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# Teacher Attitudes Toward Pay for Performance: Evidence from Hillsborough County, Florida

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# Teacher Attitudes on Pay for Performance: Evidence from Hillsborough County, Florida

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# Abstract

Pay for performance (PFP) is once again gaining popularity within education. This study examines teacher attitudes toward PFP policies, and how these views vary by teacher experience, subject area specialization, grade level(s) taught, educational background, risk and time preferences, and feelings of efficacy Data were collected through a voluntary, online survey instrument fielded over a two-week period at the end of the 2006-2007 school year. The sample comprised all full-time instructional personnel in 199 traditional public and magnet schools in a large, urban school district in Florida. Results suggest only modest support for PFP policies among teachers. We detect some association between teacher demographics and views on PFP policies. Moreover, we find that teachers who have a more positive view of their principal's leadership ability and more confidence in their own teaching ability are more supportive of incentive pay. In addition, teachers who are more risk-seeking and who have higher discount rates express greater support for incentive pay. Finally, we find that teachers appear to have very little understanding of how the two most recent PFP initiatives in Florida operate.

#### **1. Introduction**

Pay for performance (PFP) in education is based on the premise that monetary incentives will provide schools with tools to recruit and retain highly-effective teachers, and help educators focus on the pedagogical and organizational changes required to improve student learning. PFP programs may reward individual teachers, groups of teachers, or schools on the basis of any number of factors, including student test scores, classroom observations, teacher portfolios, or working in hard-to-staff schools or subject areas.

Teacher PFP dates back to Great Britain in the early-1700s, with analogous ideas forming intermittently during the historical development of the United States K-12 public education system. It was not until the release of the *A Nation at Risk* report in 1983, however, that a significant number of public school districts considered PFP an alternative or supplement to the traditional single salary schedule. While these post-*A Nation at Risk* programs were typically short-lived, teacher PFP is once again growing in popularity and use (Podgursky and Springer, 2007).

Recent investment in domestic teacher PFP programs has been substantial. In 2006, the United States Congress appropriated \$99 million per year to local education agencies, state education agencies, and charter schools on a competitive basis to fund development and implementation of PFP programs. At the state level, Florida, Minnesota, and Texas lead the nation with more than \$550 million going to high-performing educators each year. High-profile programs also exist at the local level in Denver, Colorado (ProComp) and Little Rock, Arkansas (Arkansas Achievement Challenge Project).<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> See Community Training and Assistance Center (2004) and Gonring, Teske, and Jupp (2007) for information on Denver's ProComp. See Winters, Ritter, Barnett, and Greene (2006) for the year one evaluation report on Little Rock, Arkansas' Achievement Challenge Project.

While these programs gain popularity, very little is known about teacher attitudes toward PFP. This knowledge gap is relevant because prior experience suggests that the success of any incentive pay system depends heavily on the "grassroots" support of classroom teachers. The following study begins to bridge this gap by reporting findings from a voluntary, online survey designed to elicit teacher attitudes regarding PFP. The survey was administered to full-time instructional personnel in 199 traditional public and public magnet schools in Florida's School District of Hillsborough County (SDHC). Specifically, this study seeks to address the following five research questions:

- 1. How do SDHC teachers view PFP in general?
- 2. How supportive are SDHC teachers of different methods that could be used to identify high-performing teachers in a PFP program, including student test scores, peer evaluations, and involvement in professional development activities?
- 3. To what extent do SDHC teachers understand how Florida's two most recent PFP policies, the Special Teachers Are Rewarded (STAR) program and the Merit Award Program (MAP), operate?
- 4. To what extent do SDHC teachers support STAR and MAP?
- 5. How are SDHC's teachers' attitudes on rewarding individual teacher performance related to teacher and school characteristics, such as teacher experience, subject area specialization, grade level(s) taught, educational background, risk and time preferences, and feelings of efficacy?

SDHC is an appealing setting for studying teacher attitudes on PFP as it has successfully designed and implemented several financial incentive programs, including teacher recruitment and retention bonuses for working in hard-to-staff schools or subject areas. Furthermore, in

October 2006, SDHC became the first school district in Florida to have their state-mandated PFP plan approved by the Florida Board of Education. The proposal was jointly submitted by SDHC administration and Hillsborough Classroom Teachers Association (HCTA).

Teachers in our sample express only moderate support for PFP. Teachers appear most favorably inclined toward incentive pay that is based on individual teacher performance rather than school or group (i.e., grade-level) performance, yet only 50 percent of teachers agree or strongly agree that this type of incentive pay would be a positive change in teacher compensation. Over half of the teachers surveyed express concern that incentive pay will destroy the collaborative culture of teaching, and only 34 percent believe that such pay would make teachers work harder.

We find associations between some (but not all) teacher demographics and views on incentive pay. Race and gender are not correlated with support for incentive pay in our sample. Similarly, school demographics such as the size and average achievement level of the school are not systematically related to teacher attitudes regarding incentive pay. On the other hand, we find that teachers with 1-3 years of experience express substantially more support for incentive pay than teachers with more than 20 years of experience. Teachers that expect to teach longer also express more support, while those who work in a school with elementary grades appear less supportive of incentive pay than teachers working in middle or high schools.

We also find that several other teacher characteristics are strongly associated with teacher support for incentive pay. We find that teachers who have a positive view of their principal's leadership ability and who are more confident in their teaching ability express greater support for incentive pay. Furthermore, our results suggest teachers who are more risk-seeking and more impatient express greater support of incentive pay policies.

Perhaps the most striking finding from our study, however, is how little teachers appear to understand the way Florida's STAR program and MAP operate. For example, 49 percent of respondents disagree (or strongly disagree) with the statement, "I have a clear understanding of what STAR would have measured and rewarded." 61 percent of respondents disagree (or strongly disagree) when the same statement is applied to MAP. Perhaps not surprisingly, teachers are not particularly enthusiastic about these programs.

While these results are intriguing, it is important to acknowledge the study's limitations. The results reported here come from a survey that was in the field for a very short period of time at the very end of the 2006-2007 school year. As a result, the response rate was only 20 percent. This is only problematic if non-response was not random; that is, if those teachers who responded to the survey were significantly different than those teachers who did not respond to the survey. We show that teachers who responded to the survey are similar to all teachers in the district in terms of experience level, race and gender. However, it is possible that respondents differed from non-respondents in ways that we cannot measure with the available data. Finally, the study focuses on a single district with past experience in the design and implementation PFP programs. As such, our results must be interpreted with caution.

The subsequent study is broken into five sections. In Section 2, we provide a brief overview of Florida PFP policies. In Section 3, we review relevant literature on teacher attitudes toward PFP programs. Section 4 describes the survey instrument and variables of interest. In Section 5, we present results from our analysis of survey responses. Section 6 discusses our findings in relation to past research studies on teacher attitudes toward pay for performance. Finally, in Section 7, we discuss policy implications of our research.

#### 1. Recent Pay for Performance Policy Initiatives in Florida

In 2006, Florida received considerable national attention when the state legislature enacted the Special Teachers Are Rewarded (STAR) pay for performance program. Suspending the 2001 Florida Board of Education Performance Pay Rule, known as E-Comp, STAR was designed to reward the highest performing 25 percent of instructional personnel in participating districts, as defined by their students' academic progress. Individual teacher bonuses could be no less than 5 percent of their base salary. STAR was intended to reward instructional personnel for student performance, at least 50 percent of which had to be measured by standardized tests. In order to receive the district's portion of STAR funds (a statewide total of \$147.5 million), districts were required to submit STAR plans to the Florida Board of Education for approval by December 31, 2006.

Despite a state mandate that all districts submit their STAR plans to the Florida Board of Education, or risk losing their proportional share of STAR funding, many districts and charter schools still were without approved STAR plans in March, 2007. Specifically, 19 of 55 districts (25.67 percent) had not yet received full approval from the State Board of Education.<sup>3</sup> Of these 19 unapproved districts, 15 had plans that were compliant with STAR legislation, one had been approved, and three had not submitted a proposal.<sup>4</sup> Of 349 public charter schools, all of which operate independently of traditional district governance structures, 170 had STAR plans that were approved by the State Board of Education, 56 were pending approval, and 133 charter schools did not submit a STAR plan.

<sup>&</sup>lt;sup>3</sup> The 55 districts with STAR plans included four lab schools (i.e., FAU Lab School, FAMU Lab School, FSU Lab School, and UF Lab School.

<sup>&</sup>lt;sup>4</sup> The 19 districts without fully-approved STAR plans included the Florida School for the Deaf and Blind.

Opponents argued that STAR legislation relied on too few indicators of teacher performance, restricted award determination to the individual teacher (not groups of teachers), injected a state-imposed directive into a domain traditionally governed by local school districts, and lacked broad-based support from education stakeholders.<sup>5</sup> As a consequence, STAR was replaced by the Merit Award Program (MAP) in March, 2007. Although MAP is considered an improvement over the STAR program, it remains unclear whether the program has garnered the "grassroots" support of classroom teachers and other key education stakeholders. Much of this is still at play considering bonus payments in this first year of the program are distributed in fall 2007.

Table 1 displays a comparison of STAR and MAP legislative provisions across 10 dimensions, several of which are discussed in greater detail below. Under MAP, top performing instructional personnel and administrators in participating districts (i.e., districts with approved plans) are eligible for bonuses of five to 10 percent of the district's average teacher salary. Bonuses may be awarded to individuals or instructional teams, although they may not be distributed to whole schools. MAP calls for 60 percent of the bonus to be based on student learning gains and/or proficiency on statewide standardized tests (predetermined assessments are used for non-state tested grades), with 40 percent determined by supervisor evaluation. Districts are required to submit MAP plans to the Florida Board of Education for approval, and all plans are subject to collective bargaining laws.

<sup>&</sup>lt;sup>5</sup> Buddin, McCaffrey, Kirby, and Xia (2007) examine design and implementation issues surrounding pay for performance programs in Florida.

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TABLE 1: COMPAR	ISON OF STAR PROGRAM AND MAP	
Provisions	Special Teachers Are Rewarded (STAR)	Merit Award Program
Who qualifies?	Includes all instructional personnel as defined in $\$1012.01(2)(a)-(d)$ and may include school-based leaders who supervise or assist those instructional personnel whose student achievement leads to a bonus.	Includes all instructional personnel as defined in §1012.01 (2) (a)-(d), excluding substitute teacher; and school-based administrators as defined in §1012.01 (3) (c); each person who qualifies must still be employed in a Florida public school by September 1 the year following to receive the bonus.
How are awards determined?	Awards are only determined by individual performance	Allows awards to be determined by individual or instructional team performance (exluding whole schools); allows for supplemental awards for exemplary work attendance.
Who receives the award?	A minimum of twenty-five percent of instructional personnel to receive at least a 5% bonus calculated on the individuals base salary.	Top performing instructional and administrative personnel to receive a bonus equal to 5-10% of the district's average teacher salary.
How is eligibility determined?	The bonus is to be based primarily on improved student achievement. Legislative directive provided through technical assistance directed districts that at least 50% of the determination is based on improved student performance. Improved student performance is determined by standardized tests or locally developed/selected exams. Proviso language outlines specific types of tests that should be used based upon teh subject/course taught. The remaining percentage (not more than 50) of the determination is based on the principal's/supervisor's evaluation, which had to include areas listed in 1012.34.	Sixty percent of the bonus is to be based on learning gains, proficiency, or both of the students assigned to the individual or within their sphere of responsibility in the case of co-teaching or team teaching. Student performance is measured by statewide standardized tests or for other subjects and grades not associated with the state assessment system by national, state, or disctrict- determined testing instruments that measure the Sunshine State Standards, curriculum frameworks or course descriptions. The remaining forty percent is based on the principal's/supervisor's evaluation, which is described as criteria similar to those required by §1012.34.

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The Florida Department of Education provides technical assistance in plan development upon request. The department collects and disseminates best practices for district testing insturments and Merit Award Program plans.	Plans are due by October 1 each year for use in the next swchool year; reviewed by Commissioner; revisions of plans that do not comply with the law are due by January 31.	If the submitted plan fails to comply, the Commissioner of Education provides a written response back to the district outlining required revisions by November 15 each year. Revised plans are due by January 31 of each year. The Commissioner will report those districts and charter schools not in compliance to the Governor, the President of the Senate, and the Speaker of the House of Representatives by February 15 of each year. Each school board shall submit a report to the Commissioner by October 1 each year to verify the previous year's compliance. The Commissioner will report on compliance to same leadership by Decemeber.	Rulemaking on calculation of average teacher salaries, reporting formats, and review of plan procedures must be initiated within 30 days of becoming law. Subject negotiation as provided in Chapeter 447. If an impasse is declared, the dispute is subject to an expedited impasse hearing.
The Florida Department of Education provides technical assistnace upon request and provides model methodologies.	Plans are due December 31, 2006, for use in current year; reviewed by State Board; revisions due by March 1, 2007.	Approval or denial is provided by the Florida State Board of Education. Revision must be specified. There is no specified audit of compliance.	N/A
Does the DOE provide technical assistance?	When are plans due?	How is compliance determined?	Is there rulemaking authority? Are these providions relating to collective bargaining?

For 2006-07: a. Provides districts utilizing STAR an extension until May 1 to submit their revised plan to SBOE. Eliminated the recalculation of undistributed funds from STAR proviso. b. Districts utilizing their previous §1012.22 performance pay plan may do so in but draw down funds equal to the dollars they expended in 2005-06 for performance pay. c. Districts may meet the requirements of Merit Award Program §1012.225 (1), (2), and (3) to receive their full allocation. All undisbursed funds revert back to the state. For 2007-08 and after, a recurring sum is authorized. However, only districts with Merit Award Programs that are adopted and which have end-of-course tests in all subjects and grade groupings will be awarded funds to implement performance pay.
Appropriation for 2006-07. All districts which submit approved plans within the timelines will be awarded funds based upon an initial allocation determined on base funding and a recalculation of remaining funds not distributed to districts that do not meet STAR plan requirements.
What is the appropriation?

Source: Adapted from Florida Education Association's MAP STAR Comparison, http://www.feaweb.org/absolutenm/articlefiles/2600-MAP%20and%20STAR%20Side%20by%20Side%20\_2\_.pdf.

Since STAR plans were being processed, approved and implemented during the same school year (i.e., 2006-2007) in which MAP legislation replaced the STAR program, districts have some flexibility in defining the parameters of their pay for performance programs during the 2006-2007 and 2007-2008 school years. In the 2006-2007 school year, 15 districts used their existing STAR plan as approved by the Florida Board of Education, nine amended their existing STAR plan to incorporate components of MAP legislation, and five replaced their STAR plan wholesale. Eleven districts with approved STAR plans and 18 without approved STAR plans reverted to the old 1012.22 plan. The "1012.22 plan" began in 2000 and provides a salary supplement for teachers who improve student performance at "D" and "F" rated schools. As of the 2007-2008 school year, slightly more than half of the school districts were still undecided about their plans for implementing a PFP program, while 42 percent of respondents planned to develop, negotiate, and implement a plan that met MAP guidelines. Three districts have already decided not to adopt a PFP plan.<sup>1</sup>

This is not the first time Florida has implemented incentive pay policy. Table 2 shows the different types of teacher performance pay programs that Florida school districts report on the two most recent administrations of the Schools and Staffing Surveys (i.e., 1999-2000 and 2003-2004).<sup>2</sup> Monetary reward for attaining National Board certification is the most prevalent (79.5 percent) form of teacher performance pay, followed by excellence in teaching (70.2 percent). The incidence of paying teachers for completing in-service professional development has increased substantially from the 1999-2000 school year to the 2003-2004 school year (153.81

<sup>&</sup>lt;sup>1</sup> This information was generated from a survey the FEA administered to all Florida school districts in April, 2007 to better understand how districts intended to respond to the MAP transition. Ninety-one percent of Florida districts responded to the survey.

<sup>&</sup>lt;sup>2</sup> Schools and Staffing Survey is a large-scale survey of a nationally representative sample of public and private school teachers, schools, and district in the United States. Reported estimates are unweighted.

percent), although slightly fewer than 30 percent of districts report paying teachers additional money for doing so. Market-based incentive initiatives – for instance, teaching in a hard-to-staff school or subject area – are not as widely used by districts to recruit and retain teachers (13.46 and 16.08 percent, respectively).

# TABLE II: PERCENT OF TEACHERS REPORTING INCENTIVE PAY , UNITED STATES AND FLORIDA

	1	United State	es		Florida	
Percent reporting incentive pay for	1999- 2000	2003- 2004	% Change	1999- 2000	2003- 2004	% Change
National Board certification	8.30	18.40	121.69	42.51	79.52	87.06
Excellence in teaching	5.50	7.90	43.64	29.52	70.24	137.94
Completion of in-service professional development	26.40	24.20	-8.33	11.54	29.29	153.81
Teaching in a less desirable location	3.60	4.60	27.78	4.17	13.46	222.78
Teaching in a shortage field	10.40	11.90	14.42	8.34	16.08	92.81

Note: The numbers presented above are expressed in percentages of the total number of respondents.

Source: Authors own calculations using the National Center for Education Statistics' Schools and Staffing Survey, 1999-2000 and 2002-2003

The cumulative impact of these initiatives on Florida's teacher compensation landscape is apparent. As shown in Figure 1, the percent of Florida public school teachers reporting bonus payments as part of total compensation increased from 7.1 percent in the 1993-1994 school year to 31.4 percent in the 2003-2004 school year. The relative size of the average bonus payment during this time was very similar to the 2003-2004 school year. Bonuses ranged from approximately \$200 at the 5<sup>th</sup> percentile to more than \$6,600 at the 95<sup>th</sup> percentile. Perhaps the most interesting finding is that less than 20 percent of bonuses reported by respondents exceeded

\$3,000 during the 2003-2004. Some contend that any bonus below \$3,000 is too small to change



teacher behavior or labor market dynamics (Ballou and Podgursky, 1993).

### 2. Prior Research

Numerous surveys, reports and research papers have explored teacher attitudes toward PFP over the past 30 years. Unfortunately, the picture arising from this collective body of work is confusing and often contradictory (Ballou and Podgursky 1993; Goldhaber, DeArmond, and DeBurgomaster 2007). For example, a poll by the National School Board Association in the early 1980s found that 63 percent of teachers supported pay for performance while a 1984 poll by Phi Delta Kappan found that 64 percent of teachers opposed pay for performance. Several studies have noted that the vast majority of PFP programs implemented in the U.S., particularly those that tied teacher pay to student performance, have encountered resistance on the part of teachers and eventually failed (Murnane and Cohen 1986; Hatry and Greiner 1985; Middleton 1989; Darling-Hammond and Barry 1988). Yet, a national survey of teachers in 2003 found that 70 percent of teachers supported higher pay for teachers who work in poor and/or low-achieving schools and that 63 percent support tying pay to student performance (Farkas et al. 2003).

This muddled picture is likely due to a variety of factors. Incentive pay is a broad concept that encompasses a variety of very different types of programs. Many surveys in the past have either referred to performance pay in the abstract or focused on specific, but different, forms of PFP. In addition, the quality of survey methodology has varied widely across studies in this area. Finally, because support for incentive pay likely varies according to the background of the teacher and the context in which she is working, some of the differences in the prior literature may be due to differences in the sample of teachers who were surveyed.

One of the earliest systematic analyses of teacher attitudes toward PFP utilized the 1987-1988 Schools and Staffing Survey (SASS). Ballou and Podgursky (1993) found that teachers' support for incentive pay varied considerably based on the specific type of incentive pay. For example, teachers in this nationally representative sample were most supportive of additional pay for additional responsibilities such as a master or mentor teacher (roughly 59 percent strongly favored this proposal), followed thereafter by additional pay for teaching in a high priority situation and additional pay through a career ladder program (with 41 percent strongly favoring). Additional pay for teaching in a shortage area received the least amount of support among respondents (only 25 percent strongly favored), preceded by a pay bonus for exceptional service (with 29 percent strongly favoring). Importantly, SASS did not specifically ask about incentive pay based on student test scores, which other work has found to garner even less support among teachers. For example, Schneider (1984) surveyed a random sample of teachers in 46 unidentified school districts and found that teachers overwhelmingly disagreed with compensation systems based on classroom performance.

Ballou and Podgursky (1993) also explored how teacher attitudes toward PFP policy varied. The authors found no evidence that the level of pay in the district impacts teacher attitudes, or that teachers with low performing students opposed pay for performance. However, they did find that teachers in urban areas, as well as Black and Hispanic teachers, were more supportive of pay for performance, while teachers with more experience and female teachers were less supportive of pay for performance.

In 2003, Public Agenda surveyed a nationally representative sample of K-12 public school teachers, and obtained responses from 27 percent of their sample. As in earlier work, teachers indicated varying support for different forms of incentive pay, with the most support coming for extra teacher effort and for teaching in difficult situations. Specifically, over 62 percent favored financial rewards for teachers who received outstanding principal evaluations or put in extra effort; 38 to 47 percent favored rewards for teachers whose students scored higher on various performance measures (depending on how the specific question asked); 63 and 70 percent, respectively, supported higher pay for teaching "hard-to-reach" students and those schools in "tough neighborhoods"; and, finally, 42 percent supported higher pay for teaching "hard-to-fill" subjects. The survey responses also indicate some ambivalence on the part of teachers regarding pay for performance. While nearly half of surveyed teachers strongly favored tying pay to student performance in some questions, 63 percent thought that pay for performance would engender unhealthy competition and jealousy.

Findings from the year one evaluation of the Texas Governor's Educator Excellence Grant (GEEG) program deviate from results reported by Ballou and Podgursky (1993). Springer et al. (2007) surveyed all full-time instructional personnel at Texas schools that had designed and implemented a PFP program under a non-competitive state grant program in 2006.

The survey included 52 schools and 1,571 teachers in elementary, middle, and high schools throughout the state, and obtained a 62.4 percent response rate. More than 90 percent of respondents identified improvement in students' test scores as either of moderate or high importance for evaluating a teacher in an incentive program, making it the single highest ranked measure out of 17 indicators. National Board certification and subjective measures of teacher performance (i.e., peer evaluations and teaching portfolios) were perceived as the least important measures. It is important to note the sample was limited to teachers in schools who voluntarily adopted PFP programs, suggesting that this sample may be more amenable to PFP than teachers in other Texas schools.

A recent working paper by Goldhaber, DeArmon, and DeBurgomaster (2007) presents results from a survey of stratified random sample of 5,238 Washington State teachers. They find that teacher attitudes vary considerably depending on the type of incentive pay. Roughly 72 percent of teachers favored giving extra pay to teachers working in poor and/or low-performing schools. In contrast, only 41 percent of teachers favored differential pay by subject-area and only 17 percent of teachers favored incentive pay based on student test score gains. In addition, Goldhaber et al (2007) found significant differences in attitudes by teacher characteristic and context. For example, the authors found that veteran and female teachers are less supportive of pay reform in general. They also find that secondary school teachers are more supportive of certain reforms, including pay for performance and bonuses for teaching in a hard-to-staff subject, than elementary school teachers. Perhaps the most interesting conclusion is that those teachers who have positive opinions of their principals and negative impressions of other

teachers in their school are more likely to support pay for performance bonuses for highlyeffective teachers.<sup>3</sup>

The studies described above highlight the inconsistent findings with regard to teacher attitudes toward PFP. While some of this variance is attributed to the background of the teacher and the context in which he is working, the extant literature still presents a mixed view of teacher attitudes. To enhance our ability to draw more systematic comparisons of studies on teacher attitudes toward PFP, this study uses survey items drawn from instrumentation developed for NCPI's evaluations of the Nashville (TN) Project on Incentives in Teaching (POINT) experiment and the Texas Governor's Educator Excellence Award Program.

#### 3. Methodology

This study analyzes results from a voluntary, online survey administered to teachers in the School District of Hillsborough County (SDHC) by the Florida Education Association (FEA), Hillsborough Classroom Teachers Association (HCTA), and National Center on Performance Incentives (NCPI) at Vanderbilt University. The survey instrument was fielded over a two-week period at the end of the 2006-2007 school year. The sample comprised all full-time instructional personnel in 199 traditional public and magnet schools in SDHC.

We calculated response rates using data on the number of full-time instructional personnel taken from the National Center for Education Statistics' *2005 Common Core of Data*, supplemented when necessary with information provided by HCTA. The overall response rate was 13.7 percent, with 23 of the 199 schools not responding at all. Among schools with a non-zero response rate, the average response rate to the survey was 20 percent. As noted earlier, non-

<sup>&</sup>lt;sup>3</sup> Milanowski (2007) is an interesting study on performance pay system preferences of students preparing to be teachers.

response is problematic only insofar as respondents differ from non-respondents in important ways. Table 3 presents summary statistics for the district as a whole as well as for the sample of teachers that responded to the survey. With only a few exceptions, it appears as if the survey respondents resembled teachers in the district in terms of race, gender, years of experience, degree attainment and union membership. Survey respondents were somewhat less likely to be Black (7 percent versus 13 percent) relative to district teachers as a whole, slightly less likely to have 1-3 years of experience (14 percent versus 21 percent), and slightly more likely to have a MA degree (43 percent versus 39 percent). Of course, survey respondents may well differ from non-respondents in ways not captured by simple demographics, which should be considered when generalizing the results of this study.

The survey assesses teacher perceptions, preferences, and attitudes toward PFP programs, and how these outcomes vary according to teacher experience, subject area specialization, grade level(s) taught, educational background, risk and time preferences, and feelings of efficacy. Most items utilize a 4 or 5 category "Liekert" scale. We coded items such that higher values always correspond to stronger support for PFP programs. Survey data were supplemented with publicly available data on school level characteristics from the Florida Department of Education website, including student proficiency rates in math and reading, total student enrollment, and percent of black and Hispanic students.

Our study focuses on three key areas of interest related to performance pay policies: (1) a teacher's general view on incentive pay; (2) a teacher's opinion on methods used to identify high-performing teachers; and (3) a teacher's self-reported knowledge and opinion of Florida's STAR program and MAP. In addition to reporting descriptive statistics related to these three areas of interest, we also report results from several regression analyses that examine the

association between teachers' attitudes toward incentive pay based on individual teacher performance and teacher demographics and school-level characteristics.

The basic OLS regression model is specified as:

 $Y_{ij} = \beta_0 + \beta_1 X_i + \beta_2 S_j + \beta_3 P_i + \beta_4 C_i + \beta_5 E_i + \beta_6 R_i + \beta_7 I_i + u_{ij}$ 

where,  $Y_{ij}$  is support for PFP based on individual teacher performance for teacher *i* in school *j*;  $X_i$  is a vector of individual teacher characteristics,  $S_j$  is a vector of school characteristics;  $P_i$  is a teacher's view of principal leadership in their school;  $C_i$  is a teacher's view of other teachers in their school;  $E_i$  is a teacher's self-reported efficacy score;  $R_i$  is a teacher's risk-seeking behavior score;  $I_i$  is a teacher's impatience score; and  $u_{ij}$  is a random error term capturing teacher and school effects not included among our independent variables. Select model specifications express  $R_i$  and  $I_i$  as non-linear using a second-degree polynomial. We also report estimates from models that include school fixed effects in order to control for unobserved characteristics of the school that may be correlated with teacher attitudes toward PFP.

#### **Outcome Measures**

*General Views on Incentive Pay.* To assess respondents' general views on incentive pay, the survey included eight questions developed by NCPI. The first set of questions asked respondents whether incentive pay for teachers based on overall performance at the school-, group-, or individual-level is a positive change to teacher pay practices. Respondents were then asked if incentive pay for administrators based on overall performance at the school is a positive change to administrator pay practices. The next three questions assessed relevance of past critiques of incentive pay policies, including whether rewarding teachers based on performance will: threaten the collaborative culture of teaching; cause teachers to work harder; and result in teachers working together more often. Respondents were asked, in conclusion, whether district and state officials should be more concerned about increasing base pay as opposed to devising teacher incentive pay programs.<sup>4</sup>

*Methods Used to Identify High-Performing Teachers*. To assess teachers' opinions on methods used to identify high-performing teachers, respondents were asked to identify how much weight they would give to 17 different measures of performance when designing an incentive pay program. Measures of performance ranged from compensation based on supervisor evaluations and portfolios created by teachers to payments awarded on the basis of student growth on the Florida Comprehensive Assessment Test (FCAT).<sup>5</sup>

*Views of Florida's PFP Programs.* To assess teachers' views of Florida's PFP programs, two sets of questions were adapted from instrumentation developed by NCPI. The first set included three items to gauge respondents' perceived *understanding* of Florida's PFP programs. Understanding was measured by the level to which respondents agreed or disagreed about: having a clear understanding of what the PFP program measured and rewarded; being able to explain conceptually how the PFP program measured and rewarded individual teachers; and having a clear understanding of the target they would have needed to meet in order to achieve a bonus.

The second set included six items to evaluate respondents' *opinions* of the PFP programs in Florida. Opinions were measured by the level to which respondents agree or disagree about the PFP program: doing a good job of distinguishing effective from ineffective teachers; causing resentment among teachers; being fair to teachers; and having beneficial effects on teaching and

<sup>&</sup>lt;sup>4</sup> See Section I, questions a – h.

<sup>&</sup>lt;sup>5</sup> See Section II, questions a - q.

learning. The opinion section also asked whether the size of the top bonus was large enough to motivate the respondent to put in extra effort. Both the *understanding* and *opinion* questions were asked on two occasions, once to rate a teacher's view of the Special Teachers Are Reward (STAR) program and a second time to rate a teacher's understanding of the state's more recent Merit Award Program (MAP).<sup>6</sup>

#### Teacher and School Characteristics

The survey asked teachers a host of background questions that are included as predictors in our analysis. Questions included whether a teacher belonged to a teachers association, as well as yes or no questions about their marital status and race. Teachers were asked about their respective years of teaching experience, both overall and at their current school, as well as grade level and subjects taught. In addition to standard demographic variables, the survey also elicited some unique information from teacher respondents to further understand how opinions regarding PFP relate to school and classroom context, risk and time preferences, and feelings of efficacy. Scales and constructs described below are based on instruments with established psychometric properties.

*Principal Leadership.* Teachers were asked a series of questions about their school, which were used to create a measure reflecting teachers' opinion regarding the effectiveness of the school principal and the school environment. Some of these items were adapted from questions used by the National Institute of School Leadership study, Consortium on Chicago School Research, and National Center on School Choice at Vanderbilt University. Teachers were asked whether the principal at their school: works to create a sense of community; sets high standards for teaching; ensures that teachers have sufficient time for professional development;

<sup>&</sup>lt;sup>6</sup> See Section III, Parts A – D.

and provides support to improve instruction. Responses were averaged to form a single principal leadership measure.<sup>7</sup>

*Professional Community*. The professional community construct was adapted from surveys used by the National Institute of School Leadership, Consortium on Chicago School Research, Study of Instructional Improvement, and National Center on School Choice at Vanderbilt University. Teachers were asked whether teachers in their school: seem more competitive than cooperative; do not really trust each other; feel responsible to help each other do their best; and can be counted on to help out anywhere or anytime, even though it may not be part of their official assignment. Responses were averaged to form a single professional community measure.<sup>8</sup>

*Teaching Self-Efficacy*. Teachers responded to 10 statements about their ability to influence students in the classroom. Items were based on surveys used by the National Institute of School Leadership study and adapted by the National Center on School Choice at Vanderbilt University. This battery of questions inquired about: student discipline; impact of the home environment on student achievement; class assignments; and teachers' ability to reach difficult or unmotivated students. Items were reversed coded as necessary so that higher values corresponded to greater feelings of efficacy; responses to all 10 items were then averaged to form a measure of teaching self-efficacy.<sup>9</sup>

*Risk and Time Preferences.* Individual differences in behavior and experiences may mediate association between teacher attitudes and preferences toward PFP programs. To better understand that relationship, respondents completed standard protocols to elicit their discount rate and risk aversion. To measure risk aversion, the respondent was asked to choose between

<sup>&</sup>lt;sup>7</sup> See Section V, Part A, questions a - d. <sup>8</sup> See Section V, Part B questions a - g.

<sup>&</sup>lt;sup>9</sup> See Section IV. questions a - q.

one amount of money with certainty and a lottery (i.e., coin flip) which could yield either a higher or lower amount of money. In a series of 11 statements, the value of the certain payment started at \$30 and declined to \$10, while the coin flip always offered \$10 for heads and \$30 for tails. From this data, a variable was created representing the last certain payment the teacher chose before opting for the coin toss. Teachers who chose the coin toss over a larger sum of money exhibited more *risk-seeking* behavior.<sup>10</sup>

To measure their *time preferences*, teachers were asked whether they preferred a lump sum of \$20 today, or a larger sum in one week. The postponed sum increased in each subsequent question, from \$20.25 to \$30. Here, the measure we use corresponds to the first value for which the teacher chose the postponed amount. Therefore, a higher value represents a more *impatient* teacher; that is, someone who required a larger amount of money to "wait" a week.<sup>11</sup>

#### 4. Findings

Table 3 and 4 provides summary statistics on the characteristics of the teachers and schools that responded to the survey. We see that roughly 81 percent of the respondents were women, 92 percent were Caucasian, and 72 percent were teaching in elementary or middle schools. Approximately 43 percent of respondents held at least a master's degree, and the average level of full-time teaching experience was six years. Fixty-six percent of respondents belonged to a teacher association.

<sup>&</sup>lt;sup>10</sup> See Section VI, Part B, questions a - k. <sup>11</sup> See Section VI, Part C, questions a - j.

	District	Survey Respondents
Hispanic	0.089	0.105
Black	0.125	0.065
Asian	0.011	0.008
Male	0.212	0.188
1-3 years of experience	0.211	0.144
4-9 years of experience	0.244	0.271
10-14 years of experience	0.118	0.149
15-19 years of experience	0.101	0.114
20+ years of experience	0.326	0.322
Hold at least a MA	0.391	0.432
Teachers Union	0.540	0.562

### TABLE III: SAMPLE MEANS FOR SELECT VARIABLES

Notes: Information on teacher race, gender and experience is based on teacher-level data from the Florida K-20 Data Warehouse, generously provided to us by Martin West at Brown University and Matthew Chingos at Harvard University. District-level information on MA degree and membership in the teachers' union was taken from School District of Hillsborough County website.

# TABLE IV: SUMMARY STATISTICS

Teacher Characteristics	Min	Max	Mean	Standard Deviation
1-3 Years as a Full Time Teacher	0	1	0.144	0.351
4-9 Years as a Full Time Teacher	0	1	0.271	0.445
10-14 Years as a Full Time Teacher	0	1	0.149	0.356
15-19 Years as a Full Time Teacher	0	1	0.114	0.317
Expects to Teach 1-3 more years	0	1	0.198	0.399
Expects to teach 4-6 more years	0	1	0.173	0.378
Expects to teach 6-10 more years	0	1	0.196	0.397
Expects to teach more than 10 years	0	1	0.396	0.489
Teachers Union	0	1	0.562	0.496
Male	0	1	0.188	0.391
Hispanic	0	1	0.105	0.307
Black	0	1	0.065	0.247
Asian	0	1	0.008	0.087
Holds at least an MA	0	1	0.432	0.496
Teaches FCAT subject/grade	0	1	0.556	0.497
Elementary School	0	1	0.532	0.499
Middle School	0	1	0.218	0.413
High School	0	1	0.289	0.454

Teacher Attitudes/Beliefs and Personality Measures	Min	Max	Mean	Standard Deviation
View of Principals (1=Negative View)	1	5	3.839	1.124
View of Other Teachers (1=Negative View)	1.71	5	3.978	0.668
Self-Reported Efficacy Score (1=Lowest Efficacy)	1.7	6	4.162	0.743
Risk Seeking Behavior (0=Completely Risk Averse)	0	30	15.751	5.269
Impatience (0=Extremely Patient)	0	30	22.252	3.516
School-Level Characteristics	Min	Max	Mean	SD
Average Proficiency=% of students proficient in math and reading	0	95	59.560	16.525
Enrollment/100	3.36	27.92	11.583	6.615
% of Black Students	0.03	90.31	19.891	17.010
% of Hispanic Students	0.11	72.91	26.390	15.335
Response Rate (% of full time teachers who completed the survey)	0	1.08	0.223	0.148
Views Regarding Incentive Pay	Min	Max	Mean	Standard Deviation
Incentive Pay, Overall Performance (Section I, a)	0	4	2.140	0.853
Incentive Pay, Group Performance (Section I, b)	0	4	1.795	1.096
Incentive Pay, Individual Performance (Section I, c)	0	4	2.386	0.947
Incentive Pay, Average Opinion (Section I, a-c)	0	4	2.107	1.189
Support of Rewards for Test Scores (Section II, c-e)	1	4	2.374	0.803

Rewards based on Knowledge and Skill (Section II, a, b, j, m, n)	1	4	2.939	0.603
Rewards based on Recruiting and Retaining Difficult Fields (Section II, p-q)	1	4	2.852	0.916
Rewards based on Subjective Measures (Section II, f-l)	1	4	2.612	0.622
Rewards based on NBPTS Certification (Section II, n)	1	4	2.499	1.067
Knowledge of STAR (Section IIIA, a-c)	0	4	2.298	0.940
Opinion of STAR (Section IIIB, a-f)	0	4	1.551	0.687
Knowledge of MAP (Section IIIC, a-c)	0	4	1.948	0.969
Opinion of MAP (Section IIID, a-g)	0	3.714	1.347	0.844

NOTE: Total number of respondents for each question is 1,691.

Table 5 summarizes responses to the first set of items measuring general views regarding incentive pay. Overall, the response patterns indicate only moderate support for incentive pay. Teachers appear to be most favorably inclined toward incentive pay that is based on individual teacher performance rather than school or group (i.e., grade-level) performance. Yet, only 50 percent of teachers agree or strongly agree that incentive pay based on individual performance would be a positive change in teacher compensation policy. Teachers show some concern that incentive pay will threaten the collaborative culture of teaching, with 56 percent agreeing or strongly agreeing with this statement. On the other hand, relatively few teachers believe that incentive pay will cause teachers to work harder or to work together more often, with only 34 percent and 24 percent, respectively, marking agree or strongly agree with these statements.

	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
Incentive pay for <i>teachers</i> based on <u>overall performance</u> at the school is a positive change to teacher pay practices	31.82	26.73	25.37	13.01	3.08
Incentive pay for <i>teachers</i> based on <b>group performance</b> (i.e., grade-level, department, or interdisciplinary team) is a positive change to teacher pay practices	40.98	33.47	16.79	5.26	3.49
Incentive pay for <i>teachers</i> based on <u>individual teacher</u> performance is a positive change to teacher pay practices	27.74	20.11	27.14	22.12	2.90
Incentive pay for <i>administrators</i> based on <u>overall</u> <u>performance at the school</u> is a positive change to administrator pay practices	25.96	22.12	30.99	14.49	6.45
Rewarding teachers based on performance will destroy the collaborative culture of teaching	9.76	26.61	23.95	31.99	7.69
Rewarding teachers based on performance will cause teachers to work harder	28.56	32.47	24.48	9.46	5.03
Rewarding teachers based on performance will result in teachers working together more often	29.80	37.85	17.62	6.62	8.10
District and state officials should be more concerned about increasing base pay opposed to devising teacher incentive pay programs	2.72	4.02	13.60	71.02	8.63

**TABLE V: GENERAL VIEWS ON INCENTIVE PAY** 

NOTE: Total number of respondents for each question is 1,691. The numbers presented above are expressed in percentages of the total number of respondents.

Responses to a set of indicators that may be used to reward teachers with incentive pay are summarized in Table 6. Teachers expressed the most support for pay practices that reflect the current compensation system. For example, 79 percent of teachers assigned moderate or high importance for rewards given to teachers on the basis of advanced degrees and 86 percent assigned moderate or high importance to rewards assigned for time spent in professional development. In contrast, teachers were less supportive of rewards based on student test performance. Only 35 percent of teachers believed rewards were merited for high scores by students on standardized tests, but 46 percent of teachers thought student gains on the FCAT were of moderate or high importance. Additionally, 54 percent of teachers believed student gains on other standardized tests besides the FCAT should be considered moderately or highly important when deciding upon teacher rewards.

Tables 7 and 8 describe teacher attitudes toward the STAR and MAP programs, respectively. The most striking feature is how little teachers appear to understand how these programs operate. For example, 49 percent of respondents disagreed (or strongly disagreed) with the statement, "I have a clear understanding of what STAR would have measured and rewarded." A similar percentage indicated that they did not understand how STAR worked conceptually or the specific targets they would have had to meet to receive the reward. The figures for the MAP program were no more encouraging. Sixty-one percent of respondents disagreed (or strongly disagreed) that they had a clear understanding of what MAP will measure and reward.

			Florida		
	Not Important	Low Importance	Moderate Importance	High Importance	Rank
Time spent in professional development	2.66	11.35	46.84	39.15	-
Earning an advanced degree	7.69	12.95	35.36	44.00	7
Performance evaluations by supervisors	8.28	17.45	44.47	29.80	б
Collaboration with other faculty and staff	7.98	18.98	45.59	27.44	4
Efforts to involve parents in students' education	66.6	19.87	39.50	30.57	Ś
Teaching in hard-to-staff schools (i.e., schools that difficulty in finding and retaining qualified and effective teachers).	9.17	20.88	38.68	31.28	Q
Serving as a master or mentor teacher	9.70	20.82	41.40	28.09	7
Teaching in hard-to-staff fields (i.e., subjects that are difficult to find and retain qualified and effective teachers)	12.30	24.07	36.90	26.67	×
Independent evaluation of portfolios (e.g., students' and/or teachers' work)	13.96	24.72	39.68	21.64	6
Student gains (improvement/growth) on a standardized test other than FCAT	15.73	28.80	42.93	12.54	10

TABLE VI: WHAT SHOULD BE REWARDED WITH INCENTIVE PAY?

Performance evaluations by peers	20.22	27.20	36.84	15.73	11
National Board for Professional Teaching Standards (NBPTS) Certification	23.12	25.25	30.40	21.23	12
Parent satisfaction with teacher	18.98	30.63	37.55	12.83	13
Student <u>gains</u> (improvement/growth) on an FCAT	19.63	33.89	36.31	10.17	14
Working with students outside of class time	22.59	32.70	31.70	13.01	15
High test scores by students on a standardized test	22.47	40.69	30.87	5.91	16
Student evaluations of teaching performance	29.51	35.42	27.32	7.75	17
NOTE: Total number of respondents for each quest	ion is 1,691. Th	le numbers presente	d above are express	ed in percentages	of the total

number of respondents.

### TABLE VII: VIEWS ON STAR

Understanding of STAR	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
I have a clear understanding of what STAR would have measured and rewarded	18.15	31.11	35.96	11.47	3.31
I can explain conceptually how STAR would have rewarded individual teachers	19.93	29.69	37.37	9.88	3.13
I have a clear understanding of the target I would have needed to meet in order to achieve a STAR bonus	23.54	30.16	33.23	10.05	3.02
Opinions of STAR	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
STAR would have done a good job of distinguishing effective from ineffective teachers at my school	43.76	36.13	7.33	2.48	10.29
STAR would have caused resentment among teachers at my school	3.49	10.05	31.11	42.7	12.66
STAR would not have been fair to teachers at my school	5.44	11.47	29.98	39.74	13.36
STAR would have had a beneficial effect on teaching and learning at my school	39.09	36.07	8.57	3.78	12.48
The size of the top STAR bonus would have been large enough to motivate me to put in extra effort	33.12	34.3	12.6	4.44	15.55
STAR would not have affected my teaching practices because I was not confident bonuses would actually be paid as promised	6.86	15.67	31.11	30.93	15.43

NOTE: Total number of respondents for each question is 1,691. The numbers above are expressed as a percentage of the total number of respondents.

## TABLE VIII: VIEWS ON MAP

Understanding of MAP	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
I have a clear understanding of what MAP will measure and reward	22.53	38.85	26.02	4.79	7.81
I can explain conceptually how MAP will reward individual teachers	23.42	37.55	26.43	4.32	8.28
I have a clear understanding of the target I need to meet in order to achieve a MAP bonus	24.96	39.15	23.36	4.55	7.98
Opinions of MAP	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
I consider myself well-informed about Florida's new incentive pay program, the Merit Award Program (MAP)	24.96	40.80	24.54	3.84	5.85
MAP will do a good job of distinguishing effective from ineffective teachers at my school	26.55	31.76	7.92	1.42	32.35
MAP is going to cause resentment among teachers at my school	25.90	27.20	10.59	2.37	33.94
MAP is not going to be fair to teachers at my school	24.31	24.19	12.00	2.90	36.61
MAP is going to have beneficial affects on teaching and learning at my school	23.24	26.79	11.12	2.54	36.31
The size of the top MAP bonus is large enough to motivate me to put in extra effort	22.77	25.61	11.30	3.08	37.26
MAP is not going to affect my teaching practices because I am not confident bonuses will actually be paid as promised	19.87	25.90	16.03	6.27	31.93

Note: Total number of respondents for each question is 1,691. The numbers presented above are expressed as percentages of the total number of respondents

Despite their limited understanding of the STAR and MAP programs, teachers still had strong opinions on the programs. Eighty percent of teachers disagreed or strongly disagreed that STAR would have distinguished effective teachers from ineffective teachers, and 75 percent of teachers did not think that STAR would have had beneficial effects on teaching and learning in their school. Some of these resentments towards STAR seem to carry over into teachers' opinions of MAP. Although 65 percent of teachers did not consider themselves well informed about MAP, 57 percent still disagreed that MAP would distinguish effective teachers in their school, and 50 percent of teachers did not think MAP would have beneficial effects on teaching and learning.

Table 9 presents the results of an OLS regression of teacher support for incentive pay on a variety of teacher and school characteristics. The dependent variable in the regression is the teacher response to item "c" in Section I of the survey which asked whether "incentive pay for teachers based on individual teacher performance would be a positive change to teacher pay practices." The responses ranged from 1 (strongly disagree) to 4 (strongly agree), where higher values indicate more support for incentive pay. Standard errors clustered by school are reported in parentheses beneath the coefficients. Each column represents a separate regression that includes a slightly different set of covariates. Column 1 includes teacher demographics. Columns 2 and 3 add measures of teacher self-efficacy, risk seeking behavior, and impatience. Column 4 adds several important school demographic variables. In an effort to control for other unobserved school characteristics, the specification shown in column 5 includes school fixed effects. Since the results do not differ appreciably across specifications, we will focus on the results shown in column 4.

### TABLE IX: THE RELATIONSHIP BETWEEN TEACHER AND SCHOOL CHARACTERISTICS, AND TEACHER SUPPORT FOR PAY FOR PERFORMANCE BASED ON INDIVIDUAL TEACHER PERFORMANCE

	(1)	(2)	(3)	(4)	(5)
Teacher Demographics					
Filled Out a Paper Survey	-0.136	-0.158	-0.033	-0.007	-0.298
	(0.237)	(0.242)	(0.252)	(0.260)	(0.380)
1-3 Years as a Full Time Teacher	0.262**	0.275**	0.258**	0.237**	0.176*
	(0.120)	(0.119)	(0.119)	(0.118)	(0.104)
4-9 Years as a Full Time Teacher	0.142	0.121	0.100	0.077	0.014
	(0.104)	(0.103)	(0.105)	(0.103)	(0.086)
10-14 Years as a Full Time Teacher	0.154	0.146	0.139	0.136	0.065
	(0.116)	(0.115)	(0.115)	(0.115)	(0.099)
15-19 Years as a Full Time Teacher	0.031	0.029	0.007	-0.003	-0.085
	(0.110)	(0.108)	(0.108)	(0.108)	(0.108)
Expects to Teach 1-3 more years	0.246	0.287*	0.286*	0.281*	0.341*
	(0.154)	(0.152)	(0.154)	(0.154)	(0.175)
Expects to teach 4-6 more years	0.541**	0.539**	0.546**	0.532**	0.583**
	(0.158)	(0.158)	(0.159)	(0.160)	(0.180)
Expects to teach 6-10 more years	0.438**	0.446**	0.451**	0.445**	0.547**
	(0.138)	(0.141)	(0.141)	(0.140)	(0.178)
Expects to teach more than 10 years	0.502**	0.496**	0.514**	0.504**	0.600**
	(0.153)	(0.153)	(0.152)	(0.152)	(0.171)
Teachers Union	-0.061	-0.062	-0.054	-0.086	-0.054
	(0.064)	(0.064)	(0.062)	(0.063)	(0.064)
Male	-0.104	-0.029	-0.023	-0.037	-0.047
	(0.081)	(0.083)	(0.085)	(0.083)	(0.085)
Hispanic	-0.059	-0.072	-0.061	-0.082	-0.046
	(0.109)	(0.107)	(0.109)	(0.105)	(0.101)
Black	0.201	0.170	0.166	0.077	0.106
	(0.129)	(0.128)	(0.127)	(0.130)	(0.132)
Asian	0.180	0.226	0.142	0.109	0.244
	(0.259)	(0.249)	(0.276)	(0.280)	(0.361)
Holds at least an MA	-0.073	-0.079	-0.073	-0.069	-0.059
	(0.058)	(0.057)	(0.055)	(0.055)	(0.064)
Teaches FCAT subject/grade	-0.005	0.001	0.000	0.010	-0.009
	(0.068)	(0.067)	(0.066)	(0.066)	(0.062)
Elementary School	-0.231	-0.256*	-0.272*	-0.330**	-0.138
	(0.144)	(0.143)	(0.143)	(0.167)	(0.265)
Middle School	-0.143	-0.134	-0.157	-0.192	-0.038

	(0.133)	(0.132)	(0.135)	(0.142)	(0.212)
High School	-0.144	-0.126	-0.143	-0.115	-0.459
	(0.140)	(0.138)	(0.140)	(0.159)	(0.294)
View of Principals	0.143**	0.125**	0.130**	0.130**	0.115**
	(0.035)	(0.034)	(0.033)	(0.035)	(0.034)
View of Other Teachers	-0.069	-0.071	-0.074	-0.058	-0.033
	(0.058)	(0.059)	(0.059)	(0.059)	(0.053)
Self-Reported Efficacy Score		0.960**	0.967**	1.028**	1.191**
		(0.369)	(0.370)	(0.371)	(0.354)
Self-Reported Efficacy Score Squared		-0.093**	-0.095**	-0.102**	-0.123**
		(0.044)	(0.044)	(0.044)	(0.042)
Risk Seeking Behavior			0.015**	0.014**	0.012*
			(0.006)	(0.006)	(0.006)
Impatience			0.339**	0.340**	0.306*
			(0.147)	(0.146)	(0.161)
Impatience Squared			-0.007**	-0.007**	-0.006*
			(0.003)	(0.003)	(0.003)
Missing Risk Seeking			0.573**	0.559*	0.440*
			(0.276)	(0.291)	(0.267)
Missing Impatience			2.823	2.852	2.610
			(1.806)	(1.790)	(1.957)
School-Level Characteristics					
Math/Reading Proficiency				0.003	
				(0.003)	
Enrollment/100				-0.003	
				(0.009)	
% of Black Students				0.007**	
				(0.003)	
% of Hispanic Students				0.005*	
				(0.002)	
Response Rate				-0.006	
				(0.305)	
Includes school fixed effects?	No	No	No	No	Yes
Mean (s.d.) of dependent variable					
Ν	1614	1614	1614	1614	1614
R2	0.034	0.047	0.061	0.067	0.203

Notes: The outcome meaure is item "c" from Section I of the survey, which ranges from 1 (little support for incentive pay) to 4 (strong support for incentive pay).

Notes: Standard errors are clustered by school.

\* = significant at the 10% level; \*\* = significant at the 5% level.

We find an association between several teacher demographics and views on incentive pay. Race and gender are not correlated with support for incentive pay in our sample.<sup>1</sup> On the other hand, we find that new teachers are more likely to support incentive pay. For example, teachers with 1-3 years of experience express substantially more support than teachers with more than 20 years of experience (the coefficient implies an effect size of .26/1.2 or .22). Conditional on current teaching experience, those teachers who expect to teach longer also express more support for incentive pay. Finally, teachers working in a school with elementary grades appear less supportive of incentive pay than teachers working in middle or high schools.<sup>2</sup> In column 4, we see that school racial composition is also associated with teacher attitudes. Specifically, conditional on size and proficiency levels, schools with a larger proportion of Black (and, to a lesser extent, Hispanic) students are more supportive of incentive pay.

We find that several other teacher characteristics are strongly related to teacher support for incentive pay. Teachers who have a positive view of their principal's leadership ability are more supportive of incentive pay. The coefficient of .13 suggests that a one standard deviation increase in teacher's view of the principal is associated with a .1 standard deviation increase in support for incentive pay. Second, teachers who have higher self-efficacy measures are more likely to support incentive pay. Finally, teachers that are more risk-seeking and more impatient express greater support for incentive pay. The results suggest that a one standard deviation increase in the risk-seeking measure is associated with a .06 standard deviation increase in support for incentive pay. The relationship between impatience and incentive pay is concave,

<sup>&</sup>lt;sup>1</sup> However, it is important to note that our statistical power is somewhat limited. Nonetheless, the standard errors shown in column 1 indicate that we are able to rule out difference greater than .13 standard deviations for gender and roughly .20 for race.

<sup>&</sup>lt;sup>2</sup> A number of schools in Florida have both elementary and middle grades, or middle and high school grades. Hence, the indicators for elementary, middle and high school are not mutually exclusive, and all variables are included in the model.

and the coefficients suggest that for the teacher with the mean impatience level, a one standard deviation increase in impatience is associated with a .09 standard deviation increase in support for incentive pay.

#### 5. Discussion

Teachers in our sample express only moderate support for incentive pay. Teachers appear to be most favorably inclined toward incentive pay that is based on individual teacher performance rather than school or group (i.e., grade-level) performance, and when the program rewards time spent in professional development, earning an advanced degree, and/or collaborating with other staff. Yet, only 50 percent of teachers agree or strongly agree that this type of incentive pay would be a positive change in teacher compensation. This statistic falls roughly between Farkas et al's (2003) estimate that 63 percent of teachers nationwide support tying pay to student performance and the Phi Delta Kappan's 1984 estimate that 36 percent of teachers do not oppose pay for performance.

Over half of the surveyed teachers expressed concern that incentive pay will destroy the collaborative culture of teaching and only 34 percent believed that it would make teachers work harder. These two findings stand in sharp contrast to teachers currently participating in Texas' GEEG incentive program. For instance, 78 percent of Texas teachers responding to the GEEG survey did not believe that the opportunity for a teacher at their school to earn a bonus discourages teachers from working together. This holds for bonus recipients and non-recipients.

It is important to recognize that the Texas and Florida PFP programs characterize two very different approaches to implementing state-level PFP policy – Texas promoted shared governance, while Florida was more top-down. Approximately nine out of every 10 teachers

responding to the Springer et al. (2007) survey indicated involvement in the design and implementation of their school's PFP plan. Conversely, education stakeholders in Florida have opposed the STAR program and MAP for injecting a state-imposed directive into a domain traditionally governed by local school districts. Furthermore, the composition of samples in Texas and Florida are different. Most notably, in Texas only schools that were voluntarily participating in a pay for performance program responded to the survey.

Our findings with regard to teacher experience are consistent with Ballou and Podgursky (1993) as well as Goldhaber et al. (2007). Our findings with regard to elementary versus secondary school teachers are also consistent with Goldhaber et al. (2007). We do not find the same differences by race or gender as previous studies, but the positive coefficients we find on school racial composition are likely consistent with the race findings of Ballou and Podgursky (1993) since the prevalence of Black and Hispanic teachers increases with the proportion of non-white students in a school.

We also examined additional covariates not previously studied. We included several items to gauge risk and time preferences, and feelings of efficacy. Most notably, we find that teachers who have a positive view of their principal's leadership ability and who are more self-efficacious are more supportive of incentive pay. Goldhaber et al (2007) also find a positive association between teacher attitudes on pay for performance and teacher's opinions of their principals.

With regard to the incentive programs in Florida (STAR and MAP), our most striking finding is how little teachers appear to understand how either program operates. For example, 49 (61) percent of respondents disagreed (or strongly disagreed) with the statement, "I have a clear understanding of what STAR (MAP) would have measured and rewarded." Sixty-one percent of

respondents disagreed (or strongly disagreed) with the statement, "I have a clear understanding of what MAP would have measured and rewarded."

Although this report provides insight into teacher attitudes toward PFP policies, it must be noted that the results presented come from a survey instrument that was in the field for a short period of time. The overall response rate was quite low which is problematic if selection into the study is non-random. While the statistics presented in Table 3 suggest that the respondents were roughly comparable to the non-respondents in terms of several observable teacher demographics, it is still possible that the respondents differed from the non-respondents with regard to their views on PFP.

#### 6. Conclusion

As state, district, and school investment in teacher PFP expands nationally, so too does the need both for continued research on the impact of these programs and for evidence-based policy governing the design and implementation of PFP policies. In seeking to begin to bridge the knowledge gap on teacher attitudes toward PFP, our study found:

- Moderate support for select types of PFP programs among teacher respondents;
- Concern that incentive pay will destroy the collaborative culture of the teaching profession;
- Significant association between teacher support for PFP and teacher experience, principal leadership, and teacher self-efficacy, respectively; and
- Lack of understanding about how the Florida STAR program and MAP operate.

Several key policy recommendations for Florida's state department of education and K-12 public education system emerge from these findings. First, the general lack of teacher support for PFP indicates that the state needs to work collaboratively with teachers and district officials and to build "grass-roots" support for the program. State and local leadership should focus on developing the program in collaboration with teacher leaders, rather than mandating program participation and requirements.

Second, systematic variation in PFP support by teaching experience suggests that consideration should be given to allowing veteran teachers to opt-in to the program. Denver's ProComp made participation voluntary for all teachers employed by the system prior to the 2006-2007 school year. With 42 percent of the district's teachers paid under terms of ProComp, the opt-in provision for veteran teachers has sustained teacher and community support.

Third, the state and districts might also explore first offering monetary incentives to teachers for working in hard-to-staff schools, prior to fully implementing PFP. This approach would signal the state's commitment to its lowest-performing schools and continued desire to reform teacher compensation, while providing more time to build "grass roots" support for PFP.

Fourth, observation that PFP support accompanies teachers' positive view of principal leadership indicates the importance of coupling PFP programs with leadership reforms in schools that lack strong leadership. These leadership reforms might include more targeted initiatives, such as developing and implementing meaningful principal professional development programs. The principal as instructional leader and mentor may enhance program support.

Finally, the apparent role of teacher self-efficacy suggests the importance of professional development, and perhaps supports tying incentive pay to teacher inputs or improvement in teacher performance rather than to static performance levels or absolute benchmarks. The latter recommendation is particularly salient given emergence within the public K-12 education system of a general disregard for reliance on single indicators of performance.

Taken together these policy recommendations speak to the overarching need to both educate and engage teachers, principals, and their organizations in the design and implementation of PFP policy. While state-level mandates may struggle to meet teacher demands and expectations, district and school-level designed PFP programs suggests opportunity to combine teachers' pluralistic interests, thereby increasing the likelihood that PFP programs will be transparent, understood, and fundamentally operational. Without this "buy-in", any alteration of teacher behavior will be incomplete, and research on its nature and effects likely confounded.

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#### APPENDIX A SURVEY INSTRUMENT

1. Please enter the name of the school where you are employed:

2. How do you classify your	MAIN position in	THIS school during th	e 2006-2007 school yea	r?
(Please select only one response)	-	0	-	

a. Regular full time teacher	
b. Regular part-time teacher	
c. Itinerant teacher (i.e., your assignment requires you to provide instruction at more than one school)	
d. Long-term substitute (i.e., your assignment requires that you fill the role of a regular teacher on a long-term basis, but you are still considered a substitute)	
e. Short-term substitute	
f. Student teacher	
g. Teacher Aide	
h. Administrator (e.g. principal, asst. principal, director, head of school)	
i. Specialist or professional staff (e.g., curriculum coordinator, mentor teacher, literacy or math coach, library media specialist, or librarian)	
j. Other professional staff (e.g., counselor, curriculum coordinator, social worker)	
k. Support staff (e.g., administrative assistant)	

3. Do you teach any regularly scheduled class(es) at this school? (If you work as a library media specialist or librarian at this school, do not include classes in which you teach students how to use the library)

Yes
No

4. How much time do you work as a teacher at this school?

Full time

 $\square$  <sup>3</sup>/<sub>4</sub> time or more, but less than full-time

1/2 time or more, but less than full-time

1/4 time or more, but less than 1/2 time

 $\Box$  Less than <sup>1</sup>/<sub>4</sub> time

# I. INCENTIVE PAY

Please indicate whether you agree or disagree with each general statement about incentive pay that could be awarded in addition to base pay.

		Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
a.	Incentive pay for <i>teadiers</i> based on <u>overall performance at the</u> <u>school</u> is a positive change to teacher pay practices					
b.	Incentive pay for <i>teachers</i> based on <u>group performance</u> (i.e., grade- level, department, or interdisciplinary team) is a positive change to teacher pay practices					
c.	Incentive pay for <i>teachers</i> based on <u>individual teacher performance</u> is a positive change to teacher pay practices					
d.	Incentive pay for <i>administrators</i> based on <u>overall performance at the</u> <u>school</u> is a positive change to administrator pay practices					
e.	Rewarding teachers based on performance will destroy the collaborative culture of teaching					
f.	Rewarding teachers based on performance will cause teachers to work harder					
g.	Rewarding teachers based on performance will result in teachers working together more often					
h.	District and state officials should be more concerned about increasing base pay opposed to devising teacher incentive pay programs					

#### II. WHAT SHOULD BE REWARDED WITH INCENTIVE PAY?

The teacher salary schedule rewards experience and education. In select districts and states around the country, several additional factors have been suggested for determining incentive pay for *individual teaduers*. Please provide your opinion of the importance of each factor listed below.

		Not Important	Low Importance	Moderate Importance	High Importance
a.	Earning an advanced degree				
b.	Time spent in professional development				
c.	High test scores by students on a standardized test				
d.	Student gains (improvement/growth) on an FCAT				
e.	Student <u>gains</u> (improvement/growth) on a standardized test other than FCAT				
f.	Performance evaluations by supervisors				
g.	Performance evaluations by peers				
h.	Independent evaluation of portfolios (e.g., students' and/or teachers' work)				
i.	Student evaluations of teaching performance				
j.	Collaboration with other faculty and staff				
k.	Working with students outside of class time				
1.	Efforts to involve parents in students' education	a 🔲			
m.	Serving as a master or mentor teacher				
n.	National Board for Professional Teaching Standards (NBPTS) Certification				
0.	Parent satisfaction with teacher				
p.	Teaching in hard-to-staff fields (i.e., subjects that are difficult to find and retain qualified and effective teachers)				
q.	Teaching in hard-to-staff schools (i.e., schools that difficulty in finding and retaining qualified and effective teachers).				

#### **III. PERCEPTIONS AND ATTITUDES ABOUT INCENTIVE PAY PROGRAMS**

The 2006-07 budget approved by the Florida State Legislature included \$147.5 million appropriated for the Special Teachers Are Rewarded (STAR) performance-related pay program. The STAR program was replaced when Governor Crist signed into law the Merit Award Program (MAP) in late March 2007. Please answer the following questions about the STAR program and MAP.

Please note, the questions on this page refer only to STAR.

#### A. Please indicate the level to which you agree or disagree with each statement.

		Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
a.	I have a clear understanding of what STAR would have measured and rewarded					
b.	I can explain conceptually how STAR would have rewarded individual teachers					
c.	I have a clear understanding of the target I would have needed to meet in order to achieve a STAR bonus					

B. Please indicate the level to which you agree or disagree with each statement if your district had not replaced STAR with MAP.

		Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
a.	STAR would have done a good job of distinguishing effective from ineffective teachers at my school					
b.	STAR would have caused resentment among teachers at my school					
c.	STAR would not have been fair to teachers at my school					
d.	STAR would have had a beneficial affects on teaching and learning at my school					
e.	The size of the top STAR bonus would have been large enough to motivate me to put in extra effort					
f.	STAR would not have affected my teaching practices because I was not confident bonuses would actually be paid as promised					

Please note the questions on this page refer only to MAP.

(	C. Plea	se indicate	e the leve	l to which	vou agree o	or disagree	with each	statement.
			c	a ve maere	,		There couldres	Control in the res

		Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
a.	I have a clear understanding of what MAP will measure and reward					
b.	I can explain conceptually how MAP will reward individual teachers					
c.	I have a clear understanding of the target I need to meet in order to achieve a MAP bonus					

D. Please indicate the level to which you agree or disagree with each statement about the recently enacted Merit Award Program (MAP) that will replace your district's STAR program for awarding bonuses during the 2006-07 school year.

		Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
a.	I consider myself well-informed about Florida's new incentive pay program, the Merit Award Program (MAP)					
b.	MAP will do a good job of distinguishing effective from ineffective teachers at my school					
c.	MAP is going to cause resentment among teachers at my school					
d.	MAP is not going to be fair to teachers at my school					
e.	MAP is going to have beneficial affects on teaching and learning at my school					
f.	The size of the top MAP bonus is large enough to motivate me to put in extra effort					
g.	MAP is not going to affect my teaching practices because I am not confident bonuses will actually be paid as promised					

# **IV. TEACHER ATTITUDES**

To what extent do you agree or disagree with each of the following statements?

		Disagree Strongly	Disagree Moderately	Disagree Slightly more than Agree	Agree Slightly more than Disagree	Agree Moderately	Agree Strongly
a.	The amount a student can learn is primarily related to family background.						
b.	If students aren't disciplined at home, they aren't likely to accept any discipline						
c.	When I really try, I can get through to the most difficult student						
d.	A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement						
e.	If parents would do more for their children, I could do more						
f.	If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson						
g	If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly						
h.	If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty						
i.	If I really try hard, I can get through to even the most difficult or unmotivated students						
j.	When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment.						

# V. SCHOOL ENVIRONMENT

A. To what extent do you agree or disagree with the following statements about your school principal?

The prir	ncipal at my school	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
a.	Works to create a sense of community in this school					
b.	Sets high standards for teaching					
C.	Ensures that teachers have sufficient time for professional development					
d.	Provides support to improve mathematics instruction in the school.					

B. To what extent do you agree or disagree with the following statements about the teachers in your school?

Teachers in my school		Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
a.	Seem more competitive than cooperative					
b.	Do not really trust each other					
c.	Feel responsible to help each other do their best					
d.	Expect students to complete every assignment					
e.	Encourage students to keep trying even when the work is challenging					
f.	Think it is important that all of their students do well in class.					
ç.	Can be counted on to help out anywhere or anytime, even though it may not be part of their official assignment					

#### VI. TELL US ABOUT YOURSELF $\Box$

A. Please check the box that best describes you for each item below.

		Disagree Strongly	Disagree a Little or Moderately	Neither Agree or Disagree	Agree a Little or Moderately	Agree Strongly
a.	I am extroverted, enthusiastic					
b.	I am critical, quarrelsome					
c.	I am dependable, self-disciplined					
d.	I am anxious, easily upset					
e.	I am open to new experiences, complex					
f.	I am reserved, quiet					
g.	I am sympathetic, warm					
h.	I am disorganized, careless					
i.	I am calm, emotionally stable					
j.	I am conventional, uncreative					

B. The following questions ask you to choose between getting a regular payment of money and taking a coin flip, where your payment depends on whether the coin lands on heads or tails. Read each choice carefully and circle the option that you prefer. For each choice, make sure to circle either the option in the left or right column. <u>Please note that this is</u> **NOT** a test. There are no right or wrong answers.

	Daarden Dermaart	Caire Eline
	If you choose this option, you will receive the amount of money listed in the box below.	<u>Coin Flip</u> If you choose this option, you will receive either \$10 or \$30, depending on whether the coin lands on heads or tails.
a.	For sure \$30	Heads \$10 Tails \$30
b.	For sure \$28	Heads \$10 Tails \$30
с.	For sure \$26	Heads \$10 Tails \$30
d.	For sure \$24	Heads \$10 Tails \$30
e.	For sure \$22	Heads \$10 Tails \$30
f.	For sure \$20	Heads \$10 Tails \$30
g.	For sure \$18	Heads \$10 Tails \$30
h.	For sure \$16	Heads \$10 Tails \$30
i.	For sure \$14	Heads \$10 Tails \$30
j.	For sure \$12	Heads \$10 Tails \$30
k.	For sure \$10	Heads \$10

	Taila \$20
	1 alis 500

C. For each of the next 10 choices, please indicate which reward you would prefer: the smaller reward today, or the larger reward in the specified number of days. <u>Please note that this is NOT a test</u>. There are no right or wrong <u>answers</u>.

a. Would you prefer	\$20 right now	or	\$20.25 in one week
b. Would you prefer	\$20 right now	or	\$20.50 in one week
c. Would you prefer	\$20 right now	or	\$21.00 in one week
d. Would you prefer	\$20 right now	or	\$22.00 in one week
e. Would you prefer	\$20 right now	or	\$23.00 in one week
f. Would you prefer	\$20 right now	or	\$24.00 in one week
g. Would you prefer	\$20 right now	or	\$25.00 in one week
h. Would you prefer	\$20 right now	or	\$26.00 in one week
i. Would you prefer	\$20 right now	or	\$28.00 in one week
j Would you prefer	\$20 right now	or	\$30.00 in one week

#### V. BACKGROUND INFORMATION

1. Are you a member of a teachers union or an employee association similar to a union?

☐ Yes ☐ No

2a. Are you male or female?

Male

E Female

- 2b. Are you of Hispanic or Latino origin?
  - ☐ Yes ☐ No

2c. What is your race?

White
 Black or African-American
 Asian
 Native Hawaiian or Other Pacific Islander
 American Indian or Alaska Native

3a. Are you currently married and/or living with a partner?

ļ	Y	e

🗌 No

3b. If yes, does your spouse/living partner work?

□ Yes □ No

3c. How many children do you have under the age of 18?

$\Box$	0
	1
	2
	3
	4+

4a. Including this year, how many years have you taught on a full-time basis?

- 1 3 years 4 - 9 years 10 - 14 years 15 - 19 years
- 20 or more years

4b. Including this year, how many years have you taught on a full-time basis at this school?

- ☐ 1 3 years ☐ 4 – 9 years ☐ 10 – 14 years
- 15 19 years
- 20 or more years

4c. As I think about my future career plans, I believe that I will teacher in a Florida public school for the next...

1-3 years
4-6 years
6 - 10 years
10+ years

I am leaving at the end of this school year

4d. At which of the following levels of schooling do you teach? (check all that apply)

Elementary School (including early childhood and kindergarten)

- Middle School
- High School

4e. What subject(s) do you teach? (check all that apply)

Arts and Music

- Bilingual Education
- English and Language Arts
- English as a Second Language
- Foreign Languages

Gym

- Health Education
- Mathematics and Computer Science
- Natural Sciences
- Social Sciences
- Special Education
- Vocational/Technical Education
- Other

4f. I teach in a subject and grade that is part of the Florida Comprehensive Assessment Test (FCAT)

☐ Yes □ No

4g. What is the highest degree you hold?

Bachelor's Degree	
Master's Degree	
Master's +	
Doctorate or Professional Degree	
Other (please specify)	

4h. Where did you receive your undergraduate degree?

4i. Which of the following describes the teaching certificate you currently hold in Florida?

Regular or standard state certificate or advanced professional certificate

Probationary certificate (issued after satisfying all requirements excepts the completion of a probationary period)

<u>Provisional</u> or other type of certificate given to persons who are still participating in what the state calls an "alternative certification program"

<u>Temporary certificate (requires some</u> additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained)

Waiver or emergency certificate (issued to persons) with insufficient teacher preparation who must complete a regular certification program in order to continue teaching)

I do not have any of the above certifications in Florida.

4j. Which of the following describes the type(s) of incentive pay you will receive for you work during the 2006-2007 school year? (note: This does not apply to STAR and/or MAP)

National Board for Professional Teaching Standards Certification

Challenge of Renaissance School pay

Other: \_\_\_\_\_
Does Not Apply

Thank you very much for your time and participation in this survey. Please return your completed survey to the appropriate coordinator at your school.

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