarding system design, teachers most favor principal evaluations as measures of performance, though many also support gains in test scores and peer teacher evaluations. Teachers also favor awarding bonuses in groups, specifically at the school-wide level, and majorities support awards for teachers in hard-to-staff positions and those in their earlier years of teaching. Of the teachers who reported award amounts, most indicated a preference for bonuses under \$5,000. Finally, a majority of teachers did not indicate that a PFP system would encourage them to engage in more professional development.

⁶⁹ The district’s salary schedule awards higher salaries for obtaining certain amounts of graduate units, but it does not distinguish between field of study.

⁷⁰ Also note that 86% of teachers say they are not “paid appropriately for the amount of effort [they] put into [their] work.” This was the one question they feel the most strongly about – 47% “strongly disagree” that they are paid appropriately.

⁷¹ “Step and column” refers to the district’s salary schedule based on years of experience and graduate units earned.

PHASE III: ROADMAP For MVWSD

Looking ahead to possible PFP implementation for MVWSD

In this report, we have shown that few definitive conclusions can be drawn regarding PFP's effectiveness from the domestic case studies. We have also shown that MVWSD teachers are split in their support for a PFP system. Thus, we do not recommend implementing a PFP system at this time.

However, we still believe MVWSD should keep PFP in mind as an option in future years for a number of reasons. First, future studies of domestic PFP programs may provide evidence of PFP's effectiveness. In addition, there is support for the general principles behind PFP. At a very basic level, regardless of sector, adding some performance-contingent component to the salary schedule has been shown to have beneficial effects on the individual's performance such as productivity gains.⁷² More specifically, numerous education studies conducted on the value-added system of evaluating teacher performance conclude that even when controlling for differing variables such as demographics of the student body, grade level, and student ability, teachers are found to add drastically different levels of value to a student's education.⁷³ The logic is that, if all teachers are paid exactly the same, salary equity is maintained at the expense of encouraging higher quality teachers to stay in the profession and maintain a high quality of work.

International examples also show beneficial effects of PFP policies in education. Since PFP is an older concept in other countries than in the United States, data demonstrates a more complete picture of educational effects attributable to PFP. Studies show that countries that use PFP yield significantly higher student achievement than in countries that do not,⁷⁴ and specific case examples of PFP systems in Indian and Israeli schools echo these results.⁷⁵ Additionally, in the U.S., the implementation of a PFP system in the New Plymouth School District (NPSD) in New Plymouth, Idaho appears to

⁷² Lazear, Edward P. "Performance Pay and Productivity." *The American Economic Review* 90.5 (2000): 13461-361. 27 Aug. 2006. Web. 6 Mar. 2011.

⁷³ Hoxby, Caroline M., and Sonali Murarka. "Charter Schools in New York City: Who Enrolls and How They Affect Their Students' Achievement." *NBER WORKING PAPER SERIES* 14852 (2009). Print.

⁷⁴ Ibid. Woessmann, Ludger. (2011).

⁷⁵ Ibid. Muralidharan, Karthik, Sundararaman (2009).

have caused substantial increases in student achievement as well as an increase in teacher collaboration and morale, according to NPSD Superintendent, Ryan Kerby.⁷⁶

For these reasons, we suggest steps for the Mountain View Whisman School District to take if strong evidence of its effectiveness in the U.S. later becomes available. Although we do not advise implementing a PFP system in the district now, we proffer several recommendations for initiating a conversation about PFP systems, and address important components to consider in the discussion. We have broken down our suggestions into the following three categories: teacher involvement, system design, and financial considerations.

Teacher Involvement

Because PFP is a complex concept and has yielded conflicting and controversial results in the past several years, increasing awareness amongst teachers and principals is extremely important to initiating any productive conversation regarding PFP systems. In fact, research from our literature search recommends that employees be involved in the design process to ensure buy-in, because if they do not like the system they will not change their work.⁷⁷

We offer two suggestions for increasing awareness and engaging teachers in the discussion. One recommendation is to include links on the MVWSD website to apolitical websites detailing the exact purposes and components of any PFP system. The Oregon School Boards Association provides a good example of such an information resource platform.⁷⁸

Second, we suggest inviting all teachers and school administrators to participate in an open forum discussion on the topic to voice their concerns. Through our district research, we learned that some of MVWSD teachers and administrators' concerns regarding PFP include its effectiveness in addressing student achievement, the undesirable competitive behavior it might cause amongst teachers, and inequity in

⁷⁶ The district went from the lowest performing quartile for state-tested reading levels to the first in the state after the implementation of PFP. However, we did not find impartial third-party evaluations.

⁷⁷ Zingheim, Patricia K., and Jay R. Schuster. *Pay people right!: breakthrough reward strategies to create great companies*. San Francisco: Jossey-Bass Publishers, 2000. Print.

⁷⁸ "Performance pay resources." *Oregon School Boards Association*. N.p., n.d. Web. 26 Feb. 2011. <http://www.osba.org/Resources/Article/Employee_Management/Performance_Pay_Resources.aspx>.

teaching students from a wide range of backgrounds. This type of forum will be fruitful for learning about and addressing concerns such as these, as well as communicating and developing the whole district's exact goals and expectations for PFP.

System Design

The following recommendations regarding designing a PFP system are largely based on our conversation with Idaho's New Plymouth School District Superintendent, Ryan Kerby, who shared his thoughts on important elements of a successful system. We decided to model our recommendations after Superintendent Kerby's accounts because no reports comprehensively describe the entire PFP implementation process of a successful program that has been monitored for a long time post-implementation (i.e., eight years). For NPSD, reading levels measured by standardized testing rose from the lowest performing quartile to the first in the state after implementing a PFP system. Although other factors may have contributed to it is difficult the district's successes, Superintendent Kerby is certain that PFP played a significant role.

However, despite the success of NPSD, we also recognize that any successful PFP system needs to be homegrown: what works for New Plymouth, Idaho will not necessarily work for Mountain View, California. Thus, we make our following recommendations in the context of our previous findings regarding MVWSD. Specifically, each recommendation will be based on NPSD's experience and our past findings.

In this section, we introduce four additional design elements for MVWSD to consider. Note that in the earlier sections of the report, we discussed five important system design elements that were identified in the literature. Those elements were *vehicle for award*, *groupings of award recipients*, *measures of performance*, *amount of awards*, and *professional development opportunities*.⁷⁹ In this section, we address system design elements that were not identified in the literature. If MVWSD considers a PFP system in the future, we recommend they consider our findings regarding the four system design elements in this section as well as the five elements we previously discussed.

⁷⁹ All but "vehicle for award" were addressed in Phase II because the literature was comparatively conclusive on the preference for bonuses over comprehensive salary increases in implementing PFP systems.

First, due to MVWSD teachers' general skepticism about PFP⁸⁰ and Superintendent Kerby's own experiences, if MVWSD decides to implement a PFP system, it should first conduct a "**pay-for-performance system test run**" with one school where the majority of teachers show interest in trying out the program. If the program is successful, the district can promote and expand it to all schools in the district.

Another important aspect to consider within system design is the preservation of the **teacher's autonomy** in the classroom. Although our survey does not directly address the issue, Senior Hoover Fellow Eric Hanushek and MVWSD district officials emphasized that autonomy is an important and highly valued element of the teaching profession.⁸¹ Therefore, any successful PFP program should allow teachers to *set their own performance targets*. Additionally, based on NPSD's experience, Superintendent Kerby recommends that the targets be evaluated and adjusted by a committee composed of experienced teachers, school administrators, district officials, and other highly experienced education leaders.⁸²

Conversations on system design should also include a **sliding scale bonus**. Pay-for-performance bonuses and incentives should not be an "all or nothing" effort. Throughout our conversation, Superintendent Kerby stressed the importance of also rewarding teachers for increasing their efforts, *even if they do not completely meet their targets*. This means structuring rewards on a sliding scale that varies based on how close a specific teacher gets to his/her set target. Even if a teacher maintains his or her current performance level, he or she should still be rewarded. The rationale behind this recommendation is that PFP should not be used to highlight when a teacher fails to meet 100% of the target. Instead, it should be used to recognize and reward teaching that works, thus incentivizing teachers to repeat successful methods. By rewarding a teacher who partially meets his or her goals, the teacher will be incentivized to repeat the methods that led to this partial success and be motivated to experience greater gains in the future.

⁸⁰ Survey results show that very few teachers neither *strongly* agree nor *strongly* disagree with the idea of PFP systems. When asked in our survey for their overall support of a PFP system, MVWSD teachers expressed a mixed opinion. A small majority said they would not support it (52%), half of which strongly hold that opinion. In contrast, only 2% of teachers who favored a potential PFP system favored it strongly. Furthermore, only 31% believe PFP "would reward the most effective teachers."

⁸¹ Hanushek, Eric. Personal interview. 19 Jan. 2011.

⁸² For more information on NPSD's Oversight Committee, see Appendix B

Finally, when implementing new PFP systems, teachers should feel they have **ample support** from the district and school. When asked about difficulties teachers cited after PFP was implemented, Superintendent Kerby mentioned that teachers encountered many classroom and student body characteristics that affect student achievement and performance measures that are beyond their control. MVWSD officials cited similar concerns about PFP systems. Therefore, we suggest that the district think carefully about the professional development opportunities “design element” and provide ample support to teachers who do not meet their targets in consecutive years. This element will also help teachers who take on hard-to-staff areas. Principals, superintendents, and teachers should engage in conversations to discover what resources, tools, and advice different teachers need.

Financial Considerations

Pay-for-performance systems require funds in excess of current budgets for teacher salaries; therefore, if MVWSD considers a PFP program, it will need to explore additional funding sources. Potential sources include: a possible increase in property tax revenue from the Shoreline Community,⁸³ expected future reimbursements from the state, grants from the Department of Education (e.g., Race to the Top⁸⁴), and private foundation grants (e.g., The Bill and Melinda Gates Foundation).⁸⁵

Funding from these sources could be used to cover PFP bonus payouts. As previously noted, roughly 75% of teachers reported a \$5,000 bonus or lower to be the optimal bonus amount to potentially reach PFP goals.⁸⁶ To estimate a PFP program cost-range, we took the 75th and 50th percentiles of the teacher survey statistic (\$5,000 and \$3,000) and the bonus amount awarded by NPSD, which is located on the low end of the award spectrum (\$1,000). We then multiplied each amount by the total number of MVWSD teachers (236), which assumes that every teacher receives a bonus.⁸⁷ This

⁸³ "Mountain View Online: Parents seek larger slice of Shoreline taxes." *Mountain View Online*. N.p., n.d. Web. 26 Feb. 2011. <http://www.mv-voice.com/news/show_story.php?id=3894>.

⁸⁴ This is pending federal funding approval.

⁸⁵ Past PFP system programs have relied on federal, state, and foundation grants. For a list of funding sources used by other PFP programs, see Areas of Effect Matrix in Appendix C.

⁸⁶ On a sliding scale bonus system, these amounts would be the maximum caps

⁸⁷ Although our case studies did not uniformly report the percentage of teachers who received bonuses, conversations with Kerby informed us that most teachers buy into PFP systems if most receive some bonus amount after implementation.

method yields a high, medium, and low cost estimate for a PFP system: \$1,180,000, \$708,000, and \$236,000. This is an initial range that MVWSD can use in its estimates should it consider implementing a PFP system in the future.⁸⁸

Closing

The advantage of the controversial nature of PFP is that ideas, criticisms, and suggestions are constantly being generated on the design of an optimal system. If MVWSD considers a PFP system in the future, we expect that it can use the takeaways from this report and any future research findings to begin fruitful discussions on creating a narrowly tailored and homegrown program that helps to effectively address the needs of the district.

⁸⁸ Please note that this cost range only includes bonus payout and does not factor in costs associated with program implementation and maintenance.

APPENDIX A: NEW PLYMOUTH SCHOOL DISTRICT PFP

PFP That Works

We conducted a phone interview with the Superintendent of New Plymouth School District in Idaho, Ryan Kerby. For the past eight years, New Plymouth has had some form of PFP in its district. Since its introduction, the district has gone from the bottom quartile in reading to the top performing in the state, and has risen its ranking in other academic areas. Below please find more information regarding the program:

PFP Origins in New Plymouth

A handful of teachers within the district were interested in testing the concept. In collaboration with the Superintendent, they created a pilot program. When the program started yielding positive results, it was expanded within the district and now every school in the district participates.

PFP System Design

Teachers have the opportunity to earn up to a \$1000 bonus each school year for meeting annual testing goals. At the start of each school year teachers in the same grade level (elementary) or subject area (middle school and high school) meet together to create a testing goal⁸⁹ to try and meet within the next school year. Teachers submit their goals to the principal who then forwards them onto the Superintendent. Once received by the Superintendent, the Performance Pay Oversight Committee⁹⁰ for review. The Committee reviews, revises when necessary, and approves goals to ensure that all groups are facing the same level of difficulty. At the end of the year, test results are reviewed and teacher groups are awarded on a sliding bonus scale.⁹¹

⁸⁹ Testing goals may include, but are not limited to: an increased percentage of students who test proficient, an increase in the tested average, etc.

⁹⁰ The Oversight Committee consists of three teachers, (one per school), the superintendent, and two school board members. At least two of the teachers shall be union members.

⁹¹ If 100% of the goal is reached, all teachers receive the full bonus amount, \$1000. If the goal is met partially, the teachers are awarded a portion of the award. Increments should be determined to be consistent across grade levels and subject areas determined to be consistent across grade levels and subject areas.

What tests are used?

Teachers, in collaboration, create annual performance goals. The teachers then receive the full bonus amount, or a portion of the bonus, depending to what degree they met their goal. To evaluate whether or not the goal was met, the district uses the statewide test (for tested subject, end of the course assessments (EOC) for non-tested subjects, and a district performance rubric for elective courses. The rationale for using qualitative assessments as the only form of evaluation is that it offers an objective assessment. Bonuses are determined purely by a score generated by a computer algorithm which removes subjective evaluation factors such as principal or peer evaluations.

Funding

No funds that could be put towards an increase in base salary are used towards the PFP system. Federally awarded, Title II funds are used to finance the program.

PFP Benefits

The use of PFP has led to an increase in collaboration amongst teachers as they work together and share teaching practices to ensure they all reach a common goal. Teachers meet every six week in professional learning communities (PLC) to discuss student performance, group students into similar learning groups, and then discuss how to best increase the performance of each group. Teachers do not work harder, but do work with new strategies and teach in new ways. Additionally, since teachers are all working towards the same goal and are dependent upon each other for success, they support each other with the difficult students. Teachers are more willing to take traditionally low-performing students in their class if the group feels that specific teacher has a special ability to reach those students. Since bonuses are awarded on a group, and not individual basis, the teacher is not penalized for taking traditionally low-performing students in his/her class. The New Plymouth School District has seen an increase in student performance on statewide and district wide assessments.

Why it works

The goal of the PFP program is not to make teachers work harder, most are already working as hard as they can. The goal of the program is to acknowledge and reward teachers who are doing a good job; when teachers are recognized for engaging in behavior that proves to be successful, it incentivizes them to continue the behavior. The system is not a “gotcha” system, but, rather, is an opportunity for to recognize hard-working teachers. It is also designed to provide teachers with the support that they need to meet the goals they set for themselves. If a group of teachers fail to meet their goal, they are not punished, but, rather are asked, *how can we help you reach your goal next year?*

Other Takeaways

For PFP to be successful there must be a sense of trust within the district. The teachers must trust that PFP is a system designed to reward them, not to evaluate them. Additionally, in designing the PFP system, the district should strive to use funds that could not otherwise be used to raise base pay. By doing so, the district will only have to negotiate PFP process⁹² with the union, not finances or performance goals. This ensures consistency in the process.

⁹² Such as the Performance Pay Oversight Committee.

APPENDIX B: NEW PLYMOUTH SCHOOL DISTRICT OVERSIGHT COMMITTEE

Performance Pay Oversight Committee

1. Performance pay oversight committee shall be established which consists of three teachers, (1/school), the superintendent, and two school board members. At least two of the teachers shall be NPEA members.

Duties shall include:

- A) Ensure that Performance Bonuses are equivalently difficult/easy to earn by all individuals and groups (Professional Learning Communities) in the district. Preliminary plans for teachers in each building will be forwarded to the committee each year via the superintendent, and these plans will have been determined by groups of teachers and the Principal. Each building shall attempt to ensure plans are equitable before sending them to the committee.
- B) Set guidelines/rules to govern P4P in the NP school district.
- C) Help ensure that results for which there is pay are reliable and valid.
- D) These “performance bonuses” are a financial acknowledgement of excellence, and/or an encouragement to teachers/PLC’s to step out of the box and try something a little different, &/or for PLC’s to work more closely together. The committee will continually promote these concepts, and NOT, in any way, shape or fashion, use these as “gotcha’s.” This whole concept is for the purpose of encouraging excellence, not irritate folks.
- E) All confidential matters will be kept confidential. This is of particular importance in the area of any individual teacher’s performance.

APPENDIX C: AREAS OF EFFECT MATRIX

Program Name:	Mission Possible	Project On Incentives In Teaching (POINT)	Texas Educator Excellence Grant (TEEG)	Chicago Teacher Advancement Program (TAP)	Hillsborough Merit Pay Program	District Awards for Teacher Excellence (DATE)	Achievement Challenge Pilot Project (ACPP)	ProComp	NYC School-Wide Performance Pay
Study Done By:	Guilford County Schools	NCPI (Vanderbilt)	NCPI (Vanderbilt)	Mathematica	St. Petersburg Times	NCPI (Vanderbilt)	University of Arkansas	University of Colorado	RAND
Location:	North Carolina	Nashville, Tennessee	Texas	Chicago, Illinois	Hillsborough County, Florida	Texas	Little Rock, Arkansas	Denver, Colorado	New York, New York
Years Since Implementation:	1	3	4	0 (still ongoing)	1	2	2	1	3
Basic Program Goals:	To improve school performance to meet AYP; raise student achievement; decrease teacher turnover.	To test if PFP would raise test scores.	State program to fund PFP in high poverty, high performing districts.	To improve student achievement and retain effective teachers.	To reward outstanding teachers, regardless of how advanced or behind their students started out.	State program to fund locally designed PFP systems.	To offer substantial year-end bonuses to teachers based on student improvement on standardized tests.	To link teacher pay to the school district's instructional mission.	To evaluate PFP effectiveness in high need schools.
Funding Mechanism:	U.S. Department of Education funding, along with outside foundations.	An anonymous foundation funded the bonuses; U.S. Dept. of Education funded the study.	State of Texas.	Teacher Incentive Fund Grant from the U.S. Dept. of Education, and private foundation funding.	Foundation funding.	State of Texas.	Foundation funding.	Taxes.	Private foundation funding.

Effect on: Increasing Student Achievement	<i>Very Low-</i> Increase in number of schools meeting AYP, but no significant improvement.	<i>Very Low-</i> Pooled across all years and grades, no effect on test scores. There is a positive effect on 5th graders, possibly because they see the same teacher for all of their subjects.	<i>No Effect.</i>	<i>No Effect.</i>	<i>Not Measured.</i>	<i>Low-</i> Students showed greater gains in DATE schools (though not higher scores).	<i>Medium-</i> ACPP students outperformed non-ACPP students by 7% in math, 9% in language, and 6% in reading. After Year 1, ACPP teachers were more likely than non-ACPP teachers to report improvement in academic performance of their students.	<i>Low-</i> Slight gains (unsure if this is attributable to ProComp, or a selection bias where only teachers who expect to see gains opt into the system).	<i>Very Low-</i> Some increases were seen, but were comparable to increases in control group.
Effect on: Increasing Teacher Recruitment	<i>Not Measured.</i>	<i>Not Measured.</i>	<i>Not Measured.</i>	<i>Not Measured.</i>	<i>Medium.</i>	<i>Not Measured.</i>	<i>Not Measured.</i>	<i>Low</i> – Only affected 1-3% of teachers	<i>Not Measured.</i>
Effect on: Increasing Teacher Retention	<i>Very Low.</i>	<i>Not Measured.</i>	<i>Low.</i>	<i>Very Low.</i>	<i>Not Measured.</i>	<i>Low-</i> Probability of turnover fell among teachers who received an award, but it rose among teachers who didn't receive them. Also, districts with larger rewards saw turnover decrease.	<i>Not Measured.</i>	<i>Medium-</i> The study focuses primarily on hard to staff subject areas. Principals reported that because of the bonus (currently \$1,026) it was easier to retain highly qualified teachers	<i>Medium-</i> Teachers did not leave their positions as much as before the program was implemented.

Effect on: Filling Hard-to-Staff Positions	<i>High-</i> All Hard-to-Staff positions were filled with qualified teachers after implementation.	<i>Not Measured.</i>	<i>Not Measured.</i>	<i>Not Measured.</i>	<i>Low-</i> Offered an additional boost for Hard-to-Staff position teachers	<i>Not Measured.</i>	<i>Not Measured.</i>	<i>Low-</i> Majority of teachers believe additional bonuses should be awarded to teachers in Hard-to-Staff positions, but few would take such a position.	<i>No Effect-</i> Measured ELL and Special Ed students.
Effect on: Changing Teaching Practices	<i>Not Measured.</i>	<i>Low-</i> Less than a quarter of the teachers said they changed their teaching practices.	<i>Medium-</i> Personnel did not find pay-for-performance undermined collaboration. Teachers engaged in additional teaching practices.	<i>High-</i> Increased motivation, collaboration among teachers, and interest in professional development.	<i>Not Measured.</i>	<i>Low-</i> Dependent upon award groupings – more changed their practices with the individual or school-based awards; less changed with team awards.	<i>Medium-</i> Increased attention to low-performing students, and believed they were being more effective.	<i>Medium-</i> Though teachers were motivated to align student learning with ProComp goals, participating in ProComp did not cause teachers to change content; inconclusive if it caused them to change teaching methods. Although, teacher engagement in professional development activities increased.	<i>Medium-</i> Increased collaboration.
General Comments	Successfully implemented because: 1) Constant and	Tying bonuses exclusively to test scores, even if bonuses are	Pay-for-performance can help reduce turnover with	The study is still ongoing. In the first year there was no increase	The study focused more on the flaws of the initial	Student achievement appeared to increase and	This program is recognized across various sources as a	This program uses a mix of bonuses and increases in	The program was stopped because student achievement

	<p>frequent communication with stakeholders from start of program, 2) outcomes indicated effectiveness (evaluation results due to program objectives), and 3) Focused on district's highest needs.</p>	<p>significant, did not increase test scores any more than the control group. It is possible that if a student has the same teacher all day, the bonuses might have had an effect.</p>	<p>larger bonuses. It does not appear to affect student achievement gains. Teachers generally support it and don't find it hurts morale.</p>	<p>in student achievement, but there was an increase in teacher retention. After the 2nd year, there was still no increase in student achievement, and there was no increase in teacher retention.</p>	<p>program, focusing on the importance of ensuring there is an equitable bonus distribution among teachers with high SES and low SES students.</p>	<p>teacher turnover decreased when awards were big enough.</p>	<p>good example of increased student performance due to performance pay. One of the largest challenges facing the district is finding funding to continue the program.</p>	<p>base pay. A large component of this program, which will not be reflected in our study, is an emphasis on professional development.</p>	<p>was not increasing. It was found that dispersion of responsibility to raise test scores lead to very low increases in student achievement.</p>
--	--	--	--	--	--	--	--	---	---

APPENDIX D: SYSTEM DESIGN ELEMENTS MATRIX

	Mission Possible	Project on Incentives In Teaching (POINT)	Texas Educator Excellence Grant (TEEG)	Chicago Teacher Advancement Program (TAP)	Hillsborough Merit Pay Program	District Awards for Teacher Excellence (DATE)	Achievement Challenge Pilot Project (ACPP)	ProComp	NYC School-Wide Performance Pay
Vehicle for Award	Bonus	Bonus	Bonus	Bonus	Bonus	Bonus	Bonus	Salary increase	Bonus
Measures of Performance	Completion of yearly professional development activities, and earning increasing value-added scores.	Gains in student scores on standardized tests.	Mostly used student performance on standardized tests, also used teacher collaboration.	Classroom observations and standardized test scores.	60% state standardized test performance, and 40% performance evaluation.	Not discussed.	Student improvement on standardized tests.	Working in a top performing or high growth school, growth in standardized test scores, and meeting student growth goals.	Test scores (performance and progress), learning environment, attendance, and targets.
Groupings of Award Recipients	Individual	Individual	Combination of individual and team-wide.	Combination of school-wide and individual.	Individual	Combination of individual, team, and school-wide.	Individual	Combination of school-wide and individual.	School-Wide
Amount of Awards	Recruiting Incentives: \$2,500-\$10,000; Performance Incentives: \$2,500-\$5,000.	\$5,000, \$10,000, or \$15,000 (plus \$750 stipend).	Most under \$3,000.	Average in year 1 ('07-'08): \$1,100; Average in year 2 ('08-'09): \$2,653; Range from \$0 - \$6,320.	\$2,100.	District-wide average: \$1,300; School-wide average: \$3,300; Range from \$30 - \$15,000.	Range from \$100 - \$10,000.	1 - 6.4% increase in teacher salary.	Amount equivalent to \$3,000 per teacher for meeting 100% of goals, \$1,500 per teacher for meeting 75% of goals.

Professional Development Opportunities	Workshops on collaboration techniques, undoing racism, differentiated instruction, teacher expectation and student achievement.	Did not extend additional opportunities, though some already existed.	Not directly stated, though 37-57% of teachers reported attending additional professional development, trying new teaching methods, or asking other teachers for help.	Weekly cluster group meetings led by master teacher to develop ways to improve teaching methods and increase student achievement.	Not mentioned.	Were utilized, though the specific opportunities were not explicitly stated.	Not mentioned.	Bonuses could be earned by obtaining professional development units.	Not mentioned.
---	---	---	--	---	----------------	--	----------------	--	----------------

APPENDIX E: MVWSD PRINCIPAL INTERVIEW PROTOCOL

MVWSD Principal Interview Protocol

Hello (Interviewee's Name). First off I would like to thank you for taking the time to speak with me today. I know your schedule is full and appreciate the time you have been able to make for this phone call. In my earlier email, I briefly mentioned the research study I am involved in, but would like to give you some more information now. I am a Stanford Public Policy undergraduate and am part of a team researching the pros and cons of different teacher compensation systems. The Mountain View Whisman School District has been kind enough to agree to participate in our study. The goal of my conversation with you today is to gain a better understanding of what types of problems your school faces, identify your priorities in terms of teacher quality and student achievement, and get your thoughts on issues related to teacher compensation systems. Before we begin, I wanted to remind you that this interview is completely confidential and your responses will not be shared with anyone else outside of our research team. For research purposes, is it okay if I record today's interview?

Thank you. Let's go ahead and proceed.

1. Overall

First I would like to ask you some general questions before we get into specifics.

1. What is the largest problem facing your school in regards to teacher quality?
2. It is my understanding that the current pay system at your school pays teachers based on their level of education and how many years they have been a teacher. What do you think are the pros and cons of this system?
 - a. Do you find this compensation program rewards the most effective teachers?

2. Hiring and Evaluating Teachers

I want to now turn our conversation towards the process the school uses to hire and evaluate teachers.

1. Do you feel you're competitive with other districts in attracting high quality teachers? Why or why not?
2. Do you believe your level of teacher compensation is a large factor in a teacher's decision to work at your school instead of others?
3. What is the average time span between the time you post a position for hire and the time that it is filled?
4. Are there any grade levels or subject areas that you have difficulty staffing?

*** If the principal answers yes, proceed to Q4a, if the principal answers no, skip to Q5.*

- a. Would you say this is a recent trend, surfacing within the last 1-3 years? Or has the school consistently had this staffing problem for more than 3 years?
5. Could you please describe the methods, formal or informal, that you use to evaluate your teachers?
 - a. What methods do you find to be most effective? Which do you find most ineffective? Why?

Teacher Turnover/Retention

I would now like to shift gears and ask you a few questions regarding teacher turnover and retention.

1. Do you have a problem with teacher turnover?
 - a. Would you say this is a recent trend, surfacing within the last 1-3 years? Or has the school consistently had this staffing problem for more than 3 years?

***If principal answers yes, proceed to Q1b. If the principal answers no, proceed to Q2.*

- b. Why do you believe these teachers leave?
 - i. Do you feel this reason is common with other schools in the district?
- c. During what years do you feel teachers most frequently leave? For example, do most teachers leave between years 1 and 2, 3 through 5, or later in years 15 through 20?
- d. From what subject areas do they most frequently leave?
2. What do you feel your school specifically does to avoid a teacher turnover problem?

Student Achievement

I would now like to focus on questions relating to student achievement.

1. In your opinion how can student achievement be best improved?
 - a. If you were presented with an increase and funds that could be used towards one of the following, with the purpose of increasing student achievement, towards which would you allocate the funds and why?
 - i. Creation of an after-school program
 - ii. Bonuses for teachers who increase student achievement
 - iii. Hiring more para-professionals or teaching assistants
 - iv. Hiring another teacher
 - v. Bonus for all of the teaching staff
 - vi. Something else

2. What formal and informal methods does the school use to measure student achievement?
 - a. Is this consistent for every teacher, or do methods of measurement vary?
3. What is your overall opinion of state standardized tests? Do you find them an accurate indicator of student achievement?
4. Is there anything else you believe to be an accurate measure of student achievement?

Closing

In closing I would like to ask you some final questions.

1. What do you think would be the pros and cons of a performance pay compensation system for your district?
 - a. Do you believe a performance pay compensation system would be possible within your district? Why or why not?
 - b. Would you personally support the implementation of such a program?
2. If the school were given extra funds to use towards teacher compensation, what would you use it for?
3. Out of the following choices, what would you want to offer bonuses for? And why would you pick that specific alternative?
 - a. Teachers willing to teach in hard to staff subject areas or grade level
 - b. Gains in student achievement
 - c. Bonuses for everyone
 - d. Increased professional development
 - e. Something else

That concludes the list of questions that I have for you. Is there anything else that you would like to add?

Thank the principal for his/her time and close the interview.

APPENDIX F: MVWSD SURVEY SOLICITATION EMAIL

Dear Mountain View Whisman Teachers,

Thank you for taking the time to participate in this survey. All survey responses will be kept confidential and no tracking of respondents will be made. Survey responses will be used to aid a Stanford Undergraduate Public Policy Research Team in their research of compensation systems in the education sector.

Please reserve 5 - 10 minutes to take the survey and try to answer each question as accurately as possible. There are four pages of questions as well as a space at the end if you would like to leave comments. The survey is at the following link:
<http://www.surveymonkey.com/s/#####>

If you would like to contact our research team, you can send an email to Lucas Johnson at lucaswj@stanford.edu The information from our research will be made available within the next couple months.

Thank you and we appreciate your contribution to our research.

Sincerely,

Lucas Johnson

APPENDIX G: OPEN-ENDED RESPONSES, MVWSD SURVEY

Open-Ended Responses

Tests as an Evaluative Tool	CI⁹³	Co
Test scores are not an accurate measure of teacher effectiveness.	1	0
PFP would encourage teaching to the test and incentivize teachers to cheat.	5	2
Test scores are not an accurate measure of teacher effectiveness.	1	0
PFP would encourage teaching to the test and incentivize teachers to cheat.	5	2
I would support the use of test scores as an evaluative tool only if they were used to analyze student learning <i>gains</i> and not just absolute performance.	4	1
Student achievement is not an equitable evaluation.	1	0
Test scores are not an accurate measure of student achievement on their own	0	5
PFP would encourage teaching to the test and incentivize teachers to cheat.	5	2
Evaluations as an Evaluative Tool		
I would support peer evaluations because teachers have a good idea of what good teaching looks like.	1	0
Peer evaluations have the potential to be bias, but are a good measure.	0	1
Teachers change their teaching habits during classroom visits, more unscheduled visits need to occur.	0	3
The current educational system does not allow for fair evaluations of teachers.	1	2
PFP should include multiple measures of teacher effectiveness.	1	0
Principal evaluations are only helpful if you have a good principal.	1	0
All evaluations will be bias and effective teachers will not be rewarded.	0	1
Principals not effective evaluators because they don't know what are appropriate grade level standards.	0	1
Principal evaluations will be bias.	0	2
Peer, student, and principal evaluations are the most fair (<i>but they require the most time and money</i>).	0	2
Parent and student evaluations will be bias.	3	0
Support for PFP hinges on what is used as an evaluative tool.	0	1
I would support a PFP system based on evaluations.	1	0
Teacher Recruitment		
PFP could attract new talent and make the district more competitive.	1	0
PFP will drive high-quality teachers out of the profession (because they'll have difficult students who don't make as many gains, will become frustrated for not being recognized, and leave).	0	1
Teachers leave MVWSD to go to higher paying districts after being trained.	0	1
PFP would attract new teachers, but does not incentivize current teacher to better their teaching.	0	1
Student Achievement		
PFP would not increase student learning .	3	0

⁹³ "CI" refers to comments made in the clarification section and "Co" refers to comments made in the comments section. These two sections were not added together because a respondent may have made the same comment in each box and we wanted to avoid double counting.

PFP does not take into account factors that influence learning that the teacher does not have control over (SES) and, therefore, student performance is not an accurate indicator of how hard a teacher works.	12	1
There needs to be a way to account for varying student demographics.	0	3
The distribution of students with differing demographics, in the classroom, needs to be better addressed.	0	3
PFP would incentivize teachers to work only in schools or classrooms with high-performing students and avoid poorly-performing, low SES, students.	3	4
Some student's don't progress no matter what you try.	0	1
Teacher Morale		
PFP could decrease collaboration and encourage competition.	0	2
PFP will create a negative teaching environment and there is no way to measure teacher performance, strongly against PFP.	0	1
I teach at two different schools: one is supportive, the other is not.	0	1
Parent Participation		
I would support bonuses awarded to parents who helped increase their student's performance.	2	0
Parents and students should be held accountable for, and need to care about, student performance.	5	2
Bonus Structure		
Money is not a big motivator.	2	4
Some teachers will work harder for more money.	0	1
I am an excellent teacher without being paid more.	0	1
PFP would be ineffective, so I entered \$0 on the bonus amounts.	1	0
PFP bonuses should be determined by a percentage of your salary, not just a fixed amount (<i>I entered \$0 in the bonus question because I believe it should be 3% of the teacher's annual salary</i>).	1	0
My response to the bonus question is in percentages, not dollar amounts.	1	0
My responses for bonus amounts were the following, for the following reasons: \$100 to seek ways to improve teaching (cost of a class), \$40 to feel quality of teaching is being rewarded (overtime pay), and \$0 for increasing student achievement (teachers should already do this).	1	0
An increase in annual salary would motivate teachers more than a bonus.	1	0
I would support school-wide bonuses.	3	0
I would support a bonus for staffing a hard-to-fill position.	2	0
It is insulting to say teachers need to be paid to improve teaching, but compensation may motivate teachers to go the extra mile.	1	0
Extra money should be spent on good staff development (not current lame Pd).	0	1
Bonuses will not solve the problem – challenges occur because of low SES.	0	1
Bonus would need to cover costs of seeking ways to improve teaching (monetizing this is difficult).	0	1
Great teachers need to be compensated.	0	1
Terrible teachers need to be evaluated out, not just to another grade level.	0	1
All teacher's salary should increase to a fair wage.	0	1
Research does not support PFP.	0	1
Survey Structure		
The survey does not allow me to enter a combined grade-level.	1	0

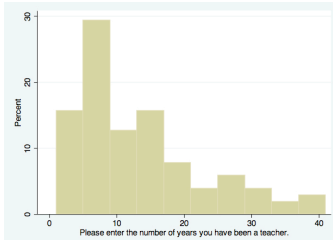
PFP is more complicated than just “agree-disagree” questions.	1	0
Please define performance.	1	0
This is a dangerous survey that does not address all issues.	1	0
The survey should have a “not sure” option	0	3
Other Things to Consider		
Need teacher feedback on administrative effectiveness.	0	1
Tenure needs to be addressed prior to thinking about PFP.	1	0
Teacher workloads should be considered in the model (<i>ex: SpEd teachers must work harder to meet district and IEP goals</i>).	1	0
The district’s current curriculum mandates do not allow for effective teaching and focus on teaching to the test.	1	0
Teachers are already working as hard as they can.	2	0
Stop moving teachers around between grade levels.	0	1
The real problem is lack of resources and training to deal with the effects of poverty.	0	1
Current pay scale traps teachers into a district.	0	1
Effective is a loaded word, what does it mean.	0	1
Need year-round schooling.	0	1
Political Feasibility		
Unions make PFP difficult by making teacher complacent.	0	1
PFP is a bandaid on a broken system.	0	1
Elective Concerns		
How does Special Education fit into PFP?	1	0
Offering grade-level bonuses would further isolate special education.	1	0
Special day classes, with poor assessment measures, would need to be included.	0	1
Teachers in non-tested subjects, electives, would revolt or need to be considered.	0	3

APPENDIX H: SURVEY RESPONSE DATA

Survey Responses - Demographics

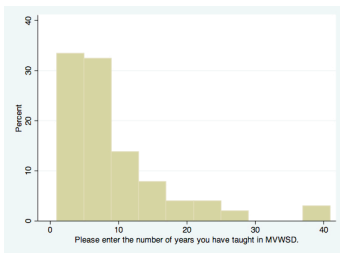
“Please enter the number of years you have been a teacher.”

We allowed an open-ended response to this question. Out of 102 responses, percentage ranges of results are displayed in the following histogram:



“Please enter the number of years you have taught in MVWSD.”

We allowed an open-ended response to this question. Out of 102 responses, percentage ranges of results are displayed in the following histogram:



“Please indicate what grade level you currently teach.”

Teachers could choose between “K-5th” and “6th-8th.”

	K-5 th	6 th -8 th
Number of Responses	61	41
Percentage	60%	40%

“Please indicate your highest level of education.”

Teachers could choose between, “less than a bachelor’s degree,” “bachelor’s degree,” “units beyond bachelor’s,” “master’s,” and “professional degree (PhD, JD, MBA, etc.)”

	Less than a bachelor’s degree	Bachelor’s degree	Units beyond bachelor’s	Master’s	Professional degree (PhD, JD, MBA, etc.)
Number of Responses	0	2	54	44	2
Percentage	0%	2%	53%	43%	2%

“How often do you attend employee association meetings?”

Teachers were asked to choose between, “never,” “rarely,” “sometimes,” and “often.” To try to avoid priming on most survey responses, we asked this question near the end of the survey.

	Never	Rarely	Sometimes	Often	Total
Number of Responses	11	29	41	17	98
Percentage	11%	30%	42%	17%	100%

Survey Responses – Opinions

Question		Number of Responses					Percentage				
		Strongly Disagree	Disagree	Agree	Strongly Agree	Total	Strongly Disagree	Disagree	Agree	Strongly Agree	
For the following questions, please check the box that most accurately reflects your opinion on the statement.	Teachers at my school get along well with each other.	0	5	69	28	102	0%	5%	68%	27%	
	I am satisfied with the current "step and column" teacher compensation system.	18	37	44	2	101	18%	37%	44%	2%	
	Teachers who have more teaching experience are generally more effective at teaching than those with less experience.	8	34	53	7	102	8%	33%	52%	7%	
	Teachers who have advanced degrees are generally more effective at teaching than those without advanced degrees.	5	60	33	4	102	5%	59%	32%	4%	
	I am paid appropriately for the amount of effort that I put into my work.	48	40	13	1	102	47%	39%	13%	1%	
	I have a good understanding of the current system(s) used to evaluate teachers.	1	13	70	18	102	1%	13%	69%	18%	
	The current teacher evaluation system is a fair measure of teacher effectiveness.	10	49	41	2	102	10%	48%	40%	2%	
	It is fair to hold teachers accountable for student achievement.	16	29	54	3	102	16%	28%	53%	3%	
	I would be more likely to stay in MVWSD in my first few years of teaching if teachers received bonuses for being highly effective.	12	47	36	7	102	12%	46%	35%	7%	
	If teachers received bonuses for being highly-effective, it would make MVWSD more attractive to new teachers.	10	38	45	9	102	10%	37%	44%	9%	
How much do you agree that the following are appropriate measures of teacher effectiveness:	I would be more likely to teach in a hard to staff subject area or grade level if I were offered a bonus.	8	42	44	8	102	8%	41%	43%	8%	
	Student test scores	21	48	31	1	101	21%	48%	31%	1%	
	Gains in student test scores	9	21	67	5	102	9%	21%	66%	5%	
	Evaluations conducted by the principal	1	4	85	11	101	1%	4%	84%	11%	
	Evaluations conducted by peer teachers	5	27	59	10	101	5%	27%	58%	10%	
	Having obtained National Board Certification	11	51	34	4	100	11%	51%	34%	4%	
	Evaluations conducted by students	12	43	44	2	101	12%	43%	44%	2%	
	Evaluations conducted by parents	17	48	36	1	102	17%	47%	35%	1%	
	I would support a pay-for-performance system that used the following groupings to award bonuses:	Individual teachers	21	35	39	5	100	21%	35%	39%	5%
		Teams of teachers by grade level	24	38	34	2	98	24%	39%	35%	2%
Teams of teachers by subject matter		21	42	32	2	97	22%	43%	33%	2%	
The entire school		22	29	40	9	100	22%	29%	40%	9%	
I would support a pay-for-performance system that awarded bonuses based on the following:		Gains in student test scores	30	49	20	1	100	30%	49%	20%	1%
	Evaluations conducted by the principal	18	34	45	2	99	18%	34%	45%	2%	
	Evaluations conducted by peer teachers	15	27	55	4	101	15%	27%	54%	4%	
	Having obtained National Board Certification	20	33	44	4	101	20%	33%	44%	4%	
	Evaluations conducted by students	18	44	36	3	101	18%	44%	36%	3%	
	Evaluations conducted by parents	33	51	15	1	100	33%	51%	15%	1%	
	To teachers who staffed hard to staff subject areas or grade levels	33	47	21	0	101	33%	47%	21%	0%	
	To teachers who remain in MVWSD for their first 3 to 5 years	14	30	47	11	102	14%	29%	46%	11%	
	I would support a pay for performance system that awarded bonuses in the following way:	All teachers in the district receive a bonus for reaching district-wide learning goals.	17	29	43	13	102	17%	28%	42%	13%
All teachers in a school receive a bonus for reaching school-wide learning goals.		15	30	49	7	101	15%	30%	49%	7%	
All teachers in a grade level or subject area in a school receive a bonus for reaching grade/subject learning goals.		15	23	56	7	101	15%	23%	55%	7%	
Individual teachers receive a bonus for reaching classroom learning goals.		16	31	50	4	101	16%	31%	50%	4%	
For the following questions, please check the box that most accurately reflects your opinion on the statement:		Individual teachers receive a bonus for reaching classroom learning goals.	19	36	42	4	101	19%	36%	42%	4%
	I think a pay-for-performance system would increase student achievement.	26	47	25	1	99	26%	47%	25%	1%	
	The possibility of a bonus would motivate me to seek out more ways to improve my teaching practice.	28	36	30	4	98	29%	37%	31%	4%	
	I think pay-for-performance programs would lead to more collaboration between teachers.	28	37	30	2	97	29%	38%	31%	2%	
	I think pay-for-performance programs would lead to counterproductive competition between teachers.	9	23	38	28	98	9%	23%	39%	29%	
	I would support some form of a pay-for-performance system in MVWSD.	25	25	45	2	97	26%	26%	46%	2%	
	I believe a pay-for-performance system would reward the most effective teachers.	31	35	27	3	96	32%	36%	28%	3%	

Survey Responses – Questions on Dollar Amounts

Teachers were given an open-ended opportunity to state dollar amounts for three separate questions. Note that many fewer teachers responded to these questions. We also excluded two responses (one teacher answered in % of salary, one teacher answered \$1 million).

The three questions are, *“If a performance-pay system were implemented, how much (\$ amount) would an annual bonus need to be to:”*

“provide a meaningful incentive for you to seek out more ways to improve your teaching.”

“make you feel that the quality of teaching is being rewarded.”

“improve student achievement at your school.”

Frequency tables of responses:

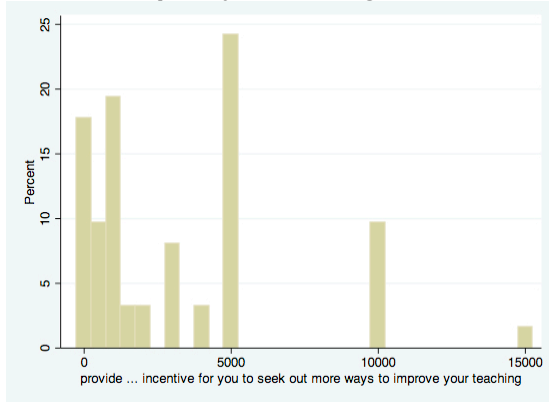
"...seek out more ways to improve your teaching"		
Amount (\$)	Number of Responses	Percentage
0	11	18%
500	6	10%
1000	12	19%
1500	2	3%
2000	2	3%
3000	5	8%
4000	2	3%
5000	15	24%
10,000	6	10%
15,000	1	2%
Total	62	

"...feel the quality of teaching is being rewarded"		
Amount (\$)	Number of Responses	Percentage
0	9	15%
500	2	3%
1000	13	22%
1500	2	3%
2000	1	2%
2500	2	3%
3000	4	7%
4000	1	2%
5000	13	22%
8000	1	2%
10,000	9	15%
20,000	3	5%
Total	60	

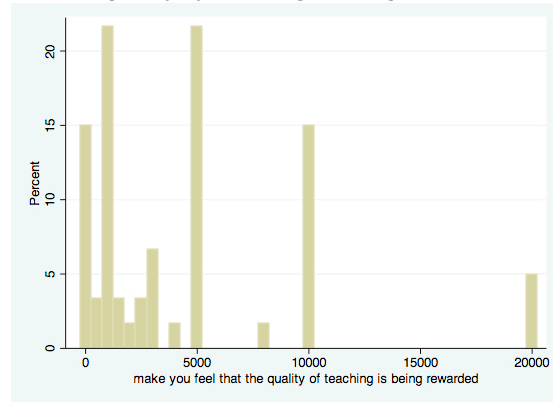
"...improve student achievement at your school"		
Amount (\$)	Number of Responses	Percentage
0	14	25%
500	2	4%
700	1	2%
1000	11	20%
1500	2	4%
2000	3	5%
3000	4	7%
4000	1	2%
5000	12	21%
7000	1	2%
10,000	4	7%
20,000	1	2%
Total	56	

Histograms of responses:

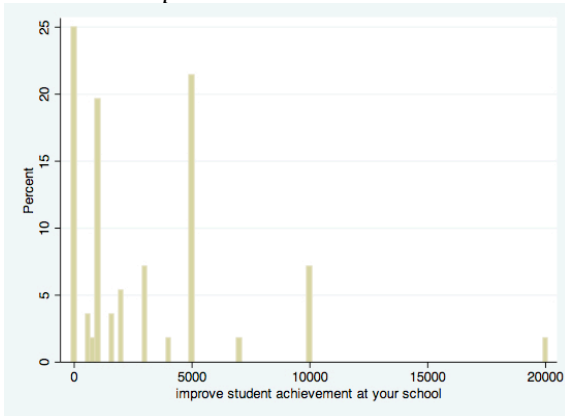
"... improve your teaching"



"... quality of teaching is being rewarded"



"... improve student achievement"



Summary statistics, excluding responses of \$0

"...improve your teaching"

Statistics excluding responses of \$0	
Average	\$3,824
25th percentile	\$1,000
Median	\$3,000
75th percentile	\$5,000
Number of responses	51

"...quality of teaching is being rewarded"

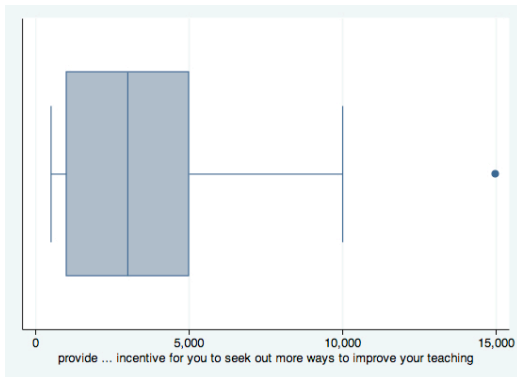
Statistics excluding responses of \$0	
Average	\$5,157
25th percentile	\$1,000
Median	\$5,000
75th percentile	\$8,000
Number of responses	51

"...improve student achievement"

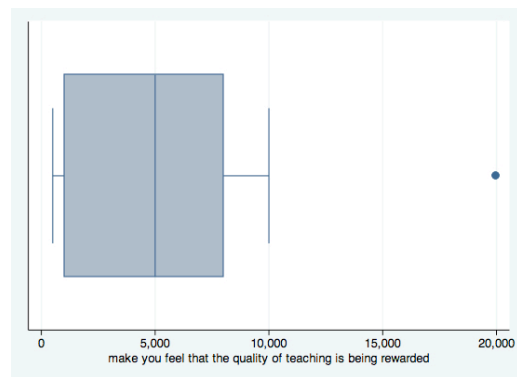
Statistics excluding responses of \$0	
Average	\$3,921
25th percentile	\$1,000
Median	\$3,000
75th percentile	\$5,000
Number of responses	42

Boxplots of summary statistics, excluding responses of \$0

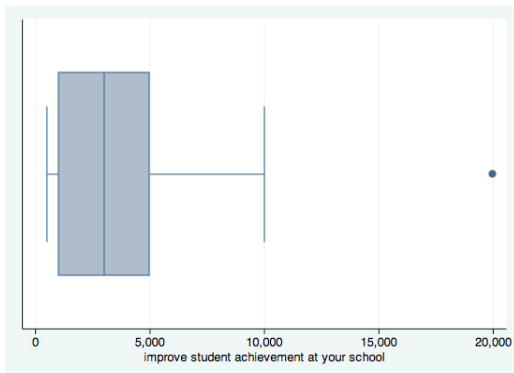
"...improve your teaching"



"...quality of teaching is being rewarded"



"...improve student achievement"



Bibliography

Atkinson, Adele, Simon Burgess, and Bronwyn Crosson. "Evaluating the Impact of Performance related Pay for Teachers in England." Centre for Market and Public Organisation (2004). Print.

Berlet, K. Richard, and Douglas M. Cravens. *Performance pay as a competitive weapon: a compensation policy model for the 1990s*. New York: Wiley, 1991. Print.

Buck, Stuart, and Jay P. Greene. "Interest Groups Wage War Against Merit Pay." *Education Next* 11.2 (2011): 27-31

Duffrin, Elizabeth. "What's the Value in Value-Added?" *District Administration* Jan. 2011: 48. Print.

"Ed-Data Website." Education Data Partnership Home Page. N.p., n.d. Web. 23 Feb. 2011. <<http://www.ed-data.k12.ca.us/Navigation/fsTwoPanel.asp?bottom=/profile.asp%3Flevel%3D06%26reportNumber%3D16>>.

"Eric Hanushek." *Education Data Partnership*. N.p., n.d. Web. 21 Feb. 2011. <edpro.stanford.edu/hanushek/content.asp?contentId=61>.

"Evaluating the Teacher Advancement Program in Chicago Schools." *Mathematica Policy Research Home*. N.p., n.d. Web. 16 Jan. 2011. <<http://www.mathematica-mpr.com/education/tapchicago.asp>>

Flannery, Thomas P., David A. Hofrichter, and Paul E. Platten. *People, performance, and pay: dynamic compensation for changing organizations*. New York: Free Press, 1996. Print.

Glaeser, Edward L. "The Uncertain Impact of Merit Pay for Teachers - NYTimes.com." *Economix*. New York Times, 8 June 2010. Web. 02 Mar. 2011. <<http://economix.blogs.nytimes.com/2010/06/08/the-uncertain-impact-of-merit-pay-for-teachers/>>.

Goldhaber, Dan, Michael DeArmond, Daniel Player, and Hyugn-Jai Choi. "Why Do So Few Public School Districts Use Merit Pay?" Working Paper 2005_5. Center on Reinventing Public Education. 2005.

Goldman, Craig. Personal interview. 7 Jan. 2011 and 2 Feb. 2011.

Goodman, Sarena, and Lesley Turner. "Does Whole-School Performance Pay Improve Student Learning?" *Education Next* 11.2 (2011): 67-71.

Goodman, Sarena, and Lesley Turner. "Study Provides Evidence That the New York City Bonus Program Did Not Lead to Marked Gains in Student Achievement." *Education Next: A Journal of Opinion and Research about Education Policy*. Education Next, 03

Feb. 2011. Web. 13 Feb. 2011. <<http://educationnext.org/study-provides-evidence-that-the-new-york-city-bonus-program-did-not-lead-to-marked-gains-in-student-achievement/>>.

Gordon, Robert, Thomas J. Kane, and Douglas O. Staiger. "Identifying Effective Teachers Using Performance on the Job." Discussion Paper 2006-1. The Brookings Institution. 2006.

Hanushek, Eric. Personal interview, 19 Jan. 2011 and 11 Feb. 2011.

Hanushek, Eric. "The Economic Value of Higher Teacher Quality." Working Paper 16606. National Bureau of Economic Research, 2010.

Heneman, Robert L.. *Merit pay: linking pay increases to performance ratings*. Reading, Mass.: Addison-Wesley Pub. Co., 1992. Print.

Hopkins, Bill L., and Thomas C. Mawhinney. *Pay for performance: history, controversy, and evidence*. New York : Haworth Press, 1992. Print.

Hoxby, Caroline M., and Sonali Murarka. "Charter Schools in New York City: Who Enrolls and How They Affect Their Students' Achievement." *NBER WORKING PAPER SERIES* 14852 (2009). Print.

Hume, David A.. *Reward management: employee performance, motivation and pay*. Oxford, UK: Blackwell Publishers, 1995. Print.

"Inching Closer to Merit Pay for Teachers." *Foundation for Education Reform and Accountability | Welcome to FERA*. N.p., n.d. Web. 16 Jan. 2011. <<http://www.nyfera.org/?p=3226>>.

Kerby, Ryan. Phone interview. 24 Feb. 2011.

Lavy, Victor. "Performance Pay and Teachers' Effort, Productivity, and Grading Ethics." *The American Economic Review* 99.5 (2009): 1979-2021. Print.

Lavy, Victor. "Using Performance-Based Pay to Improve the Quality of Teachers." *The Future of Children* 17 (2007): 87-109. Print.

Lazear, Edward P. "Performance Pay and Productivity." *The American Economic Review* 90.5 (2000): 13461-361. 27 Aug. 2006. Web. 6 Mar. 2011. Loeb, Susanna. Personal interview. 19 Jan. 2011.

"Maria (Cuky) Perez Home." *Stanford University*. N.p., n.d. Web. 21 Feb. 2011. <<http://www.stanford.edu/~cuky>

"Mountain View Online : Parents seek larger slice of Shoreline taxes." *Mountain View Online*. N.p., n.d. Web. 26 Feb. 2011. <http://www.mv-voice.com/news/show_story.php?id=3894>.

Muralidharan, Karthik, and Venkatesh Sundararaman. "Teacher Performance Pay: Experimental Evidence from India." NATIONAL BUREAU OF ECONOMIC RESEARCH 15323 (2009). 30

National Board for Professional Teaching Standards: National Board for Professional Teaching Standards. Web. 02 Mar. 2011. <<http://www.nbpts.org/>>.

Perez, Maria. Personal interview, 2 Feb. 2011.

Performance pay resources." *Oregon School Boards Association*. N.p., n.d. Web. 26 Feb. 2011. <http://www.osba.org/Resources/Article/Employee_Management/Performance_Pay_Primer.aspx>.

"Performance pay resources." *Oregon School Boards Association*. N.p., n.d. Web. 26 Feb. 2011. <http://www.osba.org/Resources/Article/Employee_Management/Performance_Pay_Resources.aspx>.

Podgursky, Michael J., and Matthew G. Springer. "Teacher Performance Pay: A Review." *Journal of Policy Analysis and Management* 26.4 (2007): 909-949. Print.

"POINT Experiment." *National Center on Performance Incentives: Home*. N.p., n.d. Web. 16 Jan. 2011. <<http://www.performanceincentives.org/>>.

Ritter, Gary W., Marc J. Holley, Nathan C. Jensen, Brent E. Riffel, Marcus A. Winters, Joshua H. Barnett, and Jay P. Greene. "Year Two Evaluation of the Achievement Challenge Pilot Project in the Little Rock Public School District." Department of Education Reform, College of Education and Health Professions, University of Arkansas. 2008.

Rowland, Cortney. *Mission Possible: A Comprehensive Teacher Incentive Program in Guilford County, North Carolina*. Rep. Center for Educator Compensation Reform. Print.

Smarick, Andy. "Diplomatic Mission." *Education Next* 11.1 (2011): 56-63. Print.

Springer, Matthew G., et al. *Teacher Pay for Performance: Experimental Evidence from the Project on Incentives in Teaching*. Rep. Nashville: National Center on Performance Incentives, Vanderbilt, 2010. Print.

Springer, Matthew G., et al. *District Awards for Teacher Excellence (D.A.T.E.) Program: Final Evaluation Report*. Rep. Nashville: National Center on Performance Incentives, Vanderbilt, 2010. Print.

Springer, Matthew G., et al. *Texas Educator Excellence Grant (T.E.E.G.) Program: Year Three Evaluation Report*. Rep. Nashville: National Center on Performance Incentives, Vanderbilt, 2009. Print.

Stein, Letitia . "Hillsborough's merit pay experiment benefits affluent schools." *St. Petersburg Times*. N.p., 24 Feb. 2008. Web. 16 Jan. 2011.
<www.sptimes.com/2008/02/24

"Teacher Attitudes toward Pay for Performance: Evidence from Hillsborough County, Florida. Working Paper 2008-08." *ERIC – Education Resource Information Center*. N.p., n.d. Web. 26 Jan. 2011. <http://eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICEExtSearch_SearchValue_0=ED510517&ERICEExtSearch_SearchType_0=no&accno=ED510517>

"The Four Elements of Chicago TAP." Chicago TAP. Web. 20 Feb. 2011.
<http://www.chicagotapschools.org/four_elements.php>.

"Understanding the AYP." *Education Data Partnership Home Page*. N.p., n.d. Web. 2 Mar. 2011. <<http://www.ed-data.k12.ca.us/Articles/Article.asp?title=Understanding%20the%20AYP#programimprovement.>>.

"Unemployment Rates, California LaborMarketInfo." *Educational Development Department, State of California*. N.p., n.d. Web. 24 Feb. 2011.
<<http://www.labormarketinfo.edd.ca.gov/?pageid=1006>>.

Wiley, Ed, Matthew Gaertner, Eleanor Spindler, and Amy Subert. "Denver ProComp Evaluation: A Mixed-Method Evaluation of Denver's Alternative Teacher Compensation System, Year 1 Report." University of Colorado, School of Education, ProComp Evaluation Team.

Winters, Marcus A., Gary W. Ritter, Joshua H. Barnett, and Jay P. Greene. "An Evaluation of Teacher Performance in Arkansas." Working Paper. Department of Education Reform, University of Arkansas. 2007.

Woessmann, Ludger. "Merit Pay International." *Education Next* 11.2 (2011): 73-77. Print.

Zingheim, Patricia K., and Jay R. Schuster. *Pay people right!: breakthrough reward strategies to create great companies*. San Francisco: Jossey-Bass Publishers, 2000. Print