

Denver ProComp Evaluation:
A Mixed-Method Evaluation of
Denver's Alternative Teacher Compensation System
Year 1 Report

Ed Wiley, Matthew Gaertner, Eleanor Spindler, Amy Subert
University of Colorado
School of Education
ProComp Evaluation Team

Denver ProComp
A Mixed-Method Evaluation of
Denver’s Alternative Teacher Compensation System

Teacher compensation reform has gained substantial popularity as a policy instrument for improving teacher quality. Performance-pay programs have received bipartisan support in discussions of reauthorization of No Child Left Behind Act, and at least one leading presidential candidate – Sen. Barack Obama – recently announced his support of teacher merit pay (Honawar, 2007). The Bush administration has prioritized compensation reform, devoting nearly \$100M to performance-based compensation systems through its Teacher Incentive Fund (TIF) program. Compensation reform is also central to a \$60M campaign – funded by the Gates and Broad Foundations – that focuses attention on education issues during the 2008 presidential campaign.

Denver’s *Professional Compensation System for Teachers* (“ProComp”) is perhaps the most prominent compensation reform effort yet. Designed through union/district partnership, ProComp was backed by Denver voters via a 2005 referendum to levy \$25M in annual taxes to pay for the program. ProComp has received national attention due to the diversity of incentives included as part of the program; teachers can receive bonuses by obtaining advanced degrees and certifications, completing specialized professional development, demonstrating proficient practice through a newly-designed Comprehensive Professional Evaluation system, working in a high-needs school or position, meeting classroom learning objectives, exceeding student achievement expectations, and/or by working a school with distinguished student achievement and attendance. Through these varied elements, ProComp aims to increase the recruitment and retention of high-quality teachers and improve student achievement by linking compensation to instructional practice.

Based on the mixed-method research being completed as part of the ProComp Internal Evaluation, this report details (a) initial evidence of trends associated with ProComp with regard to student achievement, and (b) insight into attitudes and observations of DPS principals and DCTA members regarding recruitment/retention of high-quality teachers, teacher quality in high-needs schools/positions, instructional practices, and student achievement. Results presented in this report employ two main analytical strategies – value-added modeling of two years’ of student achievement data (2005-06 and 2006-07) and weighted analysis of responses to surveys administered in spring, 2007. As the district is able to provide additional, more refined data (e.g., longitudinal data linking teacher and student records from more than two years; data regarding applications for hard-to-serve schools and hard-to-staff positions), analyses exploring ProComp will expand in scope and sophistication to provide greater insight into outcomes associated with the reform.

This report that follows is structured in two sections:

- *Student achievement analyses* – a preliminary inferential study of student achievement trends associated with teacher characteristics and ProComp participation

- *Year 1 survey results* – overviews of key findings and tables presenting quantitative results from ProComp principal and teacher surveys regarding the overall ProComp program as well as each of the four ProComp components

Because of the preliminary nature of the reform's implementation and the data available for analysis, this report undoubtedly leads to more questions being raised than answered. These questions will provide the basis for more definitive inquiry as the reform matures.

Nevertheless, details provided herein that allude to early challenges and successes associated with ProComp should provide insight for district stakeholders charged with implementation and oversight of the reform.

Part I.

Student Achievement Analysis

Perhaps the most critical goal of any comprehensive educational reform is improvement of student achievement. Darling-Hammond (1999) argues that large-scale reforms are rarely evaluated appropriately; rather than examining the effects of these programs on student achievement measures, policy makers often rely on qualitative, attitudinal data that focuses on overall participant satisfaction. Pay for performance compensation programs are no exception. Although promises of increased student achievement are often used to justify their implementation, little research exists to document this relationship.

State policy evidence suggests a strong relationship between teacher quality and student achievement (Darling-Hammond, 1999, p. 29). Rivkin, Hanushek, and Kain (2005) found teachers to have measurable effects on student achievement, although gains linked to observable teacher characteristics were generally small. Recent research does confirm the relationship between teacher evaluation systems and student achievement (e.g., Milanowski, 2004; Odden, Borman, & Fermanich, 2004; White, 2004). This suggests that a thorough teacher evaluation program can identify teachers whose students are likely to achieve at higher levels, and supports the use of assessment data as a determinant of teacher pay (Milanowski, 2004).

Taken together, the current body of literature provides optimism toward the potential of alternative teacher compensation programs to increase student achievement. ProComp provides an ideal setting to examine this; the program provides some incentives directly linked to student achievement outcomes as well as others linked to professional activities thought to improve student learning. Because not all teachers in the district participate in ProComp, student achievement can be compared for ProComp participants and teachers paid via traditional salary schedules.

This section presents initial analyses focusing upon the relationship between ProComp participation and student achievement. Via a multi-level, “value-added” model (VAM), learning and achievement outcomes attributable to specific teachers have been estimated with statistical controls for non-educational factors. Student achievement effects attributable to particular teachers are modeled on the various ProComp incentives; if program components indeed have the intended effect of improving achievement, teachers who achieve each incentive at greater rates should demonstrate larger effects on student achievement.

Estimating Teacher Effects via Value-added Modeling

Teachers’ contributions to student achievement were estimated via a two-step process as recommended by Rubin, Stuart, and Zanutto (2004). The two steps involved employing a value-added model to estimate teacher “effects” which were subsequently modeled on ProComp opt-in status and other teacher-level variables.

Reading and Mathematics CSAP scale scores were first (separately) modeled using a nonparametric cross-classified mixed effects model with student-level covariates. In particular, using the `lmer()` (linear mixed effects) function in the statistical package **R**, student CSAP scale scores were modeled on:

- random effects particular to student grade (with GRADE specified as a factor, which specifies no parametric form);
- fixed effects for student-level covariates: (indicator variables for ethnicity and lunch status variables); and
- random effects associated with teachers

Scores were modeled with no intercept so that each grade factor's fixed effect would represent the *Best Linear Unbiased Predictor* of CSAP scale scores for that grade. Cases were weighted by exposure to individual teachers and course attendance. In the mathematics model, scale scores from 35,688 records taken from 22,768 students were modeled to estimate effects for 866 teachers; in reading, 26,565 records taken from 17,812 students provided scale scores that were modeled to estimate effects for 812 teachers.

Data used for this analysis were provided by the District November 16, 2007; these data consist of several variables key to performing the value-added analysis designed to isolate the contributions of individual teachers to their students' achievement. Variables used for this analysis are as follows:

1. School-level Data
 - i. School Name
 - ii. School ID
2. Teacher-level Demographic Data
 - i. ProComp opt-in status
 - ii. Years of experience
 - iii. Highest degree
 - iv. Degree subject
 - v. ProComp Incentives Achieved
3. Student-level Course Enrollment Data
 - i. Course name
 - ii. Course number
 - iii. Course instructor
 - iv. Attendance
4. Student-level Demographic Data
 - i. Grade
 - ii. Ethnicity
 - iii. IEP status
 - iv. Primary language
 - v. Ethnicity
 - vi. Free and/or Reduced Lunch Eligibility
2. Student-level CSAP data
 - i. Scale scores from CSAP assessments administered spring semester 2006 and 2007

Summary results for the mathematics and reading models are presented in Tables 1 and 2, respectively.

Table 1. Model Summary Statistics: Mathematics Value-Added Model

<u>RANDOM EFFECTS</u>			
LEVEL	EFFECT	VARIANCE	STD.DEV.
Students	GRADE3	6427.11	80.169
	GRADE4	5762.27	75.910
	GRADE5	5911.16	76.884
Teachers (Intercept)		20.88	4.569
Residuals		51.02	7.143
<u>FIXED EFFECTS</u>			
EFFECT	ESTIMATE	SE	t
Grade3	468.934	1.227	382.1
Grade4	509.328	1.188	428.8
Grade5	540.974	1.218	444.2
AA	-65.142	1.688	-38.6
HI	-54.044	1.377	-39.3
FRL	-23.975	1.068	-22.5
<u>SUMMARY STATISTICS</u>			
AIC		386340	
BIC		386450	
Log Likelihood		-193157	
Deviance (ML)		386323	
Deviance (REML)		386314	

Table 2. Model Summary Statistics: Reading Value-Added Model

RANDOM EFFECTS

LEVEL	EFFECT	VARIANCE	STD.DEV.
Students	GRADE3	5225.38	72.287
	GRADE4	3689.60	60.742
	GRADE5	4318.08	65.712
Teachers (Intercept)		63.20	7.950
Residuals		80.03	8.950

FIXED EFFECTS

EFFECT	ESTIMATE	SE	t
Grade3	578.482	1.284	450.6
Grade4	612.487	1.193	513.4
Grade5	635.657	1.246	510.2
AA	-40.491	1.656	-24.5
HI	-48.686	1.346	-36.2
FRL	-25.042	1.089	-23.0

SUMMARY STATISTICS

AIC	238791
BIC	283898
Log Likelihood	-141883
Deviance (ML)	283775
Deviance (REML)	283765

Trends evident in these analyses are generally consistent across both mathematics and reading, and confirm what we'd generally expect from students and teachers overall:

- Relative to the overall CSAP scale (see Table 3), grade-level fixed effects are consistently located in the *Proficient* performance level, suggesting that, on average, DPS students who are neither FRL, AA, or HI score in this level.
- Each student-level fixed effect is associated with a significant negative effect, suggesting that, on average, DPS students who are neither FRL, AA, or HI score lower than their counterparts.
- Teacher random effects demonstrate substantial variability, with zero mean and standard deviation of 4.5 in mathematics to nearly 8.0 in reading, suggesting teachers vary quite a lot in the CSAP performance of their students.

Table 3. Performance Level Scale Ranges for CSAP Assessments

Performance Level Scale Ranges for CSAP Assessments						
Content Area	Grade	Unsatisfactory	Partially Proficient	Proficient	Advanced	
Reading	3	150-465	466-525	526-655	656-795	
	4	180-516	517-571	572-670	671-940	
	5	220-537	538-587	588-690	691-955	
	6	260-542	543-599	600-695	696-970	
	7	300-566	567-619	620-715	716-980	
	8	330-577	578-631	632-723	724-990	
	9	350-584	585-641	642-738	739-995	
	10	370-606	607-662	663-746	747-999	
	Mathematics	3	150-334	335-418	419-509	510-700
		4	180-382	383-454	455-537	538-780
5		220-421	422-493	494-561	562-800	
6		240-453	454-519	520-588	589-830	
7		280-486	487-558	559-613	614-860	
8		310-520	521-576	577-627	628-890	
9		340-547	548-601	602-651	652-920	
10		370-561	562-626	627-691	692-950	

The last of these findings – that teacher effects vary substantially across both reading and mathematics – provides the basis for stage two of the analysis in which teacher effect variability is modeled on teacher characteristics and ProComp elements. Distributions of teacher effects are presented in Figures 1 and 2; in each case distributions are symmetrical around zero, with the majority of estimates falling between -20.00 and +20.00. The degree to which these effects are associated with ProComp participation and/or teacher characteristics is discussed in the pages that follow.

Figure 1. Teacher Effect Estimates: Mathematics

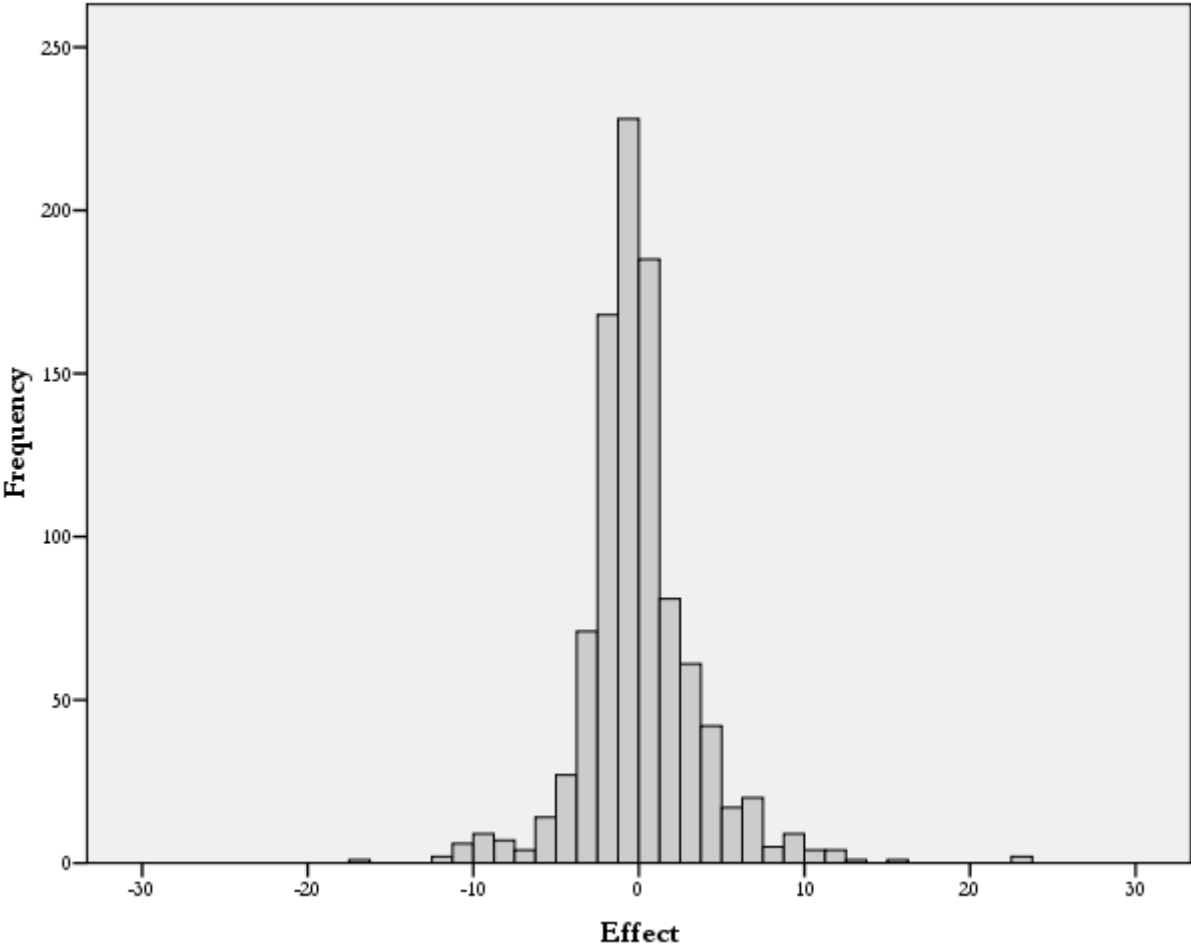
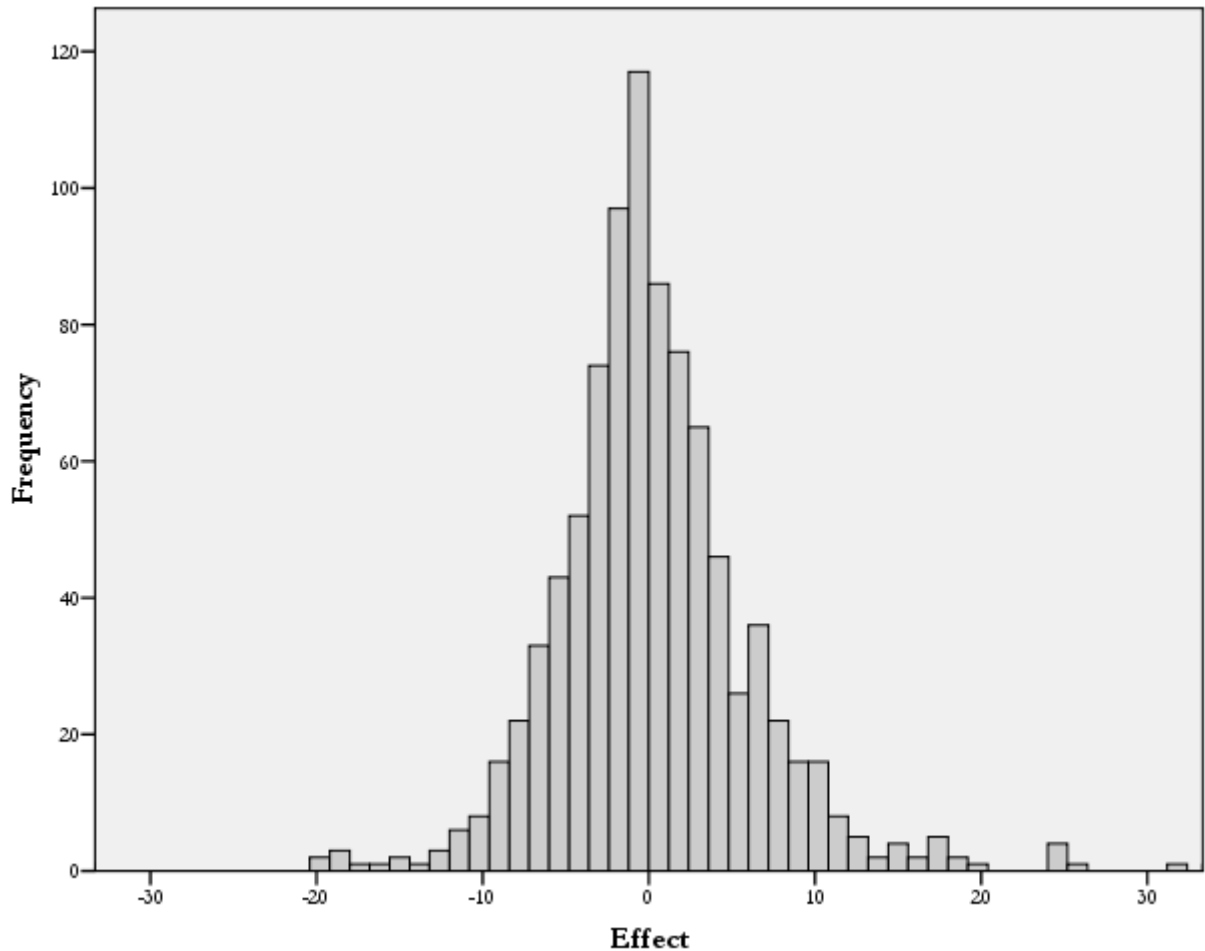


Figure 2. Teacher Effect Estimates: Reading



ProComp Participation and Achievement

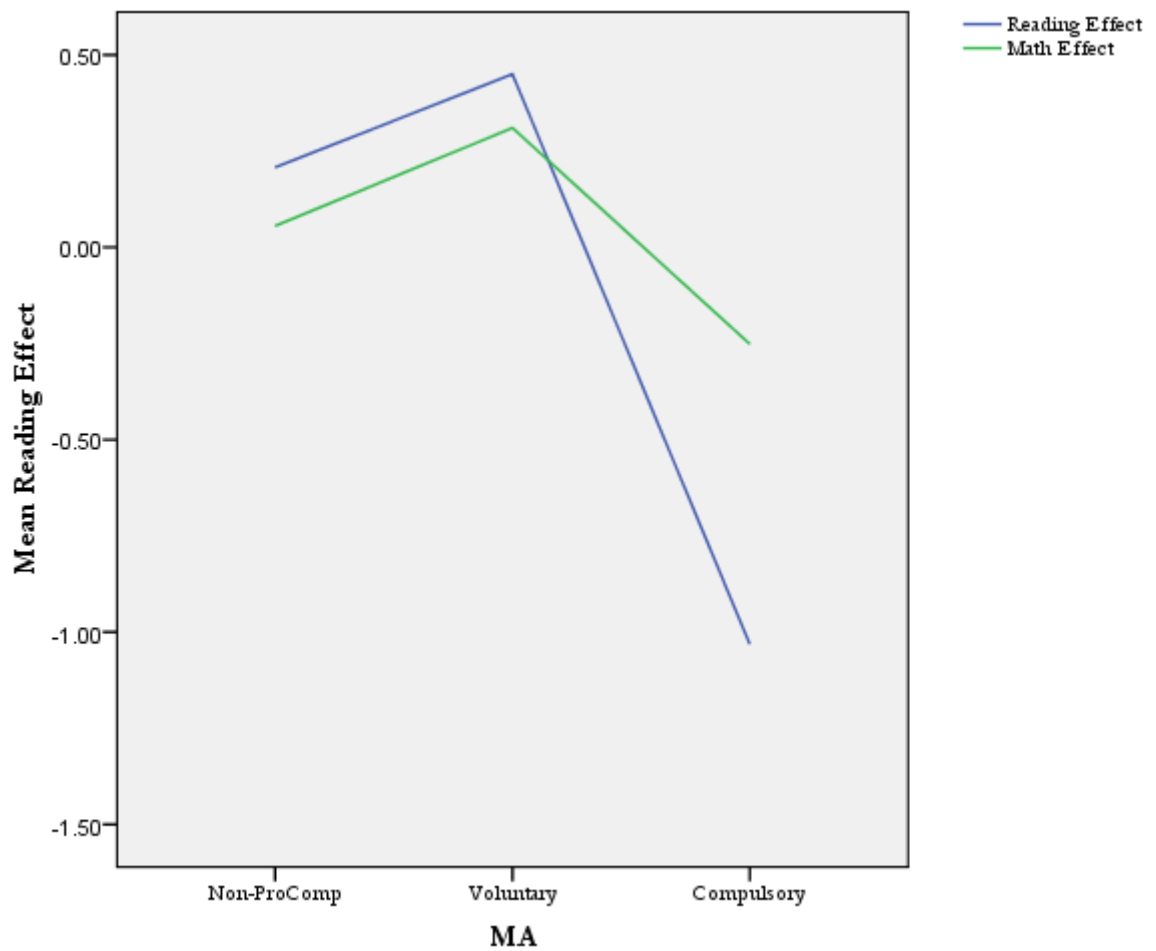
The key question underlying this evaluation is whether ProComp participation is associated with differences in achievement. Descriptive statistics regarding this question are presented in Table 4; Figure 3 provides a plot of associated means. **When viewing Figure 3 and all subsequent figures it is crucial to keep in mind the magnitude of scale represented on the vertical axis; although plots have been crafted to provide greatest insight into questions being analyzed, in most cases differences represent a few CSAP points at most.**

When interpreting the analyses reported herein it is important to keep in mind that any resulting differences have not necessarily come about *because* of ProComp; because opt-in is voluntary for veteran teachers, it is possible – and in fact probable – that those opting in are those more likely to achieve the incentives, *one of which is improved student performance*. In other words, though differences between groups may appear, it is too early to attribute to ProComp the improvement of student achievement.

Table 4. Descriptive Statistics for Effect Estimates Relative to ProComp Participation

Subject	ProComp	n	Mean	Std. Dev.
Math	NON	688	0.025	3.227
Math	VOLUNTARY	208	0.221	4.287
Math	COMPULSORY	73	-0.318	3.076
Reading	NON	654	0.208	5.524
Reading	VOLUNTARY	188	0.450	6.333
Reading	COMPULSORY	62	-1.031	6.021

Figure 4. Achievement Effects Relative to ProComp Participation



In mathematics, relative to teachers are not participating in ProComp:

- Teachers who opted into ProComp had effects on average 0.196 CSAP points higher (representing an effect size of 0.061); and
- Teachers required to join ProComp had effects on average 0.539 CSAP points lower (representing an effect size of -0.106).

In reading, relative to teachers are not participating in ProComp:

- Teachers who opted into ProComp had effects on average 0.242 CSAP points higher (representing an effect size of 0.044); and
- Teachers required to join ProComp had effects on average -1.481 CSAP points lower (representing an effect size of -0.224).

Comparing reading and mathematics effect estimates among teachers varying in the nature of their participation does reveal some slight differences – teachers who opted into ProComp under their own volition demonstrate slightly higher effects than their nonparticipating counterparts, and both groups do a point or two better than to colleagues new to the district and therefore required to participate. Although differences are directionally what might be expected, they are only on the order of one or two CSAP points – certainly not large. Furthermore, associated effect sizes are quite small, and mean differences are not statistically significantly different from zero (Math: $F_{2,966} = 0.068$; $p > 0.20$; Reading: $F_{2,901} = 1.598$; $p > 0.20$).

ProComp Participation and Master's Degree Attainment

Comparing reading and mathematics effect estimates on the basis of ProComp participation and Master's Degree attainment suggests differences on the basis of these two teacher characteristics. Table 5 provides descriptive statistics for each of the categories defined by Master's Degree attainment and ProComp participation; mean achievement is further represented via the line graphs presented in Figures 4 and 5.

Table 4. Descriptive Statistics for Effect Estimates Relative to ProComp Participation and Master’s Degree Attainment

Subject	MA+	ProComp	n	Mean	Std. Dev.
Math	NO	NON	375	-0.063	3.074
Math	NO	VOLUNTARY	76	-0.386	4.405
Math	NO	COMPULSORY	42	-0.449	3.364
Math	YES	NON	313	0.131	3.402
Math	YES	VOLUNTARY	132	0.570	4.195
Math	YES	COMPULSORY	31	-0.140	2.681
Reading	NO	NON	360	-0.177	5.397
Reading	NO	VOLUNTARY	71	0.373	6.484
Reading	NO	COMPULSORY	38	-2.518	6.252
Reading	YES	NON	294	0.678	5.649
Reading	YES	VOLUNTARY	117	0.497	6.267
Reading	YES	COMPULSORY	24	1.322	4.881

Figure 4. Mathematics Effects Relative to ProComp Participation and Master’s Degree Attainment

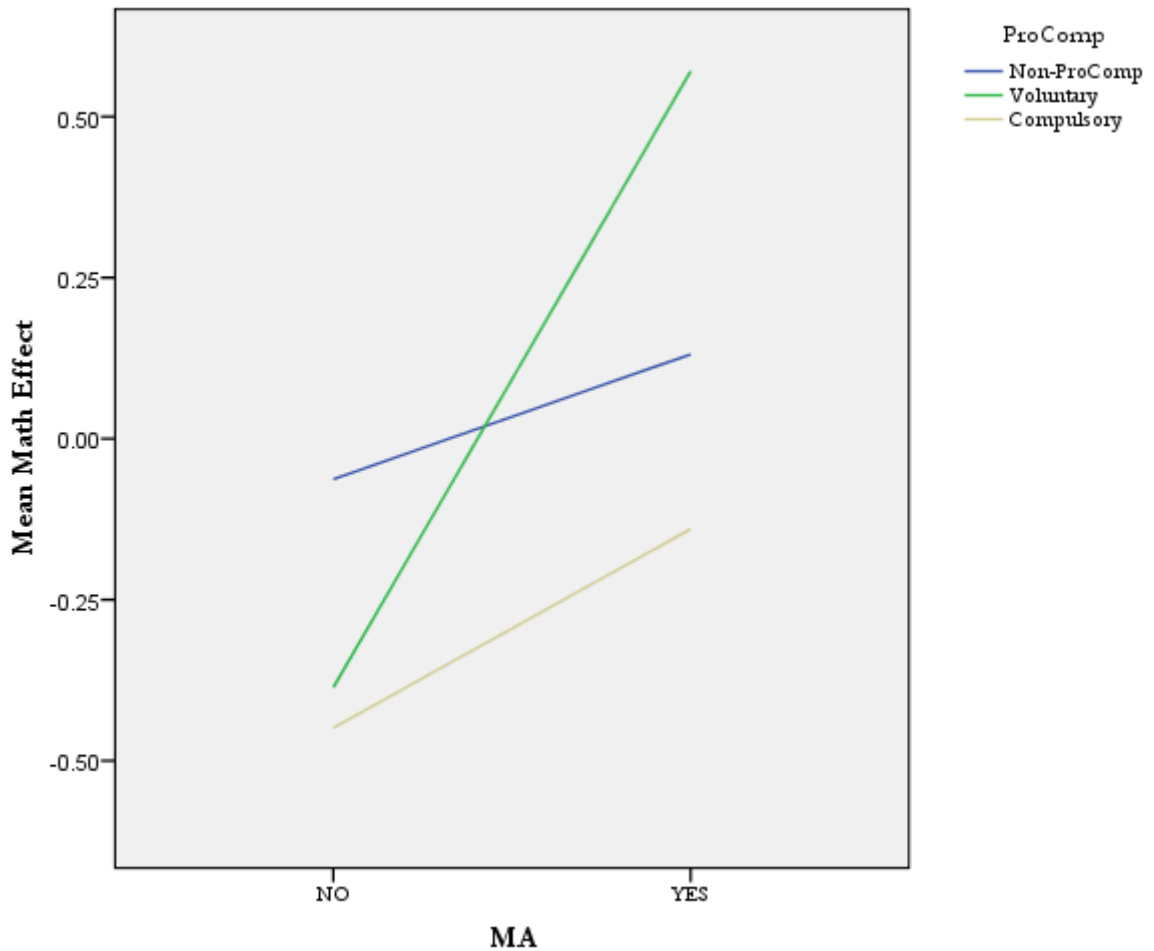
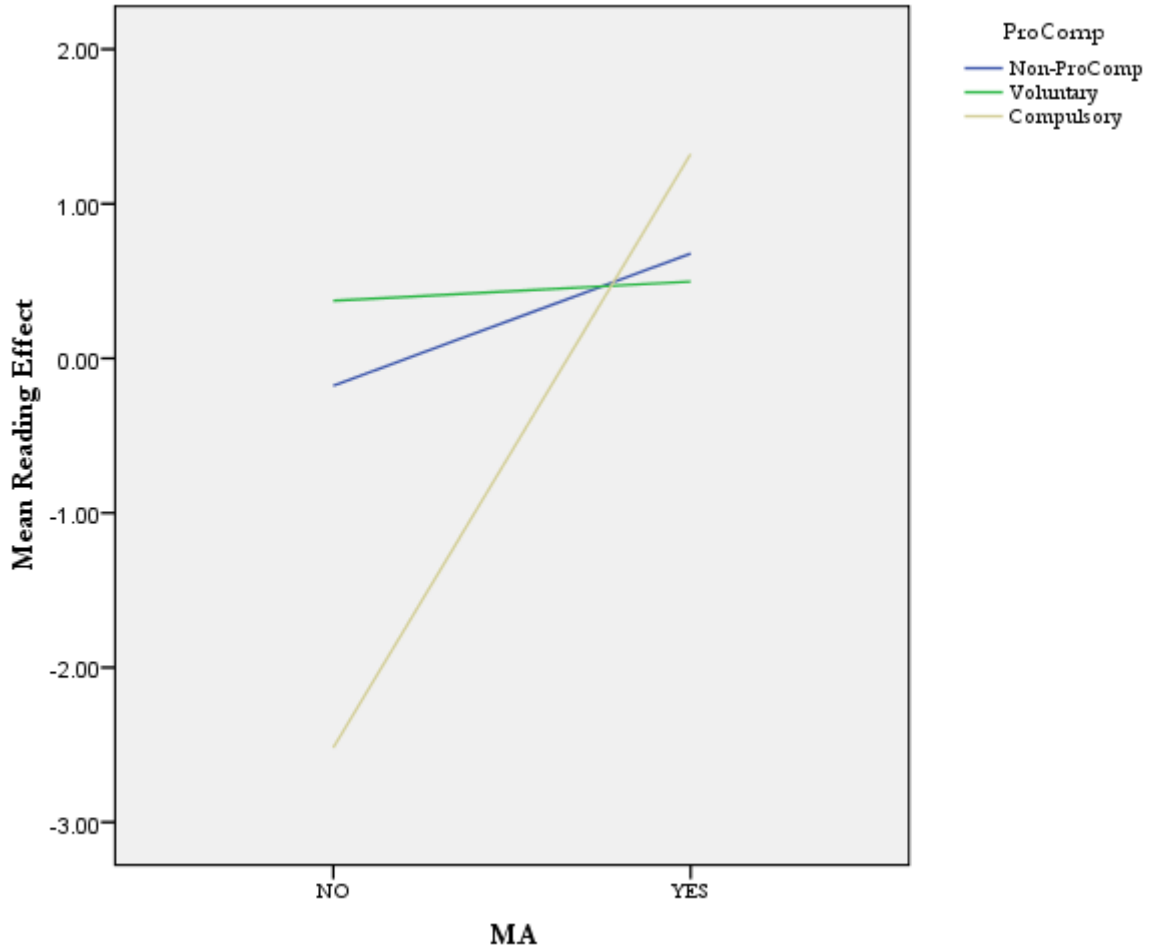


Figure 5. Reading Effects Relative to ProComp Participation and Master's Degree Attainment



Examination reveals very slight advantages in overall effect estimates for Master's degree attainment for all teachers; teachers who opted into ProComp gained the greatest benefit in mathematics, while compulsory participants gained the greatest benefit in reading. For reading these differences reach statistical significance, though the same cannot be said for mathematics (Math: $F_{1,967} = 2.923$; $p > 0.05$; Reading: $F_{1,902} = 6.195$; $p < 0.05$). Regardless of statistical significance, however, the absolute differences remain on the order of a few CSAP points.

ProComp Participation and Years of Service in DPS

ProComp participants and non-participants differ in the degree to which differences in reading and mathematics effect estimates change as a function of Years of Service. Table 5 provides descriptive statistics for each of the categories defined by Years of Service and ProComp participation; line graphs detailing these differences are presented in Figures 6 and 7.

Table 5 Descriptive Statistics for Effect Estimates Relative to ProComp Participation and Years of Service in DPS

Subject	MA+	ProComp	n	Mean	Std. Dev.
Math	<4 years	NON	171	-0.024	2.564
Math	<4 years	VOLUNTARY	38	-1.501	3.108
Math	<4 years	COMPULSORY	73	-0.318	3.076
Math	4-10 years	NON	307	0.095	3.404
Math	4-10 years	VOLUNTARY	58	0.864	4.884
Math	4-10 years	COMPULSORY	-	-	-
Math	11+ years	NON	210	-0.037	3.450
Math	11+ years	VOLUNTARY	112	0.472	4.184
Math	11+ years	COMPULSORY	-	-	-
Reading	<4 years	NON	156	0.190	2.564
Reading	<4 years	VOLUNTARY	32	-2.792	3.108
Reading	<4 years	COMPULSORY	62	-1.031	3.076
Reading	4-10	NON	295	-0.122	5.364
Reading	4-10	VOLUNTARY	54	0.659	5.562
Reading	4-10	COMPULSORY	-	-	-
Reading	11+ years	NON	203	0.700	5.914
Reading	11+ years	VOLUNTARY	102	1.356	6.812
Reading	11+ years	COMPULSORY	-	-	-

Figure 6. Mathematics Effects Relative to ProComp Participation and Years of Service

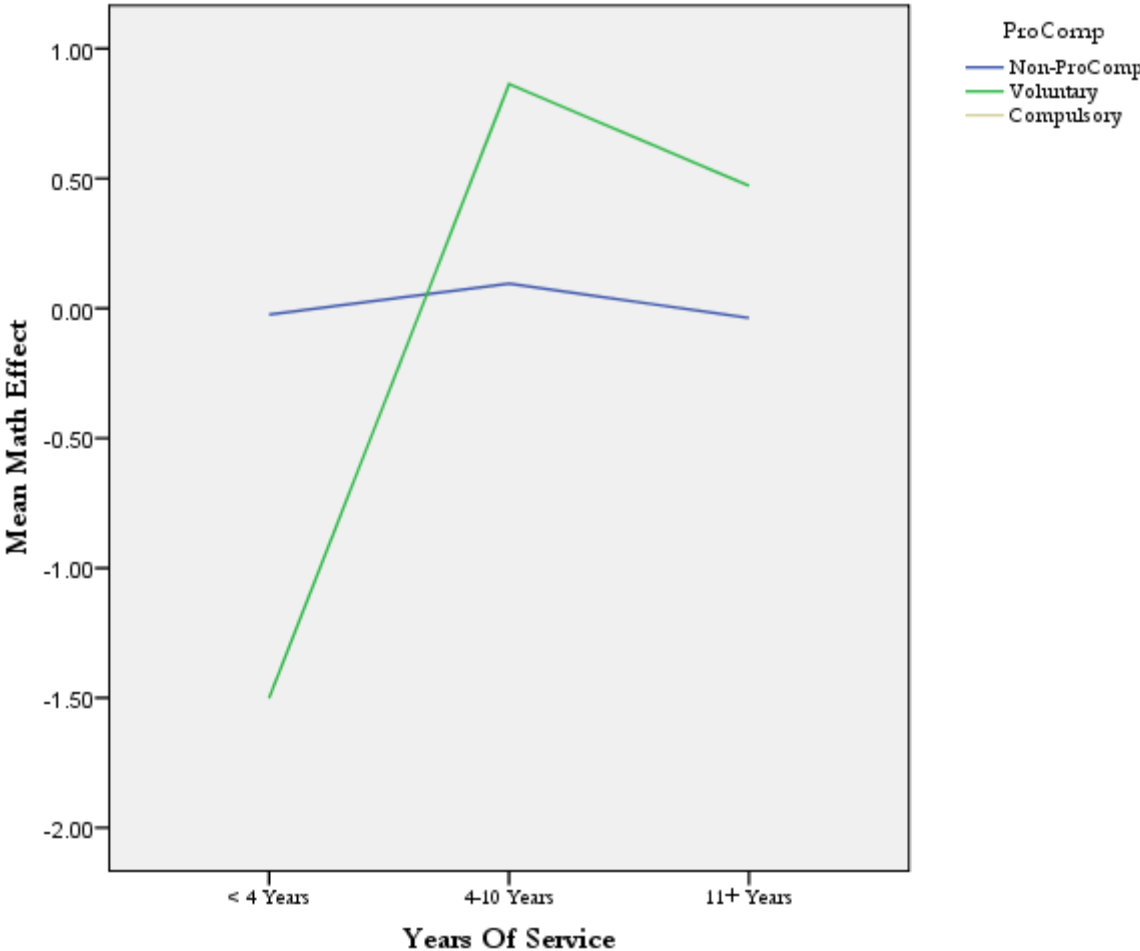
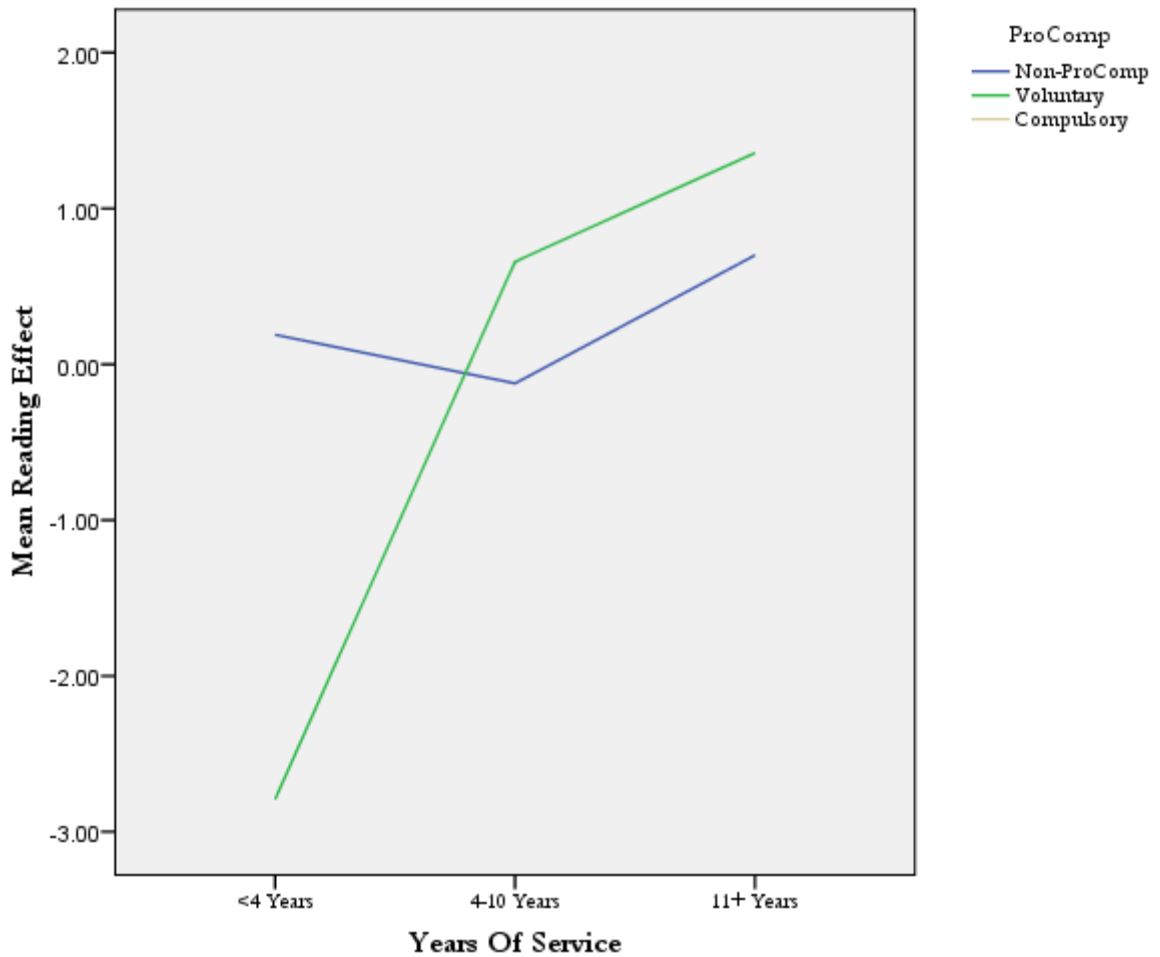


Figure 7. Reading Effects Relative to ProComp Participation and Years of Service



Voluntary participants differ substantially as a function of Years of Service – DPS veterans in this group, regardless of whether they have 4-10 years or 11+ years of district experience, substantially outperform their novice counterparts. Teachers choosing not to opt in to ProComp are very different, demonstrating little achievement differences as a function of longevity. Similar to the findings for advanced degree attainment, differences reach statistical significance for reading but not for mathematics (Math: $F_{2,966} = 1.964$; $p > 0.05$; Reading: $F_{2,901} = 4.469$; $p < 0.05$).

ProComp Incentives and Student Achievement

In evaluating ProComp’s effectiveness in raising student achievement, it is important to consider not only the entire reform but also the individual incentives through which the program is expected to achieve goals. As such, analyses of student achievement will not only include effects discussed above but also more nuanced *partial* effects related to individual incentives. At this point it is impossible to determine the degree to which individual incentives have brought about changes in student achievement; examination of achievement effects relative to the attainment of a given incentive more likely reflect not the effects of that incentive on student achievement (i.e., “Did that incentive cause improvements?”) but rather the characteristics of individuals who achieved that incentive (i.e., “Who received the incentive?”).

Nevertheless, the figures that follow provide some idea of the very slight differences between ProComp participants who received an incentive and those who did not. Once again, it is important to keep in mind the very small magnitude of differences represented in these figures; of the figures shown, only one figure – for the Hard to Serve incentive – represents differences of more than a single CSAP point.

Figure 8. Student Achievement Effects Relative to Successful PE Evaluation

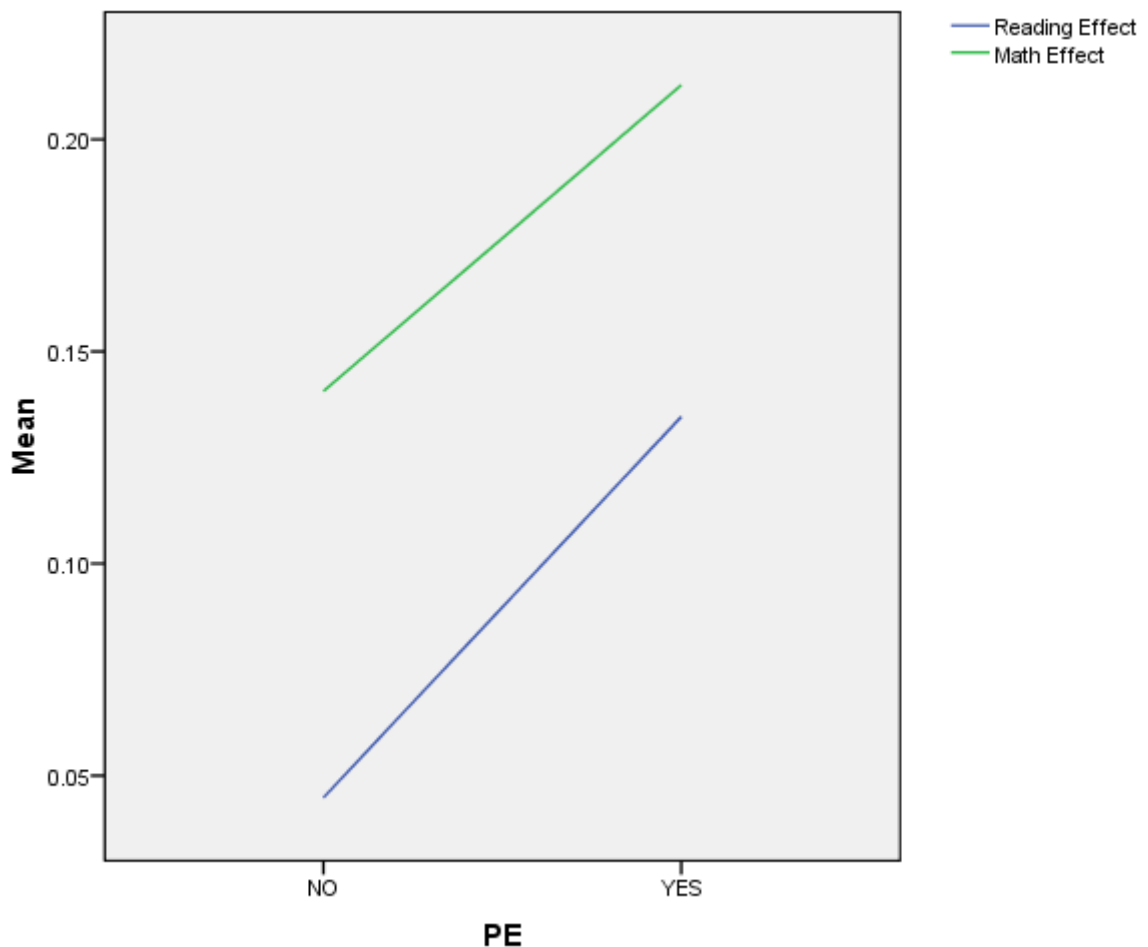


Figure 9. Student Achievement Effects Relative to PDU Attainment

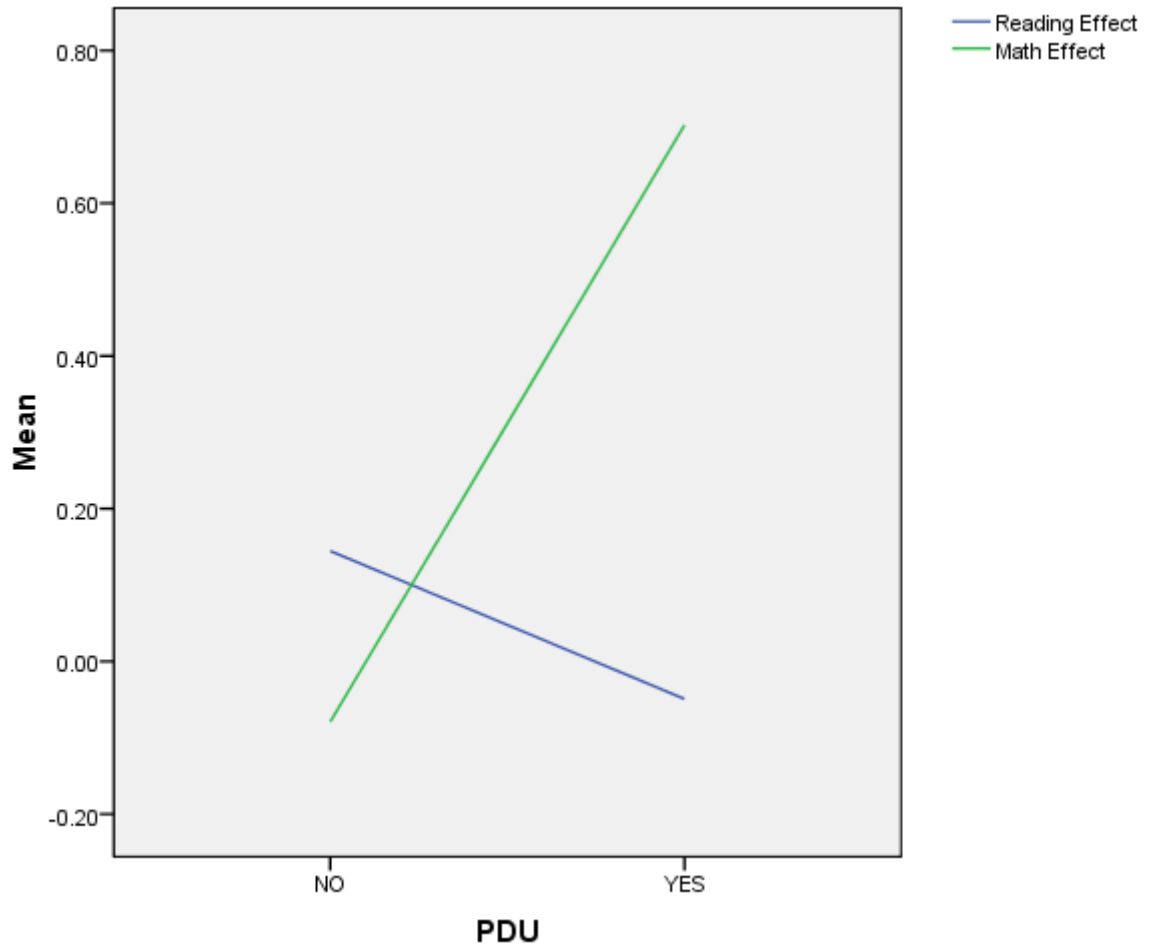


Figure 10. Student Achievement Effects Relative to Advanced Degree Attainment

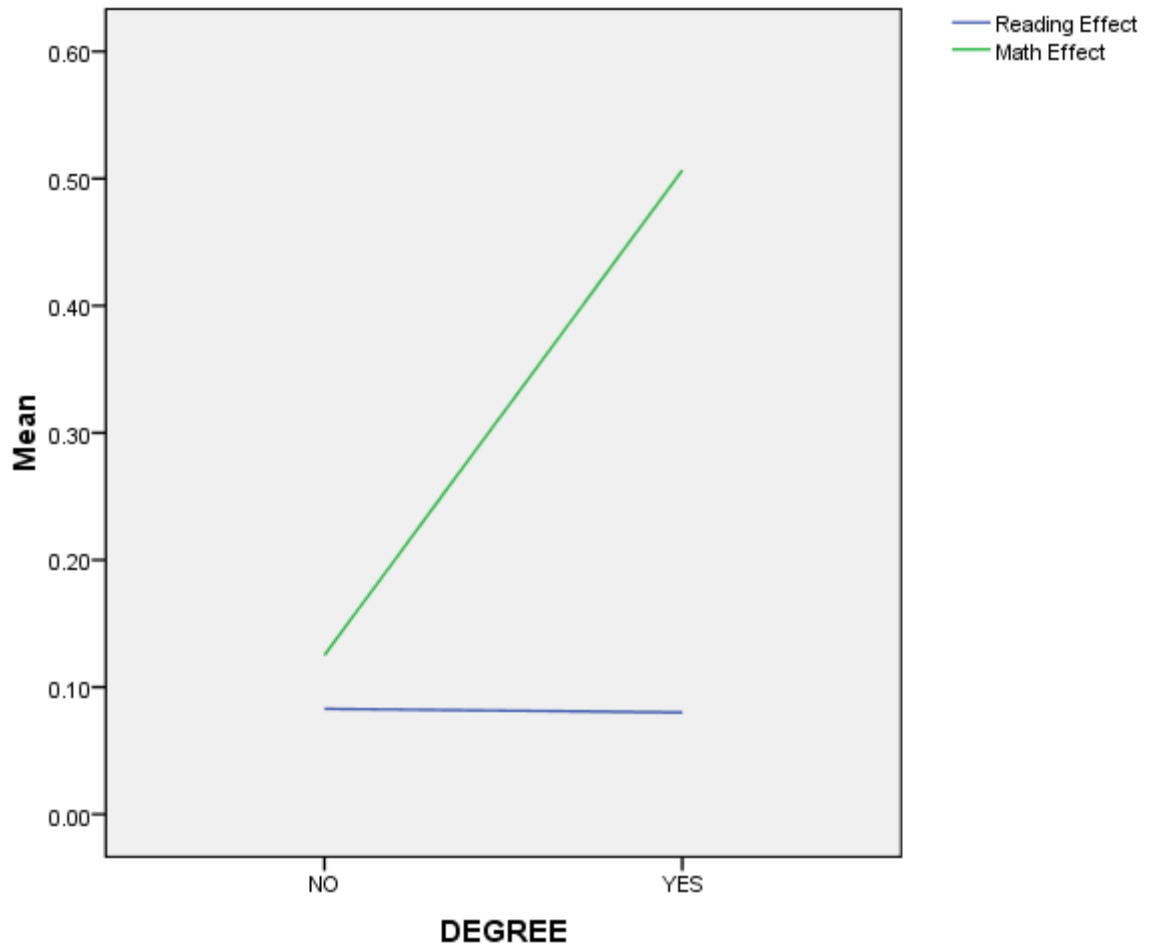
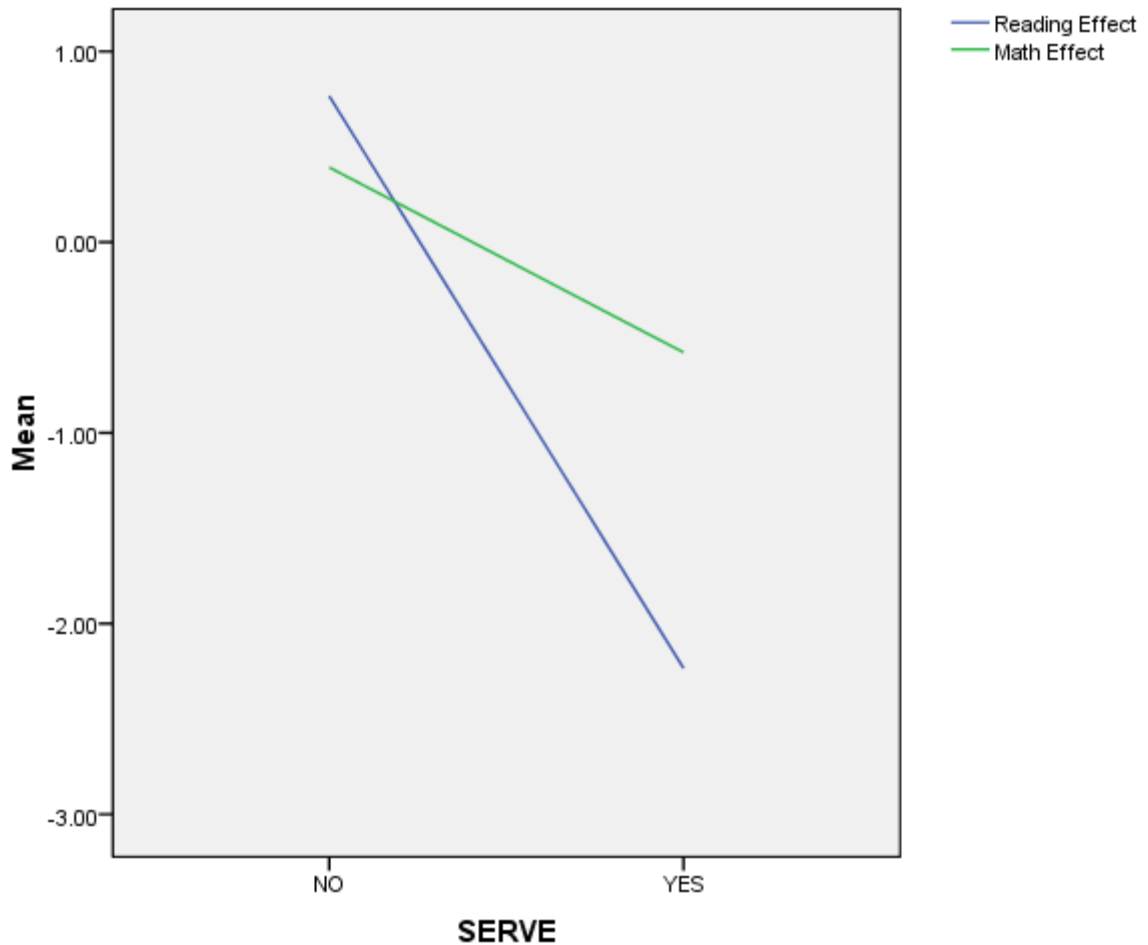


Figure 11. Student Achievement Effects Relative to Qualifying for the Hard to Serve Incentive



Conclusion: What is known at this point regarding ProComp and Student Achievement?

The analyses described demonstrate little in the way of differences between ProComp participants and non-participants. Small effects were observed in some analyses, but in most cases these were associated with teacher characteristics such as previous completion of an advanced degree or experience beyond the first four years of teaching. Teachers new to the district -- and thus required to join ProComp -- consistently demonstrated lower effects than their more seasoned counterparts. As the reform proceeds these teachers will be of primary evaluative interest, not only because of their compulsory participation but also because of both their greater need for improvement and their potential for positive change.

That few significant program effects are apparent at this point should not surprise. School reform takes substantial time to gain traction and catalyze desired changes in behavior among participants; the complex ProComp reform, with its many channels for bringing

behavioral change (some of which build on aspects of teacher practice already in place), is most certainly subject to the same evolutionary process of other reforms.

As noted above, these results should be taken as descriptive and quite preliminary; at most they should be taken as suggestive that (a) those teachers who opted into ProComp may have had slightly better history of success than their non-ProComp colleagues, and (b) teachers with Master's degrees (or greater) had been slightly more successful than their counterparts without higher degrees. Lack of data prior to 2006 – which would allow greater estimation of pre-ProComp trends and potential evolution on those trends – weakens the current analysis; with better data it should be possible to better isolate the magnitude of differences associated with ProComp participation and attainment of various incentives. Furthermore, as the reform progresses and the program matures, the analysis of subsequent cohorts of teachers and students will provide greater insight into the effects *associated with* ProComp rather than descriptions of ProComp participants.

Part II.

Principal and Teacher Attitudes toward ProComp:

Results from the Year 1 ProComp Survey

While improvement of student achievement is the *sine qua non* of educational reform, so too is there evaluative interest in changes in stakeholder attitudes related to those reforms. Especially in the early years of school reform, attitudes of educators and administrators are crucial to the success or failure of such efforts.

ProComp's four components – *Knowledge and Skills; Professional Evaluation; Market Incentives; Student Growth* -- are hoped to not only improve student achievement but also target increases in the quality of teachers practicing in the district. This increase in the overall quality of DPS professionals may take place via a number of mechanisms.

Recruitment/Retention of High-Quality Teachers

A central goal of Denver ProComp is to improve teacher quality via improved retention and recruitment of exemplary teachers. Though some research has explored alternative compensation programs, not enough is known about the effectiveness of financial incentives for attracting and retaining high-quality teachers (Holley, Barnett, & Ritter, 2007). Some evidence suggests that alternative compensation plans improve overall workforce quality by attracting different types of young professionals (Figlio, 2002). Other studies, however, have suggested a minimal impact because teachers are more strongly motivated by non-salary factors (Hanushek, Kain, & Rivkin, 1999; Kirby & Grissmer, 1993; Milanowski, et al., 2007). Some research has even suggested that alternative compensation programs may foster competition between teachers (Odden & Conley, 1995).

Teacher Quality in Hard-to-Serve Schools and Hard-to-Staff Positions

Increased emphasis has been placed on teacher quality and retention in the last decade, in large part because of the "Highly Qualified Teacher" requirement of the No Child Left Behind Act. School districts across the country are experimenting with new policies and procedures designed to attract and retain highly qualified teachers, especially in high-poverty, low-achieving schools (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2007). One such strategy is the use of alternative compensation models that provide incentives for quality teachers to teach in the schools and positions of greatest need.

Research shows teacher mobility to be greater in schools that arguably have the greatest need for quality teachers: low-achieving, urban, high-poverty, predominantly minority schools (Hanushek, Kain, & Rivkin, 2004; Lankford, Loeb, & Wyckoff, 2002; Smith & Ingersoll 2004). Nevertheless, several studies suggest that higher salaries may lead to higher teacher retention rates (Murnane & Olsen, 1998; Stinebrickner, 1998); in fact, two different studies found that a \$1000 salary increase is associated with reduced attrition rates of approximately

three percent (Kirby, Berends, & Naftel, 1999; Ingersoll, 2001). While this impact may not be large, it does suggest that salary incentives have the potential to impact teachers' decisions about where they work. In fact, some research even suggests that salary incentives may compensate for less desirable school characteristics (Carter & Carter, 2000).

ProComp provides incentives for teachers working in the districts hard-to-serve schools and hard-to-staff positions in the hope that highly qualified teachers will be more likely to move to and remain in the schools and positions that are most challenging. Several important questions emerge in light of the ProComp program and the existing literature on compensation and teacher quality. First, have individual teachers' employment been affected by the ProComp incentives for working in hard-to-serve schools and hard-to-staff positions? Second, are the quality and characteristics of teachers in hard-to-serve schools and hard-to-staff positions different from those of other teachers? In other words, do the incentives encourage high quality teachers to move into and remain in the positions and schools of greatest need?

Instructional Practices

Teacher and principal compensation programs are built on the belief that professionals will change practices for which incentives are provided, and that these practices will ultimately improve student learning. Little is known, however, about the specific classroom practices teachers employ to realize learning gains in the context of large-scale reforms (Darling-Hammond, 1999), though some research has suggested an association between student learning and a teacher's instructional flexibility, creativity, and adaptability (Berliner & Tikunoff, 1976). Even less is known about the effectiveness of a professional compensation program in encouraging teachers to engage in self-reflection and professional development that lead to successful instructional practices. In addition, recent studies have suggested that the achievement focus central to many compensation programs may provide incentives for educators to "teach to the test" (Carnoy, et al., 2007). This component of the ProComp evaluation seeks to more clearly describe the nature of the relationship between an alternative compensation system and changes in instructional practices. Of particular interest in this phase of the study will be Denver's focus on the development of knowledge and skills, via specific ProComp incentives for completing Professional Development Units (PDUs) and setting goals through the establishment of Student Growth Objectives (SGOs).

ProComp Principal and Teacher Surveys

To ascertain teacher and principal attitudes towards ProComp's effects on such areas as recruitment/retention, service in high-needs positions, and instructional practice, the evaluation team administered district-wide surveys in Spring, 2007. The DCTA survey was launched 5/21/07; the principal survey was deployed on 5/25/07. The principal survey had 97 complete responses and two partial responses, for "complete" and "complete + partial" response rates of 87% and 89%, respectively. For DCTA, surveys were administered to 4107 members, from which we received 1943 complete and 338 partial responses -- giving complete and complete + partial response rates of 47% and 56%, respectively. Of the DCTA respondents, 76% are teachers and 24% are SSPs. Furthermore, 38% of DCTA respondents identify themselves as having opted in to ProComp, 15% identify themselves as

new employees who were required to join ProComp, and 47% identify themselves as non-participants. **All results are based on survey responses that have been weighted for non-response.** This step is crucial in order to avoid uneven response by, e.g., teachers more likely to feel strongly regarding the ProComp reform.

To reflect the structure of the ProComp program, both the principal and teacher surveys contained sections specific to each of the four program components (Knowledge and Skills; Professional Evaluation; Market Incentives; Student Growth) as well as a separate section for program-wide attitudes. The following pages provide overviews of survey responses as well as weighted quantitative results for each of these sections, starting with ProComp overall and followed by each of the four individual ProComp components.

GENERAL & HOLISTIC ATTITUDINAL RESULTS

GENERAL ATTITUDINAL QUESTIONS TEACHER & SSP ANALYSIS

SUMMARY OF KEY FINDINGS

- Overall, a majority of teachers believe ProComp has increased their engagement in professional development activities aimed at increasing their ability to help raise their student's achievement and a plurality of teachers focused their teaching more on aspects of student learning related to ProComp goals
- Teachers are roughly split on whether or not ProComp led them to spend more hours on teaching and teaching-related tasks and whether or not ProComp has led them to change the methods they use to teach
- Most teachers do *not* believe participating in ProComp has led them to change the content of what they teach
- Although most teachers, regardless of ProComp status, do *not* believe their job offers a fair salary, they are proud to tell others they work at DPS
- Most teachers, regardless of ProComp status, do *not* believe the morale at their school is high and do *not* believe working at DPS is as good or better than working elsewhere in the region

ProComp teachers:

- A plurality of ProComp teachers have favorable views of ProComp – they believe ProComp can motivate teachers to improve instructional practice and ultimately improve student achievement
- A majority of ProComp teachers have a clear understanding of the ProComp program and most ProComp teachers know the range of salary benefits and bonuses under ProComp
- Most ProComp teachers believe the design of ProComp distributes incentives appropriately, provides incentives for teachers to accomplish what is most important, and is consistent with the goals of the district
- ProComp teachers also feel more often than not, increased pressure and job stress as a result of ProComp and most are neutral about whether or not ProComp is a fair program
- ProComp teachers are mixed on whether or not the administration knows how to answer their questions about ProComp and whether or not DPS provides the training and resources needed to meet the ProComp objectives

Non-ProComp teachers:

- A majority of non-ProComp teachers do *not* believe ProComp can ultimately increase student achievement
- Although most non-ProComp teachers feel they have a clear understanding of the ProComp program and associated salary increases, they do not believe ProComp can motivate participants to improve their teaching practices
- A majority of non-ProComp teachers do not feel ProComp provides incentives for teachers to accomplish what is most important, yet most are neutral on whether ProComp distributes incentives appropriately and is consistent with important goals of the district

- Most non-ProComp teachers are also neutral about the fairness of ProComp, the associated pressure and job stress as a result of ProComp, and whether DPS and administrators provide training and resources to meet the objectives of and answer questions about ProComp

RESULTS

Table 2.1

Participating in ProComp has led me to:

	%Agree	%Neutral	%Disagree	%N/A
<i>Spend more hours on teaching and teaching-related tasks.</i>	31.6	31.0	31.7	5.7
<i>Change the content of what I teach.</i>	22.4	27.7	41.7	8.2
<i>Change the way I teach (e.g. by using different teaching methods).</i>	35.1	23.4	34.0	7.5
<i>Engage in professional development activities (e.g. in-service or other training) aimed at increasing my ability to help students improve their test scores.</i>	54.9	20.7	21.2	3.2
<i>Focus my teaching more on those aspects of student learning related to ProComp goals.</i>	37.9	31.6	25.4	5.2

Table 2.2

General impressions of ProComp

	%Agree	%Neutral	%Disagree
<i>ProComp can motivate participants to improve teaching practices.</i>			
ProComp	49.5	28.8	21.7
Not Procomp	27.8	29.0	43.2
<i>ProComp can ultimately improve student achievement.</i>			
ProComp	38.5	34.7	26.8
Not Procomp	15.3	32.1	52.6
<i>I have a clear understanding of the ProComp program.</i>			
ProComp	50.5	20.4	29.1
Not Procomp	43.0	22.8	34.2
<i>I know the range of salary increases and bonuses that I could receive under ProComp.</i>			
ProComp	63.5	11.9	24.7
Not Procomp	47.8	17.8	34.4
<i>The design of ProComp distributes incentives appropriately.</i>			
ProComp	34.1	36.1	29.8
Not Procomp	10.9	44.0	45.1
<i>ProComp is consistent with important goals of our school district.</i>			
ProComp	49.9	34.4	15.7

Not Procomp	22.6	42.9	34.6
<i>ProComp provides incentives for teachers to accomplish what is most important.</i>			
ProComp	42.5	29.4	28.1
Not Procomp	17.9	30.6	51.5
<i>I feel more pressure and job stress as a result of ProComp.</i>			
ProComp	42.6	27.0	30.4
Not Procomp	34.2	45.5	20.3
<i>ProComp is a fair program.</i>			
ProComp	37.9	40.4	21.7
Not Procomp	10.0	47.3	42.7
<i>DPS provides the training and resources needed to meet the ProComp objectives.</i>			
ProComp	36.3	30.6	33.1
Not Procomp	16.0	48.0	35.9
<i>The administration at my school knows how to answer my questions about ProComp.</i>			
ProComp	24.0	37.3	38.7
Not Procomp	16.7	49.1	34.1

Table 2.3

Current feelings about working at DPS

	%Agree	%Neutral	%Disagree
<i>My job offers a fair salary.</i>			
ProComp	30.7	19.4	49.9
Not Procomp	18.7	15.9	65.4
<i>Working at DPS is as good or better than working elsewhere in the region.</i>			
ProComp	21.7	27.4	50.9
Not Procomp	17.2	23.3	59.5
<i>I am proud to tell others that I work for DPS.</i>			
ProComp	48.8	27.4	23.7
Not Procomp	45.6	26.7	27.7
<i>The morale at my school is high.</i>			
ProComp	32.6	23.8	43.6
Not Procomp	32.1	21.2	46.7

GENERAL ATTITUDINAL QUESTIONS PRINCIPAL ANALYSIS

SUMMARY OF KEY FINDINGS

- Overall, a large majority of principals believe ProComp is aligned with important goals of the district
- A plurality of principals believe ProComp distributes incentives appropriately; provides incentives for teachers to accomplish what is most important; they have the knowledge to answer their teacher's questions about ProComp; and that there is district support via training and resources to meet ProComp objectives
- Principals are almost evenly split on whether they are neutral or in agreement with the belief that ProComp is a fair program or that it can ultimately improve student achievement
- Principals are almost evenly split on whether they believe ProComp has or has not resulted in more job stress and pressure for them; however, a majority of principals believe ProComp *has* resulted in more job stress and pressure for their teachers
- Most principals are neutral about whether ProComp motivates participant so to improve their teaching
- Most principals do *not* believe ProComp has caused teachers to spend more time on teaching and teaching-related tasks, change the content of what they teach, or changed the methods they use for teaching
- Most of principals do believe ProComp has resulted in increasing teacher's engagement in professional development activities aimed at increasing their ability to help students improve their test scores
- Principals are split on whether ProComp has caused teachers to focus their teaching more on aspects of student learning related to ProComp elements or remain neutral
- While most principals believe teaching at DPS is as good or better than teaching elsewhere in the region, they do not believe DPS offers teachers a fair salary
- That said, most principals believe the morale at their school is high and that their teachers are proud to tell others they work for DPS
- Similarly, most principals are proud to tell others they work for DPS and feel working as an administrator at DPS is as good or better than working elsewhere in the region; however, a majority of principals do *not* feel their position offers a fair salary

RESULTS

Table 2.4
General impressions of ProComp:

	%Agree	%Neutral	%Disagree
<i>ProComp motivates participants to improve their teaching.</i>	34.3	40.4	25.3
<i>ProComp will ultimately improve student achievement.</i>	39.4	39.4	21.2
<i>The design of ProComp distributes incentives appropriately.</i>	45.5	33.3	21.2
<i>ProComp is consistent with important goals of our school district.</i>	70.7	21.2	8.1
<i>ProComp provides incentives for teachers to accomplish what is most important.</i>	48.5	34.3	17.2
<i>My teachers feel more pressure and job stress as a result of ProComp.</i>	42.4	28.3	29.3
<i>I personally feel more pressure and job stress as a result of ProComp.</i>	37.4	24.2	38.4
<i>ProComp is a fair program.</i>	44.4	41.4	14.1
<i>DPS provides the training and resources needed to meet the ProComp objectives.</i>	42.4	30.3	27.3
<i>I know how to answer my teachers' questions about ProComp.</i>	45.5	25.3	29.3

Table 2.5
ProComp has led my teachers to:

	%Agree	%Neutral	%Disagree
<i>Spend more hours on teaching and teaching-related tasks.</i>	20.2	32.3	47.5
<i>Change the content of what they teach.</i>	14.1	37.4	48.5
<i>Change the way they teach (e.g., by using different teaching methods).</i>	23.2	34.3	42.4
<i>Engage in professional development activities (e.g., in-service or other training) aimed at increasing their ability to help students improve their test scores.</i>	60.6	20.2	19.2
<i>Focus on their teaching more on those aspects of student learning related to ProComp elements.</i>	37.4	36.4	26.3

Table 2.6
Current feelings about working at DPS:

	%Agree	%Neutral	%Disagree

<i>DPS teaching jobs offer a fair salary.</i>	40.4	16.2	43.4
<i>Teaching at DPS is as good or better than teaching elsewhere in the region.</i>	47.5	26.3	26.3
<i>My teachers are proud to tell others that they work for DPS.</i>	42.4	33.3	24.2
<i>The morale at my school is high.</i>	54.5	27.3	18.2

Table 2.7

Current feelings about administrative position at DPS:

	%Agree	%Neutral	%Disagree
<i>My position offers a fair salary.</i>	23.2	18.2	58.6
<i>Working as an administrator at DPS is as good or better than working elsewhere in the region.</i>	49.5	35.4	15.2
<i>I am proud to tell others that I work for DPS.</i>	84.8	14.1	1.0

**STUDENT GROWTH
COMPONENT**

STUDENT GROWTH OBJECTIVES TEACHER & SSP ANALYSIS

SUMMARY OF KEY FINDINGS

- A large majority of ProComp and non-ProComp teachers utilize the online tools in the creation of student growth objectives; a slightly higher proportion of teachers who reported meeting both of their SGOs last year also reported that they utilized the online tools
- In all subpopulations, the plurality of teachers reported that the SGO process is clear
- More ProComp teachers than non-ProComp teachers reported that the SGO process was clear; additionally, in both groups, teachers who did NOT meet both of their SGOs reported less clarity in the SGO process
- The majority of ProComp teachers reported that the SGO process was worth the time and effort it requires; among non-ProComp teachers, the reverse was true with the plurality of teachers reporting that it was not worth the time and effort required
- Both ProComp and non-ProComp teachers reported overwhelmingly that the SGO process takes either the right amount of time or more time than it should; less than 5% of the total population reported that it takes less time than it should
- When asked to estimate the number of hours spent on SGO related tasks, the mean response was 42 hours, with a range from 1-800; several teachers, both ProComp and non-ProComp, mentioned that they felt this was too long
- The majority of all ProComp teachers, regardless of whether they met both SGOs in the previous school year, felt that they received adequate support from their administrators and that they were held accountable for their SGOs
- The majority of non-ProComp teachers who met both SGOs also felt that they received adequate support; among those who did not meet both of the SGOs, only 25.1% agreed
- Among those who had NOT met both of their SGOs, the majority of ProComp teachers (50.9%) and the plurality of non-ProComp teachers (44.1%) agreed that determination was fair
- When asked what compensation teachers deserve who meet both of their SGOs, a strong majority of ProComp teachers, regardless of the successful completion of their own SGOs in the previous year, believed that said teachers deserve a salary increase AND bonus; a majority of non-ProComp teachers who met both SGOs and a plurality who did not meet both SGOs also reported that those teachers deserve a salary increase AND bonus
- For teachers who only meet one of two SGOs, both ProComp and non-ProComp teachers were more evenly split among the alternatives
- A strong majority of ProComp teachers and a slight majority of non-ProComp teachers report that writing SGOs encourages them to focus their teaching on the aspects of student learning related to their SGOs
- A considerably larger proportion of ProComp teachers than non-ProComp teachers reported that the SGO process led to improvements in their instructional practice; interestingly, the highest percentage (52.2%) of teachers who reported this was in

subpopulation of ProComp teachers who did NOT meet both of their SGOs last year

- A considerably larger proportion of ProComp teachers than non-ProComp teachers reported that the SGO process would ultimately lead to increased student achievement; the highest percentage (54.5%) of teachers who reported this was in the subpopulation of ProComp teachers who met both of their SGOs last year

IMPLEMENTATION

Element Clarity

Table 2.8

Student Growth Objectives: Element clarity

		%Agree	%Neutral	%Disagree
<i>I utilize the online tools provided by DPS in the creation of my SGO</i>				
ProComp	Met both SGOs last year	81.6	8.8	9.5
	Did not meet both SGOs last year	76.6	13.5	9.9
	Other/Not-applicable	73.0	14.8	9.5
Not ProComp	Met both SGOs last year	80.2	9.6	10.2
	Did not meet both SGOs last year	74.5	12.3	13.2
	Other/Not-applicable	47.3	36.1	14.0
<i>The SGO process is clear.</i>				
ProComp	Met both SGOs last year	66.4	18.4	15.2
	Did not meet both SGOs last year	49.9	20.5	29.6
	Other/Not-applicable	44.0	21.1	33.1
Not ProComp	Met both SGOs last year	53.4	21.2	25.4
	Did not meet both SGOs last year	35.7	32.0	30.8
	Other/Not-applicable	52.4	20.9	26.7

Workload Appropriateness

Table 2.9

Student Growth Objectives: Workload appropriateness

		%Agree	%Neutral	%Disagree
<i>The SGO process is worth the time and effort it requires</i>				
ProComp	Met both SGOs last year	51.1	29.1	19.8
	Did not meet both SGOs last year	52.2	21.1	26.7
	Other/Not-applicable	41.9	29.2	27.1
Not ProComp	Met both SGOs last year	31.4	31.1	37.4
	Did not meet both SGOs last year	33.5	25.7	40.8
	Other/Not-applicable	31.3	38.7	28.6

Table 2.10

Student Growth Objectives: Workload appropriateness 2

		Less time than it should	The right amount of time	More time than it should
<i>The SGO process takes:</i>				
ProComp	Met both SGOs last year	2.1	55.0	42.9
	Did not meet both SGOs last year	7.2	53.8	39.0
	Other/Not-applicable	1.0	46.8	52.2
Not ProComp	Met both SGOs last year	2.1	57.9	40.0
	Did not meet both SGOs last year	1.7	55.8	42.5
	Other/Not-applicable	3.9	57.7	38.3

Table 2.11

Student Growth Objectives: Workload appropriateness open-ended analysis

<i>Approximately how many hours have you spent this school year on SGO related tasks?</i>		
Numerical responses	Number of numerical responses	231
	Mean	42
	Standard deviation	85
	Range	1 – 800
Qualitative responses	Number who said “too many”	29
	Number who indicated that they work on SGOs daily	55
	Number who indicated that if teachers were doing their job, the workload demands of SGOs would be small	7

Administrative Support

Table 2.12

Student Growth Objectives: Administrative support

		%Agree	%Neutral	%Disagree
<i>My administrator provides support to help me create my SGOs.</i>				
ProComp	Met both SGOs last year	59.9	19.9	20.2
	Did not meet both SGOs last year	57.5	16.7	25.8
	Other/Not-applicable	55.3	22.9	21.8
Not ProComp	Met both SGOs last year	56.3	21.6	22.0
	Did not meet both SGOs last year	25.1	25.2	29.7
	Other/Not-applicable	27.8	40.2	32.0
<i>I am held accountable for the SGOs I set at the beginning of the school year.</i>				
ProComp	Met both SGOs last year	88.3	8.1	3.3
	Did not meet both SGOs last year	79.4	11.5	9.1
	Other/Not-applicable	73.1	15.5	7.3
Not ProComp	Met both SGOs last year	72.9	16.8	10.1
	Did not meet both SGOs last year	69.2	17.1	12.9
	Other/Not-applicable	34.3	40.8	22.2

Table 2.13

Student Growth Objectives: Administrative support 2

		Mean	Standard deviation
<i>How many times per year do you meet with your administrator regarding your SGOs?</i>			
ProComp	Met both SGOs last year	2.69	1.58
	Did not meet both SGOs last year	2.30	1.48
	Other/Not-applicable	2.15	1.47
	All groups	2.50	1.58
Not ProComp	Met both SGOs last year	2.45	1.48
	Did not meet both SGOs last year	2.26	1.21
	Other/Not-applicable	2.21	2.84
	All groups	2.37	1.54

Fairness of SGO Process

Table 2.14

Student Growth Objectives: Fairness of SGO process

<i>The determination that my SGOs had not been met was fair.</i>			
	%Agree	%Neutral	%Disagree
ProComp	50.9	22.1	27.0
Not ProComp	44.1	33.7	22.2

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.15

Student Growth Objectives: Appropriateness of monetary incentives

		Salary increase and bonus	Salary increase; no bonus	Bonus; no salary increase	No salary increase or bonus
<i>Teachers who meet both SGOs deserve:</i>					
ProComp	Met both SGOs last year	80.2	11.7	3.3	4.8
	Did not meet both SGOs last year	70.2	14.9	10.6	4.3
	Other/Not-applicable	80.8	8.7	4.0	6.5
Not ProComp	Met both SGOs last year	53.4	11.5	7.0	28.1
	Did not meet both SGOs last year	47.4	9.8	12.0	30.8
	Other/Not-applicable	57.6	8.1	15.8	18.6
<i>Teachers who meet one of two SGOs deserve:</i>					
ProComp	Met both SGOs last year	30.4	43.3	21.5	4.9
	Did not meet both SGOs last year	34.5	37.4	22.8	5.3
	Other/Not-applicable	38.0	36.3	20.0	5.7
Not ProComp	Met both SGOs last year	28.2	26.6	16.3	28.8
	Did not meet both SGOs last year	24.0	25.9	19.1	30.9
	Other/Not-applicable	29.7	20.2	27.5	22.6

OUTCOMES**Element ability to impact instructional practice**

Table 2.16

Student Growth Objectives: Element ability to impact instructional practice

		%Agree	%Neutral	%Disagree
<i>I focus my teaching on the aspects of student learning related to my SGOs.</i>				
ProComp	Met both SGOs last year	65.5	18.8	15.7
	Did not meet both SGOs last year	65.9	17.4	16.7
	Other/Not-applicable	54.3	24.5	21.2
Not ProComp	Met both SGOs last year	55.1	17.5	27.4
	Did not meet both SGOs last year	50.3	27.8	21.9
	Other/Not-applicable	41.1	41.1	17.9
<i>The SGO process has led to improvements in my instructional practice.</i>				
ProComp	Met both SGOs last year	51.1	29.1	19.8
	Did not meet both SGOs last year	52.2	21.1	26.7
	Other/Not-applicable	41.9	29.2	27.1
Not ProComp	Met both SGOs last year	31.4	31.1	27.4
	Did not meet both SGOs last year	33.5	25.7	40.8
	Other/Not-applicable	31.3	38.7	28.6

Element ability to raise student achievement

Table 2.17

Student Growth Objectives: Element ability to raise student achievement

		%Agree	%Neutral	%Disagree
<i>My participation in the SGO process will ultimately improve the achievement of my students.</i>				
ProComp	Met both SGOs last year	54.5	30.9	14.6
	Did not meet both SGOs last year	47.1	34.7	18.2
	Other/Not-applicable	45.6	35.7	18.7
Not ProComp	Met both SGOs last year	39.6	29.7	30.8
	Did not meet both SGOs last year	36.0	31.9	32.0
	Other/Not-applicable	30.5	42.6	27.0
<i>My students are capable of meeting their growth objectives.</i>				
ProComp	Met both SGOs last year	75.0	20.2	4.8
	Did not meet both SGOs last year	60.6	22.2	17.1
	Other/Not-applicable	56.1	30.2	13.7
Not ProComp	Met both SGOs last year	71.4	22.7	5.8
	Did not meet both SGOs last year	56.4	22.5	21.1
	Other/Not-applicable	54.5	34.5	11.0
<i>I am confident that the measures I select appropriately measure my students' achievement.</i>				
ProComp	Met both SGOs last year	73.1	19.9	7.0
	Did not meet both SGOs last year	58.5	24.9	16.6
	Other/Not-applicable	53.6	30.7	15.7
Not ProComp	Met both SGOs last year	63.7	23.0	13.3
	Did not meet both SGOs last year	54.4	25.0	20.6
	Other/Not-applicable	45.3	43.1	11.7
<i>ProComp makes me more likely to strive to meet my SGOs.</i>				
ProComp	Met both SGOs last year	61.4	18.9	19.5
	Did not meet both SGOs last year	55.4	23.1	21.5
	Other/Not-applicable	48.6	28.5	21.1
Not ProComp	Met both SGOs last year	14.0	31.3	50.9
	Did not meet both SGOs last year	12.4	32.7	50.1
	Other/Not-applicable	27.4	32.9	35.1

Quality of SGOs

Table 2.18

Student Growth Objectives: Quality of SGOs

		%Agree	%Neutral	%Disagree
<i>The SGOs I set are challenging for me and my students.</i>				
ProComp	Met both SGOs last year	80.0	15.8	4.2
	Did not meet both SGOs last year	86.6	7.7	5.7
	Other/Not-applicable	71.0	24.4	4.6
Not ProComp	Met both SGOs last year	73.7	16.8	9.5
	Did not meet both SGOs last year	79.2	14.9	5.8
	Other/Not-applicable	53.3	36.7	9.9
<i>I utilize the online tools provided by DPS in the creation of my SGO</i>				
ProComp	Met both SGOs last year	81.6	8.8	9.5
	Did not meet both SGOs last year	76.6	13.5	9.9
	Other/Not-applicable	73.0	14.8	9.5
Not ProComp	Met both SGOs last year	80.2	9.6	10.2
	Did not meet both SGOs last year	74.5	12.3	13.2
	Other/Not-applicable	47.3	36.1	14.0

STUDENT GROWTH OBJECTIVES PRINCIPAL ANALYSIS

SUMMARY OF KEY FINDINGS

- Overall, a very strong majority (90.9%) of principals believe that the SGO process is worth the time and effort it requires
- Overwhelmingly, principals also reported belief in their efficacy as leaders and their knowledge about the SGO process
- Although the majority of principals reported that setting SGOs has an effect on the instruction provided at their school, the plurality of principals responded neutrally to the statement that the knowledge gained from implementing SGOs is used to inform instruction at the team or whole school level
- 89.9% of principals believe that their students are capable of meeting the SGOs set by the teachers

IMPLEMENTATION

Element Clarity

Table 2.19

Student Growth Objectives: Element clarity

	%Agree	%Neutral	%Disagree
<i>I understand the steps to collaboratively set and approve SGOs with my staff.</i>	90.9	5.1	2.0

Workload Appropriateness

Table 2.20

Student Growth Objectives: Workload appropriateness

	%Agree	%Neutral	%Disagree
<i>The SGO process is worth the time and effort it requires.</i>	90.9	5.1	2.0

Table 2.21

Student Growth Objectives: Workload appropriateness 2

	Less time than it should	The right amount of time	More time than it should
<i>The SGO process takes:</i>	4.0	60.6	33.3

Table 2.22
Student Growth Objectives: Workload appropriateness 3

	Mean	Standard deviation
<i>On average, how many times per year do you meet with each teacher regarding his/ her SGOs?</i>	3.38	1.31
<i>In total, how many teachers and staff members did you monitor throughout the SGO process last year?</i>	24.2	16.9

Administrative Support

Table 2.23
Student Growth Objectives: Administrative support

	%Agree	%Neutral	%Disagree
<i>The support provided me by DPS throughout the school year assists me in successfully completing the SGO process with the teachers and staff at my school.</i>	67.7	14.1	16.2
<i>DPS is invested in providing the teachers and staff at my school the training and resources needed to meet their SGOs.</i>	58.6	26.3	13.1
<i>I am knowledgeable about my staff's SGO content areas.</i>	90.9	4.0	3.0
<i>I have the expertise necessary to approve my staff's SGOs.</i>	86.9	8.1	3.0
<i>I hold my teachers accountable for the SGOs they set at the beginning of the school year.</i>	87.9	7.1	3.0

OUTCOMES

Element ability to impact instructional practice

Table 2.24
Student Growth Objectives: Element ability to impact instructional practice

	%Agree	%Neutral	%Disagree
<i>Setting SGOs improves the instruction and services provided at my school.</i>	59.6	28.3	10.1
<i>The knowledge gained from implementing SGOs is used to inform instruction at the team or whole school level.</i>	31.3	45.5	21.2
<i>The knowledge gained from implementing SGOs is used to influence instructional decisions made at the district level.</i>	58.6	24.2	15.2

Element ability to raise student achievement

Table 2.25

Student Growth Objectives: Element ability to raise student achievement

	%Agree	%Neutral	%Disagree
<i>Students in my school are capable of meeting their growth objectives.</i>	89.9	4.0	4.0
<i>ProComp makes my teachers more likely to strive to meet their SGOs.</i>	50.5	32.3	15.2

Quality of SGOs

Table 2.26

Student Growth Objectives: Quality of SGOs

	%Agree	%Neutral	%Disagree
<i>The SGOs set in my school are challenging for students.</i>	64.6	20.2	13.1
<i>My staff's SGO assessments accurately measure their SGOs.</i>	67.7	21.2	9.1

DISTINGUISHED SCHOOLS TEACHER & SSP ANALYSIS

SUMMARY OF KEY FINDINGS

- Regardless of ProComp status or whether teachers work in a distinguished school, teachers do *not* understand the criteria used to determine “distinguished schools” under ProComp
- Regardless of ProComp status, teachers who working distinguished schools believe their professional effort will impact the designation of their school as “distinguished”; teachers who do not work in distinguished schools disagreed
- ProComp teachers who work in distinguished schools believe they should receive a bonus for working there; most of the other teachers did not believe teachers working in distinguished schools should receive a bonus
- Most ProComp teachers, regardless of whether they work in distinguished schools are neutral about whether the “distinguished school” incentive will ultimately improve instructional practices of DPS educators; non-ProComp teachers do *not* believe this incentive will improve instructional practices of DPS teachers
- Similarly, most ProComp teachers, regardless of whether they work in distinguished schools are neutral about whether the “distinguished school” incentive will ultimately improve student achievement; non-ProComp teachers do *not* believe this incentive will improve student achievement

IMPLEMENTATION

Element Clarity

Table 2.27

Distinguished Schools: Element clarity

		%Agree	%Neutral	%Disagree
<i>I understand the criteria used to determine whether schools are considered “distinguished” under ProComp.</i>				
ProComp	Works in distinguished school	33.7	22.6	43.8
	Does not work in distinguished school	20.8	18.6	60.6
Not ProComp	Works in distinguished school	30.1	23.5	46.4
	Does not work in distinguished school	20.8	20.3	58.9

Workload Appropriateness

Table 2.28

Distinguished Schools: Workload appropriateness

		%Agree	%Neutral	%Disagree
<i>My level of professional effort will impact whether my school will be likely to be designated as "distinguished."</i>				
ProComp	Works in distinguished school	45.6	31.0	23.4
	Does not work in distinguished school	31.4	34.9	33.7
Not ProComp	Works in distinguished school	40.0	31.4	28.6
	Does not work in distinguished school	27.5	32.4	40.1

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.29

Distinguished Schools: Appropriateness of monetary incentives

		%Agree	%Neutral	%Disagree
<i>Teachers and SSPs working in schools designated as "distinguished" under ProComp deserve a bonus.</i>				
ProComp	Works in distinguished school	49.3	28.7	22.1
	Does not work in distinguished school	24.0	38.5	37.5
Not ProComp	Works in distinguished school	27.7	33.6	38.7
	Does not work in distinguished school	12.9	37.6	49.5
<i>My level of professional effort will impact whether my school will be likely to be designated as "distinguished."</i>				
ProComp	Works in distinguished school	45.6	31.0	23.4
	Does not work in distinguished school	31.4	34.9	33.7
Not ProComp	Works in distinguished school	40.0	31.4	28.6
	Does not work in distinguished school	27.5	32.4	40.1

OUTCOMES**Element ability to impact instructional practice**

Table 2.30

Distinguished Schools: Element ability to impact instructional practice

		%Agree	%Neutral	%Disagree
<i>The "Distinguished Schools" incentive of ProComp will ultimately improve instructional practices of DPS educators.</i>				
ProComp	Works in distinguished school	30.3	41.4	28.4
	Does not work in distinguished school	15.3	45.8	38.9
Not ProComp	Works in distinguished school	12.4	28.7	58.9
	Does not work in distinguished school	6.7	36.8	56.5

Element ability to raise student achievement

Table 2.31

Distinguished Schools: Element ability to raise student achievement

		%Agree	%Neutral	%Disagree
<i>The "Distinguished Schools" incentive of ProComp will ultimately improve the achievement of DPS students.</i>				
ProComp	Works in distinguished school	29.8	41.5	28.7
	Does not work in distinguished school	16.9	43.6	39.5
Not ProComp	Works in distinguished school	13.7	27.2	59.2
	Does not work in distinguished school	6.5	38.1	55.4

DISTINGUISHED SCHOOLS PRINCIPAL ANALYSIS

SUMMARY OF KEY FINDINGS

- Regardless of whether they work in a distinguished school, most principals do *not* understand how schools get designated “distinguished” under ProComp
- A large majority of principals believe their level of professional effort will impact whether their school is designated as “distinguished”
- A large majority of principals working in distinguished schools believe their teachers deserve a bonus; most principals not working in distinguished schools are neutral about whether teachers in distinguished schools deserve a bonus
- A majority of principals who work in distinguished schools believe that this incentive will ultimately improve instructional practices of DPS educators; a majority of principals who do not work in distinguished schools are neutral about the ability of this incentive to improve instructional practices
- Most principals who work in distinguished schools are neutral or agree that this incentive will ultimately improve student achievement; most principals who do not work in distinguished schools are neutral about the ability of this incentive to improve student achievement

IMPLEMENTATION

Element Clarity

Table 2.32

Distinguished Schools: Element clarity

	%Agree	%Neutral	%Disagree
<i>I understand the criteria used to determine whether schools are considered “distinguished” under ProComp.</i>			
Works in distinguished school	40.7	11.1	48.1
Does not work in distinguished school	33.3	19.4	47.2

Workload Appropriateness

Table 2.33

Distinguished Schools: Workload appropriateness

	%Agree	%Neutral	%Disagree
<i>My level of professional effort will impact whether my school will be likely to be designated as “distinguished.”</i>			
Works in distinguished school	70.4	18.5	11.1
Does not work in distinguished school	73.6	12.5	13.9

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.34

Distinguished Schools: Appropriateness of monetary incentives

	%Agree	%Neutral	%Disagree
<i>My level of professional effort will impact whether my school will be likely to be designated as “distinguished.”</i>			
Works in distinguished school	70.4	18.5	11.1
Does not work in distinguished school	73.6	12.5	13.9
<i>Teachers and SSPs working in schools designated as “distinguished” under ProComp deserve a bonus.</i>			
Works in distinguished school	74.1	18.5	7.4
Does not work in distinguished school	30.6	40.3	29.2

OUTCOMES**Element ability to impact instructional practice**

Table 2.35

Distinguished Schools: Element ability to impact instructional practice

	%Agree	%Neutral	%Disagree
<i>The “Distinguished Schools” incentive of ProComp will ultimately improve instructional practices of DPS educators.</i>			
Works in distinguished school	51.9	37.0	11.1
Does not work in distinguished school	18.1	55.6	26.4

Element ability to raise student achievement

Table 2.36

Distinguished Schools: Element ability to raise student achievement

	%Agree	%Neutral	%Disagree
<i>The “Distinguished Schools” incentive of ProComp will ultimately improve the achievement of DPS students.</i>			
Works in distinguished school	44.4	44.4	11.1
Does not work in distinguished school	20.8	50.0	29.2

**EXCEEDS EXPECTATIONS (CSAP)
TEACHER & SSP ANALYSIS**

SUMMARY OF KEY FINDINGS

- Fewer than 50 percent of both ProComp and non-ProComp teachers understand the requirements for teachers to receive a salary increase under "exceeding CSAP expectations" under ProComp
- Of ProComp teachers, those who teach CSAP grades are more likely than those who do not to believe that teachers exceeding CSAP expectations deserve an increase in salary. In general, ProComp teachers are more likely than non-ProComp teachers to believe teachers who exceed these expectations deserve an increase in salary
- Less than one third of teachers – whether they are involved in ProComp or not – agree that students' CSAP scores depend on the professional effort of their teachers
- Less than one-quarter of ProComp teachers and roughly one tenth of non-ProComp teachers believe that the "exceeds CSAP expectations" incentive will ultimately improve instructional practice. In both groups, those who teach CSAP subjects and grades are more likely to disagree with the notion that the "exceeds expectations" incentive will improve instructional practice
- Similar results surface vis-a-vis the "exceeds expectations" incentive's ability to impact student achievement. Less than one-quarter of ProComp teachers and roughly one-eighth of non-ProComp teachers believe that the "exceeds expectations" incentive will ultimately raise student achievement

IMPLEMENTATION

Element Clarity

Table 2.37

Exceed Expectations: Element clarity

		%Agree	%Neutral	%Disagree
<i>I understand the requirement for teachers to receive a salary increase for "exceeding CSAP expectations" under ProComp.</i>				
ProComp	Teaches a CSAP subject/grade	47.9	20.4	31.7
	Teaches a non-CSAP subject/grade	36.0	25.9	38.0
Not ProComp	Teaches a CSAP subject/grade	36.0	24.8	39.1
	Teaches a non-CSAP subject/grade	43.0	25.4	31.6

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.38

Exceed Expectations: Appropriateness of monetary incentives

		%Agree	%Neutral	%Disagree
<i>Teachers whose students exceed CSAP expectations under ProComp deserve an increase in salary.</i>				
ProComp	Teaches a CSAP subject/grade	40.8	31.1	28.1
	Teaches a non-CSAP subject/grade	35.9	34.6	29.5
Not ProComp	Teaches a CSAP subject/grade	24.4	26.6	49.0
	Teaches a non-CSAP subject/grade	33.9	24.0	42.0
<i>Student CSAP scores depend on the professional effort of their teachers.</i>				
ProComp	Teaches a CSAP subject/grade	29.8	22.1	48.1
	Teaches a non-CSAP subject/grade	26.0	26.7	47.3
Not ProComp	Teaches a CSAP subject/grade	23.0	18.0	58.9
	Teaches a non-CSAP subject/grade	23.7	23.4	53.0

OUTCOMES**Element ability to impact instructional practice**

Table 2.39

Exceed Expectations: Element ability to impact instructional practice

		%Agree	%Neutral	%Disagree
<i>The "Exceed CSAP Expectations" incentive of ProComp will ultimately improve instructional practices of DPS educators.</i>				
ProComp	Teaches a CSAP subject/grade	22.4	30.6	46.9
	Teaches a non-CSAP subject/grade	17.0	40.2	42.7
Not ProComp	Teaches a CSAP subject/grade	7.8	23.9	68.2
	Teaches a non-CSAP subject/grade	13.0	31.1	55.9

Element ability to raise student achievement

Table 2.40

Exceed Expectations: Element ability to raise student achievement

		%Agree	%Neutral	%Disagree
<i>The "Exceed CSAP Expectations" incentive of ProComp will ultimately improve the achievement of DPS students.</i>				
ProComp	Teaches a CSAP subject/grade	26.1	27.4	46.4
	Teaches a non-CSAP subject/grade	19.6	38.3	42.1
Not ProComp	Teaches a CSAP subject/grade	10.0	22.9	67.1
	Teaches a non-CSAP subject/grade	14.1	28.8	57.1

**EXCEEDS EXPECTATIONS (CSAP)
PRINCIPAL ANALYSIS**

SUMMARY OF KEY FINDINGS

- The vast majority of principals – 78 percent – agree that students' CSAP scores depend on the professional effort of their teachers. Only 11 percent of principals disagree with this notion
- Likewise, nearly two-thirds – 64 percent – of principals believe that teachers whose students exceed CSAP expectations deserve an increase in salary
- Forty-three percent of principals agree that the "exceeds expectations" incentive of ProComp will improve instructional practice; similarly, 41 percent agree that this incentive will ultimately improve the achievement of DPS students

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.41

Exceeds Expectations: Appropriateness of monetary incentives

	%Agree	%Neutral	%Disagree
<i>Student CSAP scores depend on the professional effort of their teachers.</i>	77.8	11.1	11.1
<i>Teachers whose students exceed CSAP expectations under ProComp deserve an increase in salary.</i>	63.6	17.2	19.2

OUTCOMES

Element ability to impact instructional practice

Table 2.42

Exceeds Expectations: Element ability to impact instructional practice

	%Agree	%Neutral	%Disagree
<i>The "Exceeds CSAP Expectations" incentive of ProComp will ultimately improve instructional practices of DPS teachers.</i>	43.4	40.4	16.2

Element ability to raise student achievement

Table 2.43

Exceeds Expectations: Element ability to raise student achievement

	%Agree	%Neutral	%Disagree
<i>The "Exceeds CSAP Expectations" incentive of ProComp will ultimately improve the achievement of DPS students.</i>	41.4	38.4	20.2

**KNOWLEDGE & SKILLS
COMPONENT**

PROFESSIONAL DEVELOPMENT UNITS (PDUs) TEACHER & SSP ANALYSIS

SUMMARY OF KEY FINDINGS

- Overall, teachers tend to hold favorable views with respect to PDUs
- This positive appraisal is not uniform across stages of PDU completion or ProComp status; teachers in ProComp who have completed a PDU are more likely than all other types of teachers to understand what is required to complete a PDU, and more likely to believe that the PDU process is worth the time it requires to complete
- More often than not, teachers who have completed or are completing a PDU agree that ProComp makes it more likely that they will complete professional development
- Teachers that have completed a PDU have a substantially more favorable view of the impact PDU completion can have on instructional practice than other teachers, especially those not involved in ProComp. Roughly two-thirds of teachers that have completed a PDU – compared with less than half of non-ProComp teachers -- believe that these units improve instructional practice and help teachers achieve professional growth
- Thirty-nine percent of teachers who have completed a PDU believe that PDUs are more valuable than traditional professional development for increasing instructional expertise. Only 15 percent of non-ProComp teachers share this belief
- Teachers who have completed a PDU have different outlooks than other groups of teachers vis-a-vis the potential impact of the PDU process on student achievement. The majority of teachers who have completed a PDU agree that doing so will ultimately improve student achievement. Thirty percent of ProComp teachers who have not completed a PDU and 23 percent of non-ProComp teachers believe that doing so will improve student achievement

IMPLEMENTATION

Element Clarity

Table 2.44

Professional Development Units: Element clarity

		%Agree	%Neutral	%Disagree
<i>I understand what is required to complete a PDU</i>				
ProComp	Completed a PDU	71.8	10.9	16.4
	Completing a PDU	48.7	22.4	24.1
	Not Completed a PDU	29.9	17.9	51.3
Not ProComp		45.5	24.9	28.2

Workload Appropriateness

Table 2.45

Professional Development Units: Workload appropriateness

		%Agree	%Neutral	%Disagree
<i>The PDU process is worth the time and effort it requires</i>				
ProComp	Completed a PDU	57.5	19.7	21.9
	Completing a PDU	29.7	31.7	33.8
	Not Completed a PDU	21.5	45.0	32.0
Not ProComp		15.7	45.9	35.8

Table 2.46

Professional Development Units: Workload appropriateness 2

		Less time than it should	The right amount of time	More time than it should
<i>The PDU process takes:</i>				
ProComp	Completed a PDU	.8	45.7	53.5
	Completing a PDU	1.1	33.8	65.1
	Not Completed a PDU	1.9	28.8	69.3
Not ProComp		3.8	31.7	64.5

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.47

Professional Development Units: Appropriateness of monetary incentives

		%Agree	%Neutral	%Disagree
<i>ProComp makes it more likely for me to complete professional development.</i>				
ProComp	Completed a PDU	72.2	13.2	13.6
	Completing a PDU	52.2	16.2	27.9
	Not Completed a PDU	34.8	24.5	39.8
Not ProComp		23.3	28.0	45.9

OUTCOMES

Element ability to impact instructional practice

Table 2.48

Professional Development Units: Element ability to impact instructional practice

		%Agree	%Neutral	%Disagree
<i>Completing a PDU improved my instructional practice.</i>				
ProComp	Completed a PDU	64.3	20.3	13.8
	Completing a PDU	35.4	34.0	22.3
<i>Completing a PDU will improve a teacher's instructional practice.</i>				
ProComp	Completed a PDU	64.0	23.7	10.9
	Completing a PDU	41.4	31.6	22.2
	Not Completed a PDU	39.8	34.1	25.5
Not ProComp		32.8	38.8	27.2
<i>Completing a PDU helped me achieve professional growth.</i>				
ProComp	Completed a PDU	75.1	14.1	10.8
	Completing a PDU	55.4	21.1	21.2
<i>Completing a PDU helps teachers achieve professional growth.</i>				
ProComp	Completed a PDU	77.1	14.7	7.0
	Completing a PDU	54.4	23.9	16.9
	Not Completed a PDU	59.9	23.0	16.5
Not ProComp		46.8	30.5	21.5

Table 2.49

Professional Development Units: Element ability to impact instructional practice 2

		More valuable	Equally valuable	Less valuable
<i>PDU's are of more/less/equal value than traditional professional development for increasing instructional expertise:</i>				
ProComp	Completed a PDU	38.7	52.4	9.0
	Completing a PDU	35.1	39.9	25.0
	Not Completed a PDU	15.4	61.0	23.6
Not ProComp		15.0	57.8	27.3

Element ability to raise student achievement

Table 2.50

Professional Development Units: Element ability to raise student achievement

		%Agree	%Neutral	%Disagree
<i>Completing a PDU will ultimately improve the achievement of my students.</i>				
ProComp	Completed a PDU	59.9	25.0	13.7
	Completing a PDU	43.4	23.1	27.6
<i>Completing a PDU will lead to higher achievement of students</i>				
ProComp	Completed a PDU	55.7	28.8	14.0
	Completing a PDU	30.9	38.8	25.5
	Not Completed a PDU	30.8	39.0	29.6
Not ProComp		23.1	41.6	34.2

**PROFESSIONAL DEVELOPMENT UNITS (PDUs)
PRINCIPAL ANALYSIS**

SUMMARY OF KEY FINDINGS

- Overall, principals were favorable to the PDU process
- A plurality of principals believe the PDU process is worth the time and effort it requires and a majority believe it takes the right amount of time
- Most principals felt they understood what is required of their teachers to complete a PDU
- A majority of principals believed ProComp makes it more likely their teachers will complete professional development
- A majority of principals believed completing a PDU promotes professional growth of their teachers and improves their teacher’s instructional practice
- A majority of principals believe traditional professional development and PDUS are of equal value

IMPLEMENTATION

Element Clarity

Table 2.51

Professional Development Units: Element clarity

	%Agree	%Neutral	%Disagree
<i>I understand what is required for my teachers to complete a PDU.</i>	79.8	12.1	6.1

Workload Appropriateness

Table 2.52

Professional Development Units: Workload appropriateness

	%Agree	%Neutral	%Disagree
<i>The PDU process is worth the time and effort it requires.</i>	47.5	40.4	10.1

Table 2.53

Professional Development Units: Workload appropriateness 2

	%Less time than it should	%The right amount of time	%More time than it should
<i>PDUs take:</i>	5.1	62.6	30.3

Administrative Support

Table 2.54

Professional Development Units: Administrative support

	%Agree	%Neutral	%Disagree
<i>I understand what is required for my teachers to complete a PDU.</i>	44.4	25.3	28.3

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.55

Professional Development Units: Appropriateness of monetary incentives

	%Agree	%Neutral	%Disagree
<i>ProComp makes it more likely for my teachers to complete professional development.</i>	52.5	35.4	10.1

Table 2.56

Tuition Reimbursement: Appropriateness of monetary incentives

	%Agree	%Neutral	%Disagree
<i>I would pursue an advanced degree or certificate (in addition to any that I already have) to qualify for the ProComp salary increase (\$3070 in 2006-2007).</i>			
ProComp	42.1	27.9	30.1
Not ProComp	29.6	27.1	43.3

OUTCOMES

Element ability to impact instructional practice

Table 2.57

Professional Development Units: Element ability to impact instructional practice

	%Agree	%Neutral	%Disagree
<i>Completing a PDU improves a teacher's instructional practice.</i>	51.5	36.4	10.1
<i>Completing a PDU helps teachers achieve professional growth.</i>	65.7	25.3	7.1

Table 2.58

Professional Development Units: Element ability to impact instructional practice 2

	%Less valuable	%Equal value	%More valuable
<i>Compared to traditional professional development, PDUs are:</i>	14.1	64.6	19.2

**PROFESSIONAL EVALUATIONS
COMPONENT**

COMPREHENSIVE PROFESSIONAL EVALUATIONS TEACHER & SSP ANALYSIS

SUMMARY OF KEY FINDINGS

- Regardless of ProComp or probationary status, a majority of teachers understand what is required to complete the CPE process
- Both probationary and non-probationary ProComp teachers seemed favorable to the CPE process; non-probationary, non-ProComp teachers were overall less favorable to the CPE process
- Most ProComp teachers and non-ProComp, probationary teachers believe the CPE process is worth the time and effort it takes and takes the right amount of time; however, a majority of non-ProComp, non-probationary teachers believe the CPE process is *not* worth the time and effort it takes and takes *more* time than it should
- Regardless of ProComp or probationary status, a majority of teachers collaborated with their administrator on their CPE evaluation; conducted at least one mid-year evaluation conference; felt their administrator conducted the evaluation in a timely manner; felt their administrator had the knowledge necessary to evaluate their teaching practice; and were overall satisfied with their interactions with their evaluator (administrator)
- As expected, most ProComp teachers felt ProComp made them strive for a successful CPE; most non-ProComp teachers did *not* feel ProComp made them strive for a successful CPE
- A majority of ProComp teachers and non-ProComp, probationary teachers believe the CPE process helps teachers achieve professional growth and improve instructional practice; however, a majority of non-ProComp, non-probationary teachers do *not* believe the CPE process helps teachers achieve professional growth or improve instructional practice
- A majority of probationary ProComp teachers agreed the CPE process could lead to higher student achievement; non-probationary ProComp teachers and probationary non-ProComp teachers were neutral; non-probationary, non-ProComp teachers did *not* believe the CPE process could lead to higher student achievement
- With the exception of non-probationary ProComp teachers, a majority of teachers, regardless of ProComp or probationary status were satisfied with the CPE process
- Regardless of ProComp or probationary status, a majority of teachers were satisfied with the feedback they received on their CPE; believed their evaluation was conducted in a fair way; and believed their most recent CPE accurately reflected their job performance

IMPLEMENTATION**Element Clarity**

Table 2.59

Comprehensive Professional Evaluation: Element clarity

		%Agree	%Neutral	%Disagree
<i>I understand what is required to complete the CPE process.</i>				
ProComp	Probationary Teacher	58.9	21.9	19.3
	Non-Probationary Teacher	57.9	26.6	15.5
	Other	31.9	31.9	36.2
Not ProComp	Probationary Teacher	69.8	15.5	14.7
	Non-Probationary Teacher	63.8	18.8	17.4
	Other	26.3	44.7	28.9

Workload Appropriateness

Table 2.60

Comprehensive Professional Evaluation: Workload appropriateness

		%Agree	%Neutral	%Disagree
<i>The CPE process is worth the time and effort it requires.</i>				
ProComp	Probationary Teacher	43.0	34.1	23.0
	Non-Probationary Teacher	37.0	36.2	26.9
	Other	17.0	51.1	31.9
Not ProComp	Probationary Teacher	35.3	32.8	31.9
	Non-Probationary Teacher	23.7	34.0	42.3
	Other	5.3	50.0	44.7

Table 2.61

Comprehensive Professional Evaluation: Workload appropriateness 2

		Less time than it should	The right amount of time	More time than it should
<i>The CPE process takes:</i>				
ProComp	Probationary Teacher	5.6	61.9	32.6
	Non-Probationary Teacher	2.6	50.6	46.8
	Other	10.6	36.2	53.2
Not ProComp	Probationary Teacher	6.0	54.3	39.7
	Non-Probationary Teacher	5.4	39.4	55.2
	Other	2.6	28.9	68.4

Administrative Support

Table 2.62

Comprehensive Professional Evaluation: Administrative support.

		%Agree	%Neutral	%Disagree
<i>I collaborated with my administrator on my evaluation (e.g., (s)he helped me provide evidence of teaching and learning).</i>				
ProComp	Probationary Teacher	70.0	12.6	17.4
	Non-Probationary Teacher	61.2	14.7	22.5
	Other	36.2	23.4	31.9
Not ProComp	Probationary Teacher	68.1	8.6	23.3
	Non-Probationary Teacher	61.7	13.1	24.2
	Other	44.7	23.7	28.9
<i>My administrator conducted at least one mid-year evaluation conference.</i>				
ProComp	Probationary Teacher	73.7	10.7	15.2
	Non-Probationary Teacher	70.3	10.6	18.6
	Other	42.6	10.6	40.4
Not ProComp	Probationary Teacher	76.7	8.6	14.7
	Non-Probationary Teacher	70.9	9.2	18.8
	Other	55.3	15.8	26.3
<i>My administrator conducted the evaluation in a timely manner.</i>				
ProComp	Probationary Teacher	67.0	13.0	20.0
	Non-Probationary Teacher	67.4	16.0	16.0
	Other	46.8	17.0	27.7
Not ProComp	Probationary Teacher	72.4	12.9	14.7
	Non-Probationary Teacher	66.4	10.6	22.1
	Other	52.6	23.7	21.1
<i>My administrator has the knowledge necessary to evaluate my teaching practice.</i>				
ProComp	Probationary Teacher	68.1	13.3	18.5
	Non-Probationary Teacher	60.5	17.1	20.7
	Other	36.2	27.7	29.8
Not ProComp	Probationary Teacher	70.7	8.6	20.7
	Non-Probationary Teacher	60.6	14.1	25.1
	Other	50.0	18.4	31.6
<i>Overall, I am satisfied with my interactions with my evaluator.</i>				
ProComp	Probationary Teacher	70.7	17.8	11.1
	Non-Probationary Teacher	67.7	15.5	16.3
	Other	44.7	14.9	36.2
Not ProComp	Probationary Teacher	75.9	6.9	17.2
	Non-Probationary Teacher	67.4	14.6	17.4
	Other	52.6	21.1	23.7

OUTCOMES

Element ability to impact instructional practice

Table 2.63

Comprehensive Professional Evaluation: Element ability to impact instructional practice.

		%Agree	%Neutral	%Disagree
<i>ProComp makes me more likely to strive for a successful professional evaluation.</i>				
ProComp	Probationary Teacher	45.6	27.8	26.7
	Non-Probationary Teacher	47.0	28.4	24.5
	Other	42.6	31.9	25.5
Not ProComp	Probationary Teacher	15.5	40.5	44.0
	Non-Probationary Teacher	15.7	31.2	53.1
	Other	5.3	47.4	47.4
<i>The CPE process helps teachers achieve professional growth.</i>				
ProComp	Probationary Teacher	53.0	27.0	20.0
	Non-Probationary Teacher	45.7	35.1	19.1
	Other	25.5	51.1	23.4
Not ProComp	Probationary Teacher	44.8	29.3	25.9
	Non-Probationary Teacher	35.2	28.2	36.6
	Other	21.1	50.0	28.9
<i>The CPE process helps to improve a teacher's instructional practice.</i>				
ProComp	Probationary Teacher	50.0	29.3	20.7
	Non-Probationary Teacher	42.1	33.6	24.3
	Other	21.3	55.3	23.4
Not ProComp	Probationary Teacher	42.2	29.3	28.4
	Non-Probationary Teacher	35.0	28.2	36.9
	Other	23.7	52.6	23.7

Element ability to raise student achievement

Table 2.64

Comprehensive Professional Evaluation: Element ability to raise student achievement.

		%Agree	%Neutral	%Disagree
<i>The CPE process leads to higher achievement of a teacher's students.</i>				
ProComp	Probationary Teacher	41.5	34.4	24.1
	Non-Probationary Teacher	30.7	41.6	27.6
	Other	12.8	59.6	27.7
Not ProComp	Probationary Teacher	29.3	35.3	35.3
	Non-Probationary Teacher	22.5	33.3	44.1
	Other	10.5	52.6	36.8

Satisfaction and perceived fairness of the process

Table 2.65

Comprehensive Professional Evaluation: Satisfaction and perceived fairness of process.

Year 1 ProComp Evaluation

		%Agree	%Neutral	%Disagree
<i>I am satisfied with the evaluation process.</i>				
ProComp	Probationary Teacher	41.5	34.4	24.1
	Non-Probationary Teacher	30.7	41.6	27.6
	Other	12.8	59.6	27.7
Not ProComp	Probationary Teacher	59.5	19.8	20.7
	Non-Probationary Teacher	55.2	19.2	25.6
	Other	44.7	36.8	18.4
<i>I am satisfied with the feedback I received from the evaluation process.</i>				
ProComp	Probationary Teacher	73.7	12.6	13.7
	Non-Probationary Teacher	71.6	14.2	14.2
	Other	42.6	34.0	23.4
Not ProComp	Probationary Teacher	75.0	9.5	15.5
	Non-Probationary Teacher	66.9	14.3	18.8
	Other	55.3	28.9	15.8
<i>My evaluation was conducted in a fair way.</i>				
ProComp	Probationary Teacher	72.6	15.9	11.5
	Non-Probationary Teacher	71.3	16.3	12.4
	Other	46.8	36.2	17.0
Not ProComp	Probationary Teacher	76.7	11.2	12.1
	Non-Probationary Teacher	70.7	15.7	13.6
	Other	55.3	31.6	13.2
<i>My most recent evaluation accurately reflected my job performance.</i>				
ProComp	Probationary Teacher	72.2	15.9	11.9
	Non-Probationary Teacher	67.7	17.1	15.2
	Other	51.1	29.8	19.1
Not ProComp	Probationary Teacher	72.4	12.1	15.5
	Non-Probationary Teacher	65.5	16.9	17.6
	Other	55.3	31.6	13.2

COMPREHENSIVE PROFESSIONAL EVALUATIONS PRINCIPAL ANALYSIS

SUMMARY OF KEY FINDINGS

- Overall, principals were favorable to the CPE process
- A majority of principals understand the CPE process and use the online tools provided for the process
- Although a majority of principals believe the CPE process is worth the time and effort it takes, a majority also believe it takes more time than it should
- A majority of principals felt they collaborate with staff on evidence to be included in the CPE; conduct mid-year evaluation conferences with a majority of their staff; and have the knowledge necessary to evaluate their staff's performance
- A majority of principals believed the CPE process promotes professional growth of their staff and improves their staff's instructional practice
- A slight majority of principals believe the CPE process has the ability to improve student achievement
- A majority of principals are satisfied with the new CPE process; believe the CPE process is manageable to complete; and feel the CPEs they give accurately reflect the job performance of their staff

IMPLEMENTATION

Element Clarity

Table 2.66

Comprehensive Professional Evaluation: Administrative support

	%Agree	%Neutral	%Disagree
<i>I understand the new CPE process.</i>	79.8	12.1	6.1
<i>I use the online tools provided for the CPE process.</i>	73.7	15.2	9.1

Workload Appropriateness

Table 2.67

Comprehensive Professional Evaluation: Workload appropriateness

	%Agree	%Neutral	%Disagree
<i>The CPE process is worth the time and effort it requires.</i>	53.5	25.3	19.2

Table 2.68

Comprehensive Professional Evaluation: Workload appropriateness 2

	%I do not conduct CPE reviews	%Less time than it should	%The right amount of time	%More time than it should
<i>The CPE process is worth the time and effort it requires.</i>	3.0	0.0	39.4	55.6

Administrative Support

Table 2.69

Comprehensive Professional Evaluation: Administrative support

	%Agree	%Neutral	%Disagree
<i>I collaborate with staff on evidence to be included in the CPE.</i>	87.9	7.1	3.0
<i>I conducted mid-year evaluation conferences with the majority of my staff.</i>	82.8	7.1	8.1
<i>I have the knowledge necessary to evaluate my staff's performance.</i>	92.9	4.0	1.0

OUTCOMES

Element ability to impact instructional practice

Table 2.70

Comprehensive Professional Evaluation: Element ability to impact instructional practice

	%Agree	%Neutral	%Disagree
<i>The CPE process promotes professional growth of the staff.</i>	59.6	25.3	13.1
<i>The CPE process improves my staff's instructional practice.</i>	56.6	32.3	9.1

Element ability to raise student achievement

Table 2.71

Comprehensive Professional Evaluation: Element ability to raise student achievement

	%Agree	%Neutral	%Disagree
<i>The CPE process leads to higher achievement of a teacher's students.</i>	46.5	40.4	11.1

Satisfaction and perceived fairness of process

Table 2.72

Comprehensive Professional Evaluation: Satisfaction and perceived fairness of process

Year 1 ProComp Evaluation

	%Agree	%Neutral	%Disagree
<i>I am satisfied with the new CPE process.</i>	49.5	27.3	21.2
<i>The CPE process is manageable to complete.</i>	44.4	22.2	31.3
<i>The CPEs I give accurately reflect the job performance of my staff.</i>	77.8	16.2	4.0

**MARKET INCENTIVES
COMPONENT**

HARD TO STAFF POSITIONS TEACHER & SSP ANALYSIS

SUMMARY OF KEY FINDINGS

- A plurality of teachers, regardless of ProComp status or current employment in a hard-to-staff position, understand the criteria used to determine which positions are considered “hard-to-staff” under ProComp; the strongest assent (70.5%) in this category was among ProComp teachers who currently work in hard-to-staff positions
- Similarly, a strong majority of teachers, regardless of ProComp status or current employment in a hard-to-staff position, believe that teachers in positions designated “hard-to-staff” under ProComp deserve a financial incentive; the strongest assent (90.5%) in this category was among ProComp teachers who currently work in hard-to-staff positions
- The majority of both ProComp and non-ProComp teachers report that they would NOT pursue the education/certification necessary to work in a hard-to-staff position to qualify for the ProComp bonus; only 13.0% of Procomp teachers and 13.1% of non-Procomp teachers indicated that they would pursue the education/certification necessary to work in a hard-to-staff position to qualify for the ProComp bonus
- Among ProComp teachers, the majority of those who currently work in a hard-to-staff position and the plurality of those who are eligible but do not work in a hard-to-staff position believe that the incentive under ProComp will ultimately raise student achievement
- A plurality of both ProComp teachers ineligible to work in hard-to-staff positions and non-Procomp teachers do NOT believe that the incentive under ProComp will ultimately raise student achievement

IMPLEMENTATION

Element Clarity

Table 2.73

Hard-to-Staff Positions: Element clarity

		%Agree	%Neutral	%Disagree
<i>I understand the criteria used to determine which positions are considered “hard-to-staff” under ProComp.</i>				
ProComp	Currently work in “hard-to staff” position	70.5	10.7	18.8
	Eligible but do not work in “hard-to-staff” position	53.3	23.2	23.5
	Ineligible to work in “hard to staff” position	48.2	22.4	29.5
Not ProComp		54.6	18.3	27.1

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.74

Hard-to- Staff Positions: Monetary incentive appropriateness

		%Agree	%Neutral	%Disagree
<i>Teachers in positions designated “hard-to-staff” under ProComp deserve a financial incentive.</i>				
ProComp	Currently work in “hard-to staff” position	90.5	6.7	2.7
	Eligible but do not work in “hard-to-staff” position	73.3	17.7	9.0
	Ineligible to work in “hard to staff” position	58.4	20.9	20.7
Not ProComp		63.1	16.2	20.6
<i>The ProComp bonus offered for my position encourages me to remain in this position.</i>				
ProComp		47.4	20.3	32.3
Not ProComp		17.1	21.6	61.3
<i>I would pursue the education/certification necessary to work in a hard-to-staff position to qualify for the ProComp bonus (\$1026 in 2006-07).</i>				
ProComp		13.0	27.5	59.5
Not ProComp		13.1	19.7	67.2

OUTCOMES

Element ability to raise student achievement

Table 2.75

Hard-to- Staff Positions: Element ability to raise student achievement

		%Agree	%Neutral	%Disagree
<i>The “hard-to-staff” incentive of ProComp will ultimately improve the achievement.</i>				
ProComp	Currently work in “hard-to staff” position	51.4	30.7	17.9
	Eligible but do not work in “hard-to-staff” position	39.2	33.2	27.6
	Ineligible to work in “hard to staff” position	25.8	34.4	39.8
Not ProComp		25.0	31.1	43.9

Effect on teacher recruitment

Table 2.76

Hard-to- Staff Positions: Recruitment of Teachers

<i>Did you decided to work in this position as a result of the financial compensation from ProComp?</i>	
Yes-ProComp was the main reason I decided to work in this position	1.3
Yes-ProComp is part of the reason I decided to work in this position	2.7
No-ProComp was not a reason I decided to work in this position	35.5
No-I was working in this school before ProComp	60.7

HARD TO STAFF POSITIONS PRINCIPAL ANALYSIS

SUMMARY OF KEY FINDINGS

- Although the plurality of principals report that the annual incentive (currently \$1026) for working in a “hard-to-staff” position makes it easier to *retain* highly-qualified applicants, the plurality also disagree that the incentives are attracting the “best-qualified person” for the assignment and that the qualifications of applicants
- Principals most often responded neutrally to the statement that the annual incentive makes it easier to *recruit* highly qualified applicants

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.77

	%Agree	%Neutral	%Disagree
<i>Overall, the incentives for “hard-to-staff” positions have resulted in the best qualified person for the assignment.</i>	13.4	45.4	41.2
<i>The annual incentive (currently \$1026) for working in a “hard-to-staff” position makes it easier to recruit highly-qualified applicants.</i>	24.7	42.3	33.0
<i>The annual incentive (currently \$1026) for working in a “hard-to-staff” position makes it easier to retain highly-qualified applicants.</i>	47.4	23.7	5.2

OUTCOMES

Element ability to impact instructional practice

Table 2.78

“Hard-to-staff” Position: Element ability to impact instructional practice

	%Agree	%Neutral	%Disagree
<i>The qualifications of applicants interviewing for “hard-to-staff” positions are improving.</i>	13.4	38.1	48.5

Element ability to raise student achievement

Table 2.79

“Hard-to-staff” Position: Element ability to raise student achievement

	%Agree	%Neutral	%Disagree
<i>The “hard-to-staff” incentive of ProComp will ultimately improve student achievement.</i>	24.7	47.4	27.8

Recruitment of Teachers

Table 2.80

“Hard-to-staff” Position: Recruitment of teachers

	1-5	6-10	11-15	16+
<i>How many of the “hard-to-staff” positions do you have in your current school?</i>	27.8	44.4	12.3	15.5

Table 2.81

“Hard-to-staff” Position: Recruitment of teachers, cont.

	%Agree	%Neutral	%Disagree
<i>The annual incentive (currently \$1026) for working in a “hard-to-staff” position makes it easier to recruit highly-qualified teachers.</i>	24.7	42.3	33
<i>The number of applicants interviewing for hard-to-staff positions is increasing.</i>	14.4	25.8	59.8

Retention of Teachers

Table 2.82

“Hard-to-staff” Position: Retention of teachers

	1-5	6-10	11-15	16+
<i>How many of the “hard-to-staff” positions do you have in your current school?</i>	27.8	44.4	12.3	15.5

Table 2.83

“Hard-to-staff” Position: Retention of teachers, cont.

	%Agree	%Neutral	%Disagree
<i>The annual incentive (currently \$1026) for working in a “hard-to-staff” position makes it easier to retain highly-qualified teachers.</i>	23.7	47.4	28.9
<i>The retention in “hard-to-staff” positions in my school is improving.</i>	38.1	37.1	24.7

Quality of teachers

Table 2.84

“Hard-to-staff” Position: Quality of teachers

	%Agree	%Neutral	%Disagree
<i>Overall, the incentives for “hard-to-staff” positions have resulted in the best-qualified person for that assignment.</i>	13.4	45.4	41.2
<i>The qualification of applicants interviewing for “hard-to-staff” positions are improving.</i>	13.4	38.1	48.5

HARD TO SERVE SCHOOLS TEACHER & SSP ANALYSIS

SUMMARY OF KEY FINDINGS

- Regardless of ProComp status or whether they work in a hard-to-serve school, most teachers believe they understand how schools are designated “hard-to-serve” and feel teachers who work in these schools deserve a bonus
- However, regardless of ProComp status, most teachers do not believe that the bonus offered for working in a hard-to-serve school encourages them to remain in a that school; most teachers not currently in hard-to-serve schools also do not believe the bonus offered would interest them in working in these schools
- Most ProComp teachers who currently work in hard-to-serve schools and who have never worked in hard-to-serve schools believe this incentive of ProComp will ultimately raise student achievement
- Most ProComp teachers who work in hard-to-serve schools in the past and non-ProComp teachers are neutral or do not believe that this incentive will ultimately raise student achievement
- A majority of teachers did *not* decide to work at a hard-to-serve school because of the incentive offered through ProComp

IMPLEMENTATION

Element Clarity

Table 2.85

Hard-to-Serve Schools: Element clarity

		%Agree	%Neutral	%Disagree
<i>I understand how schools are designated “hard-to-serve” under ProComp.</i>				
ProComp	Currently work in “hard-to-serve” school	61.6	14.9	23.5
	Worked in “hard-to-serve” school in past	56.2	17.9	25.9
	Never worked in “hard-to-serve” school	42.3	20.3	37.4
Not ProComp		50.6	19.7	29.7

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.86

Hard-to- Serve Schools: Monetary incentive appropriateness

		%Agree	%Neutral	%Disagree
<i>Teachers in schools designated “hard-to-serve” under ProComp deserve a financial incentive.</i>				
ProComp	Currently work in “hard-to-serve” school	89.0	6.5	4.5
	Worked in “hard-to-serve” school in past	66.3	20.8	12.9
	Never worked in “hard-to-serve” school	76.1	14.6	9.3
Not ProComp		68.0	14.9	17.1
<i>The ProComp bonus offered for working in my school encourages me to remain in this school.</i>				
ProComp		29.3	29.5	40.7
Not ProComp		9.5	26.0	64.5
<i>I would be interested in working in a “hard-to-serve” school to qualify for the ProComp bonus (\$1026 in 2006-07).</i>				
ProComp	Worked in “hard-to-serve” school in past	22.3	29.9	47.8
	Never worked in “hard-to-serve” school	26.4	29.3	44.0
Not ProComp		13.8	27.0	59.2

OUTCOMES**Element ability to raise student achievement**

Table 2.87

Hard-to- Serve Schools: Element ability to raise student achievement

		%Agree	%Neutral	%Disagree
<i>The “hard-to-serve” incentive of ProComp will ultimately improve the achievement of students in schools designated as “hard-to-serve.”</i>				
ProComp	Currently work in “hard-to-serve” school	50.0	35.0	15.0
	Worked in “hard-to-serve” school in past	29.3	34.6	36.1
	Never worked in “hard-to-serve” school	40.0	33.6	26.4
Not ProComp		23.9	34.6	41.5

Effect on teacher recruitment

Table 2.88

Hard-to-Serve Schools: Recruitment of Teachers

<i>Did you decide to work in this position as a result of the financial compensation from ProComp?</i>	
Yes-ProComp was the main reason I decided to work in this school	1.2
Yes-ProComp is part of the reason I decided to work in this school	3.6
No-ProComp was not a reason I decided to work in this school	54.5
No-I was working in this school before ProComp	40.2

HARD TO SERVE SCHOOLS PRINCIPAL ANALYSIS

SUMMARY OF KEY FINDINGS

- A majority of principals believe they understand how schools are designated hard-to-serve under ProComp and that teachers who work in these schools deserve a financial bonus
- Most principals do *not* believe the current incentive for working at a hard-to-serve school makes it easier to recruit or retain highly-qualified applicants
- Most principals are neutral or disagree that this incentive has resulted in more qualified teachers at their school
- Principals, for the most part, are neutral about whether the incentive for working in a hard-to-serve school will ultimately raise student achievement

IMPLEMENTATION

Element Clarity

Table 2.89

“Hard-to-Schools” Schools: Element clarity

	%Agree	%Neutral	%Disagree
<i>I understand how schools are designated “hard-to-serve” under ProComp.</i>	57.7	9.3	33.0

APPROPRIATENESS OF MONETARY INCENTIVES

Table 2.90

“Hard-to-Serve” Positions: Monetary incentive appropriateness

	%Agree	%Neutral	%Disagree
<i>Teachers in schools designated “hard-to-serve” under ProComp deserve a financial incentive.</i>	72.2	17.5	10.3
<i>The annual incentive (currently \$1026) for working in a “hard-to-serve” school makes it easier to recruit highly-qualified applicants.</i>	27.8	30.6	41.7
<i>The annual incentive (currently \$1026) for working in a “hard-to-serve” school makes it easier to retain highly-qualified applicants.</i>	33.3	27.8	38.9
<i>Overall, the incentives for “hard-to-serve” schools have resulted in more qualified teachers and SSPs in my school.</i>	22.2	38.9	38.9

OUTCOMES

Element ability to raise student achievement

Table 2.91

“Hard-to-serve” Schools: Element ability to raise student achievement

	%Agree	%Neutral	%Disagree
<i>The “hard-to-serve” incentive of ProComp will ultimately improve the achievement of students in schools designated as “hard-to-serve.”</i>	24.7	47.4	27.8

Recruitment of Teachers

Table 2.92

“Hard-to-serve” Schools: Recruitment of teachers

	%Agree	%Neutral	%Disagree
<i>The annual incentive (currently \$1026) for working in a “hard-to-serve” school makes it easier to recruit highly-qualified teachers.</i>	27.8	30.6	41.7
<i>The number of applicants interviewing for hard-to-staff positions is increasing.</i>	30.6	25.4	44.0

Retention of Teachers

Table 2.93

“Hard-to-serve” School: Retention of teachers

	%Agree	%Neutral	%Disagree
<i>The annual incentive (currently \$1026) for working in a “hard-to-serve” school makes it easier to retain highly-qualified teachers.</i>	33.3	27.8	38.9
<i>The retention of qualified staff in my school is improving.</i>			

Quality of teachers

Table 2.94

“Hard-to-serve” School: Quality of teachers

	%Agree	%Neutral	%Disagree
<i>Overall, the incentives for “hard-to-serve” schools have resulted in more qualified teachers and SSPs in my school.</i>	22.2	38.9	38.9
<i>The qualification of applicants interviewing for positions in my school are improving.</i>	30.6	33.3	36.1

References

- Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2006). How Changes in Entry Requirements Alter the Teacher Workforce and Affect Student Achievement. *Education Finance and Policy*, 1(2), 176-216.
- Berliner, D. C., & Tikunoff, W. J. (1976, Spring). The California Beginning Teacher Study. *Journal of Teacher Education*, 27, 24-30.
- Carnoy, M., Brodziak, I., Molina, A., Socias, M. (2007) The Limitations of Teacher Pay Incentive Programs Based on Inter-Cohort Comparisons: The Case of Chile's SNED. *Education Finance and Policy* 2(3), 189
- Carter, M., & Carter, C. (2000). How principals can attract teachers to the middle grades. *Schools in the Middle*, 9(8), 22–25.
- Clotfelter, C., Ladd, H., Vigdor, J., & Diaz, R. (2004). Do school accountability systems make it more difficult for low-performing schools to attract and retain high-quality teachers? *Journal of Public Policy Analysis and Management*, 23(2), 251–271.
- Colorado Department of Education (2007). Performance Level Scale Ranges for CSAP Assessments. Downloaded 1/22/07 from <http://cde.state.co.us/cdeassess/documents/csap/manuals/scalescoreranges.pdf>.
- Figlio, D. N. (2002). Can public schools buy better-qualified teachers? *Industrial and Labor Relations Review*, 55 (4). 686-699.
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (1999). *Do higher salaries buy better teachers?* NBER Working Paper No. 7082. JEL No. 12, J4.
- Holley, M., Barnett, J., & Ritter, G. (2007). Merit pay: A discussion of the issues. *Office for Education Policy*. Working Paper, 5 (1). 1-10.
- Honawar, *Vaishali*. " Merit Pay Gaining Bipartisan Favor in Federal Arena." *Education Week* 26, 44 (July 26, 2007): 20-21.
- Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534.
- Kelley, C., & Protsik, J. (1997). Risk and reward: Perspectives on the implementation of Kentucky's school-based performance award program. *Educational Administration Quarterly*, 33(4), 474-505.
- Kirby, S., Berends, M., & Naftel, S. (1999). Supply and demand of minority teachers in Texas: Problems and prospects. *Educational Evaluation and Policy Analysis*, 21(1), 47–66.
- Kirby, S. N. & Grissmer, D. W. (1993). Teacher attrition: Theory, evidence and suggested policy options. Paper presented at the Seminar of the World Bank/Harvard Institute for International Development on *Policies Affecting Learning Outcomes through Impacts on Teachers*: Cambridge, MA.
- Lankford, M., Loeb, S., & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools. A descriptive analysis. *Educational Evaluation and Policy Analysis*, 24(1), 37–62. Milanowski, A.T. (2004). The relationship between teacher performance evaluation scores and student achievement: Evidence from Cincinnati. *Peabody Journal of Education*, 79(4), 33–53.
- Milanowski, A. T., Longwell-Grice, H., Saffold, F., Jones, J., Odden, A., & Schomisch, K. (2007). Recruiting new teachers to urban school districts: What incentives will work? Paper presented at the meeting of the *American Education Finance Association*, Baltimore, MD.
- Murnane, R. J., & Olsen, R. J. (1989). The Effects of Salaries and Opportunity Costs on Duration in Teaching: Evidence from Michigan. *Review of Economics and Statistics*, 71(2), 347–352.
- Odden, A. & Conley, S. (1995). Linking teacher compensation to teacher career development. *Educational Evaluation and Policy Analysis*, 17 (2). 219-237.
- Rivkin, S.G., Hanushek, E.A., & Kain, J.F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458.
- Rubin, D.B., Stuart, E.A., & Zanutto, E.L. (2004). A potential outcomes view of value-added assessment in education. *Journal of Educational and Behavioral Research*, 29, 103–116. Darling-Hammond, L. (1999, December). Teacher quality and student achievement: A review of state policy evidence. Seattle: Center for the Study of Teaching and Policy.
- Smith, T., & Ingersoll, R. (2004). Reducing teacher turnover: What are the components of effective induction? *American Educational Research Journal*, 41(3), 687–714.

- Stinebrickner, T. R. (1998). An Empirical Investigation of Teacher Attrition. *Economics of Education Review*, 17(2), 127-136.
- Odden, A., Borman, G., & Fermanich, M. (2004) Assessing teacher, classroom, and school effects, including fiscal effects. *Peabody Journal of Education*, 79(4), 4-32.
- White, B. (2004) The relationship between teacher evaluation scores and student achievement: Evidence from Coventry, RI. CPRE Working Paper Series TC-04-04.
- Working Group on Teacher Quality, 2007. Creating a Successful Performance Compensation System for Educators. National Institute for Excellence in Teaching. Accessed July 28, 2007, from http://www.talentedteachers.org/pubs/successful_performance_pay_july_2007.pdf.