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**Pay for
Performance:**
A Pilot Study

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Teacher Attitudes on Pay for Performance: A Pilot Study

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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, personality characteristics, 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. The most striking finding is how little teachers appear to understand 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).¹

¹ 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, personality characteristics, 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 some association between teacher demographics and views on incentive pay. For example, 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 self-efficacious express greater support for incentive pay.

Furthermore, our results suggest teachers that are more risk-seeking and more impatient express greater support of incentive pay policies.

The most striking finding 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 pilot study that was in the field for a very short period of time at the end of the 2006-2007 school year. As a result, the response rate was only 20 percent. A low response rate is problematic if selection into the study was non-random; that is, the response characteristics of teachers that did not respond are different from those who did respond. Furthermore, we solicited responses from teachers in a single district with past experience in the design and implementation PFP programs. As such, this study is preliminary, and 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.

2. Background on Florida Pay for Performance Policy

A Nation at Risk, a highly influential policy report published in 1983, declared that, “...the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people” (NCEE, 1983: p. 1). Of seven teaching-related recommendations, the report’s proposal that salaries for the teaching profession should be competitive, market-sensitive, and performance-based resonated with many reform-minded education leaders. As a consequence, many locations across the country began experimenting with teacher PFP in an effort to improve the quality and performance of the teaching workforce.

Like much education legislation during this period, the Florida Educational Reform Act of 1983 (FERA) was born of concern over failing schools and the future of the nation’s economic and technological preeminence. As noted by the Brown Commission on Secondary Schools, a 12-member committee charged with examining Florida’s education system by then-Governor Bob Graham, “The state’s secondary schools had failed to make the connection between our lifestyle, our national security, our economy, our technology, and the quality of education” (Arthur and Milton, 1991: 269). Despite initiatives to raise teacher salaries under the premise that higher salaries would help attract the best teachers, neither taxpayers nor legislators were willing to accept the tax increase necessary for unilateral raises without accountability. Support was given, however, to FERA’s call for providing monetary rewards for teachers who demonstrated superior knowledge and performance (Fisher, 1985).

FERA was composed of two elements: the District Quality Instruction Incentives Program and the State Master Teacher Program. The former provided an avenue for districts to develop incentive programs specific to their needs, while the latter offered a state-sponsored

incentive of \$9,000 over three years to teachers who became associate and master teachers. To become an associate teacher, educators must document four years of teaching experience (two of which must be in Florida), a professional services or continuing contract with the school system, completion of an in-field Master's degree (or 15-hours in field coursework for those teachers who already had a Master's degree), a superior performance evaluation and outstanding attendance (Arthur and Milton, 1991). Master teacher's, on the other hand, must show seven years teaching experience, five of which in Florida, completion of an additional 15 hours in-field coursework, plus three years service as an associate teacher (Arthur and Milton, 1991). Based on the average teacher salary in Florida at that time, a \$3,000 bonus equated to approximately 13.5 percent of average base pay. Between the two programs, close to \$1 billion in additional education funding was required to implement FERA. Over the ensuing five years, however, critical interest groups failed to come together in support of the legislation; and, as result of differing views on the purpose and goals of the legislation, FERA was eventually abandoned.

Despite FERA's ultimate failure, policymakers in Florida have continued to experiment with teacher PFP initiatives. As illustrated below, many of these programs have gained traction and remain operational today. A brief review of their history provides a foundation for discussion of the two most recent PFP policy developments in Florida, and whether these programs will leave a lasting impression on Florida education policy.

Developed in 1997, the Florida School Recognition Program offers public recognition and financial awards to schools that either sustain high student performance or demonstrate substantial improvement in student performance. Specifically, schools receiving an "A" performance grade or those that improve at least one performance grade category from the previous year are eligible for awards of \$100 per full-time equivalent student based on the prior

year's enrollment. Funds may be used, at the school's discretion, for nonrecurring bonuses to faculty and staff, nonrecurring expenditures for educational equipment, and/or temporary personnel to assist the school in maintaining or improving student performance. In 2004-2005 school year, \$134.2 million was awarded to approximately 1,500 campuses under this performance program. The average award payment of \$906 per teacher equates to approximately 2.2 percent of average base pay in the 2004-2005 school year.

Enacted in 1998, the Dale Hickman Excellent Teaching Program (originally named the Excellent Teaching Program Act) offers two bonuses based on National Board certification. Designed to encourage teachers to seek National Board certification and remain full-time teachers in Florida's public schools, the program offers bonuses of 10 percent of the previous year's average base salary. The first award is available to full-time National Board certified teachers who teach a majority of time, hold a current and valid teaching license, and engage exclusively in activities that further student instruction. These teachers must also be certified annually by their district as having demonstrated satisfactory teaching.

A second award is given to those teachers who satisfy all of the aforementioned activities, as well as provide twelve working days (outside of student contact hours) of mentoring to public classroom teachers. Teachers pursuing National Board certification are offered a one-time incentive of \$150 for portfolio preparation, as well as a fee-subsidy of 90 percent of the cost of certification, or \$2,250 of the \$2,500 in total fees. In the 2004-2005 school year, \$18.25 million was awarded to 2,964 teachers under the Dale Hickman Excellent Teaching Program for an average bonus of \$6,158 per teacher. A \$6,158 award was 14.80 percent of average base teacher pay in Florida during the 2004-2005 school year.

In addition to these programs, select Florida teachers have the option of earning bonuses for high student performance on the Advanced Placement (AP), International Baccalaureate (IB), and Advanced International Certificate of Education (AICE) exams. These programs were part of state statute starting in 2002. Specifically, AP, IB, and AICE teachers receive a \$50 bonus for each student who meets or exceeds a minimum threshold score on the respective exam. An additional bonus of \$500 is available if the teacher teaches at a “D” or “F” school. Teachers can earn up to \$2,000 for each of these awards. In the 2004-2005 school year, \$2.4 million was awarded to 2,402 teachers for an average bonus of \$999 per teacher or 2.4 percent of average base teacher pay in Florida.

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. Not only is the magnitude of this 4.5 fold increase striking, so is the fact that Florida teachers are 2.3 times more likely to report bonus payments as part of total compensation when compared with the 2002-2003 school year national average.

Insert Figure 1 Here

To further explore the characteristics of pay for performance bonus payments in Florida, we computed bonus payments as a fraction of average base teacher salary for the 1993-1994, 1999-2000, and 2003-2004 school years using Schools and Staffing Survey data.² The relative size of the average bonus payment during the 1993-1994 school year was very similar to the 2003-2004 school year. Bonuses ranged from approximately \$200 at the 5th percentile to more than \$6,600 at the 95th percentile. Perhaps the most interesting finding is that less than 20

² 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 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).

Table 1 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). Monetary rewards 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 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).

Insert Table 1 Here

In 2006, Florida received considerable national attention when the state legislature enacted the Special Teachers Are Rewarded (STAR) 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.³ Of these 19 unapproved districts, 15 had plans that were compliant with STAR legislation, 1 had been approved, and 3 had not submitted a proposal.⁴ 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.

Lack of district and charter school compliance with STAR legislation underscores the political turmoil that surrounded the program. 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. 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 requisite of successful implementation. Much of this is still at play considering bonus payments in this first year of the program are distributed in fall 2007.

³ 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).

⁴ The 19 districts without fully-approved STAR plans included the Florida School for the Deaf and Blind.

Table 2 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.

Insert Table 2 Here

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, 9 amended their existing STAR plan to incorporate components of MAP legislation, and 5 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.⁵

3. 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. Research in this area has varied widely in terms of the quality of the survey methodology. Finally, because support for incentive pay likely varies according to the

⁵ 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. 91 percent of Florida districts responded to the survey.

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. 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 to assess teacher attitudes toward PFP systems. She 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 53 schools and 1,617 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 Texas sample was limited to teachers participating in a state-defined educator incentive program.

A recent working paper by Goldhaber, DeArmon, and DeBurgomaster (2007) presents results from a survey of 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 highly-effective teachers.

Some research on PFP has found that teachers are often unaware of or confused about incentive pay programs operating in their districts or schools. In her case study of a school-level performance award program in Maryland, Kelley (1999) interviewed teachers and principals at schools that were eligible for a monetary bonus. She found that many teachers were completely unaware of the incentive program, and that the teachers who did know about the program only came to find out after their school had received an award.⁶ Richardson (1999) further notes that

⁶ Principals, on the other hand, were very aware of the program, leading Kelly to conclude that the pressure for school-site awards falls more upon principals than teachers.

poor goal clarity restricts teachers understanding of a pay for performance programs and makes implementation difficult.

Our literature review of surveys, reports, and research papers on teacher attitudes towards PFP highlights inconsistent findings and conclusions. While some of this variance is attributed to the background of the teacher and the context in which he is working, the extant literature conveys idiosyncratic teacher attitudes toward PFP policies. To enhance our ability to draw more systematic comparisons of studies on teacher attitudes toward PFP in the long run, 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.

4. 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 at Vanderbilt University (NCPI). 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 schools not responding at all. Among campuses with a non-zero response rate, the average response rate to the survey was 20 percent.

The administered 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, personality characteristics, risk and time preferences, and feelings of efficacy. Most items utilize a 4 or 5 category “Likert” 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 and teacher demographics and school-level characteristics.

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.⁷

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).⁸

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

⁷ See Section I, questions a – h.

⁸ See Section II, questions a – q.

resentment among teachers; being fair to teachers; and having beneficial effects on teaching and 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).⁹

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 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, personality characteristics, 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

⁹ See Section III, Parts A – D.

standards for teaching; ensures that teachers have sufficient time for professional development; and provides support to improve instruction. Responses were averaged to form a single principal leadership measure.¹⁰

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.¹¹

Teaching Self-Efficacy. Teachers responded to ten 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.¹²

Personality Traits of Teachers. Individual differences in behavior and experiences may mediate association between teacher attitudes and preferences toward PFP programs. To better understand that relationship, we used an inventory of measures for what psychologists refer to as

¹⁰ See Section V, Part A, questions a – d.

¹¹ See Section V, Part B questions a – g.

¹² See Section IV, questions a – q.

the “Big 5” personality traits. Measured traits included extroversion, dependability, openness to new experiences, sympathy, and calmness. Teachers were asked if they agreed that a given statement described their personality. A pair of statements for each personality trait was reversed coded, if necessary, and averaged for each teacher.¹³

Finally, respondents completed standard protocols to elicit their discount rate and risk aversion. To measure *risk aversion*, the respondent was asked to choose between 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 eleven 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.¹⁴

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.¹⁵

5. Findings

Table 3 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.

¹³ See Section VI, Part A, questions a – j.

¹⁴ See Section VI, Part B, questions a – k.

¹⁵ See Section VI, Part C, questions a – j.

Approximately 43 percent of respondents held at least a master’s degree, and the average level of full-time teaching experience was 6 years. 56 percent of respondents belonged to a teacher association. As noted in Table 4, our sample summary statistics on available teacher characteristics are similar to means reported by the district. Modest differences exist between the proportion of respondents that were black and the proportion of respondents that taught in high schools.

Insert Tables 3 and 4 Here

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.

Insert Table 5 Here

Responses to a set of items that may be rewarded 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.

Insert Table 6 Here

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. 61 percent of respondents disagreed (or strongly disagreed) that they had a clear understanding of what MAP will measure and reward.

Insert Table 7 and 8 Here

Despite their limited understanding of the STAR and MAP programs, teachers still had strong opinions on the programs. 80 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.

Insert Table 9 Here

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.¹⁶ 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

¹⁶ 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.

on current teaching experience, those teachers who expect to teacher 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.¹⁷ 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, 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.

6. 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

¹⁷ 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.

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 9 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 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 personality characteristics, 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." 61 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 results presented are generated from a pilot study. The survey instrument was in the field for a short period of time, and the overall response rate was less than 20 percent. A low response rate is problematic if selection into the study is non-random; that is, the response

characteristics of teachers that do not respond are different to the response characteristics of teachers that do respond. Furthermore, some technical survey literature suggests that initial respondents tend to be those with the strongest beliefs and opinions on the topic at hand.

7. 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 2006-07 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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TABLE I: PERCENT OF TEACHERS REPORTING INCENTIVE PAY, UNITED STATES AND FLORIDA

<i>Percent reporting incentive pay for ...</i>	United States			Florida		
	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: National Center for Education Statistics' *Schools and Staffing Survey, 1999-2000 and 2002-2003*

Table II. Comparison of STAR Program and MAP

<i>Provisions</i>	Special Teachers Are Rewarded (STAR)	Merit Award Program
<i>Who qualifies?</i>	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.
<i>How are awards determined?</i>	Awards are only determined by individual performance	Allows awards to be determined by individual or instructional team performance (excluding whole schools); allows for supplemental awards for exemplary work attendance.
<i>Who receives the award?</i>	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.
<i>How is eligibility determined?</i>	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 district-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.
<i>Does the DOE provide technical assistance?</i>	The Florida Department of Education provides technical assistance upon request and provides model methodologies.	The Florida Department of Education provides technical assistance in plan development upon request. The department collects and disseminates best practices for district testing instruments and Merit Award Program plans.

<p><i>When are plans due?</i></p>	<p>Plans are due December 31, 2006, for use in current year; reviewed by State Board; revisions due by March 1, 2007.</p>	<p>Plans are due by October 1 each year for use in the next school year; reviewed by Commissioner; revisions of plans that do not comply with the law are due by January 31.</p>
<p><i>How is compliance determined?</i></p>	<p>Approval or denial is provided by the Florida State Board of Education. Revision must be specified. There is no specified audit of compliance.</p>	<p>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 these 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 December.</p>
<p><i>Is there rulemaking authority? Are there provisions relating to collective bargaining?</i></p>	<p>N/A</p>	<p>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 Chapter 447. If an impasse is declared, the dispute is subject to an expedited impasse hearing.</p>
<p><i>What is the appropriation?</i></p>	<p>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.</p>	<p>For 2006-07: a. Provides districts utilizing STAR an extension until May 1 to submit their revised plan to SBOE. b. Eliminated the recalculation of undistributed funds from STAR proviso. c. 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. d. 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.</p>

Source: Adapted from Florida Education Association's *MAP STAR Comparison*, http://www.feaweb.org/absolutem/articlefiles/2600-MAP%20and%20STAR%20Side%20by%20Side%202_2_.pdf.

TABLE III: SUMMARY STATISTICS

<i>Teacher Characteristics</i>	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

<i>Teacher Attitudes/Beliefs and Personality Measures</i>	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
Extrovert (0=Introverted)	0	5	3.797	1.012
Dependable (0=Not Dependable)	1.5	5	4.624	0.584
Open to New Experiences (0=Not at all Open)	1.5	5	4.359	0.666
Sympathetic (0=Not at all sympathetic)	1.5	5	4.317	0.708
Calm (0=Not at all calm)	1	5.5	4.294	0.761
Risk Seeking Behavior (0=Completely Risk Averse)	0	30	15.751	5.269
Impatience (0=Extremely Patient)	0	30	22.252	3.516
<i>School-Level Characteristics</i>	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

<i>Views Regarding Incentive Pay</i>	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 IV: SAMPLE MEANS FOR SELECT VARIABLES

	District	Survey Respondents
Hispanic	0.089	0.105
Black	0.133	0.065
Asian	0.010	0.008
Male	0.202	0.188
Hold at least a MA	0.391	0.432
Elementary School	0.545	0.532
Middle School	0.222	0.218
High School	0.233	0.289
Teachers Union	0.540	0.562

TABLE V: GENERAL VIEWS ON INCENTIVE PAY

	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
Incentive pay for <i>teachers</i> based on <u>overall performance at the school</u> 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 <u>group performance</u> (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 performance</u> 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 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

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.

TABLE VI: WHAT SHOULD BE REWARDED WITH INCENTIVE PAY?

	Florida				Rank
	Not Important	Low Importance	Moderate Importance	High Importance	
Time spent in professional development	2.66	11.35	46.84	39.15	1
Earning an advanced degree	7.69	12.95	35.36	44.00	2
Performance evaluations by supervisors	8.28	17.45	44.47	29.80	3
Collaboration with other faculty and staff	7.98	18.98	45.59	27.44	4
Efforts to involve parents in students' education	9.99	19.87	39.50	30.57	5
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	6
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	8
Independent evaluation of portfolios (e.g., students' and/or teachers' work)	13.96	24.72	39.68	21.64	9
Student gains (improvement/growth) on a standardized test other than FCAT	15.73	28.80	42.93	12.54	10
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 gains (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 question is 1,691. The numbers presented above are expressed in percentages of the total number of respondents.

TABLE VII: VIEWS ON STAR

<i>Understanding of STAR</i>	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
<i>Opinions of STAR</i>	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

	Disagree Strongly	Disagree	Agree	Agree Strongly	Don't Know
<i>Understanding of MAP</i>					
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
<i>Opinions of MAP</i>					
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

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)
<i>Teacher Demographics</i>					
Filled Out a Paper Survey	-0.136 (0.237)	-0.158 (0.242)	-0.033 (0.252)	-0.007 (0.260)	-0.298 (0.380)
1-3 Years as a Full Time Teacher	0.262** (0.120)	0.275** (0.119)	0.258** (0.119)	0.237** (0.118)	0.176* (0.104)
4-9 Years as a Full Time Teacher	0.142 (0.104)	0.121 (0.103)	0.100 (0.105)	0.077 (0.103)	0.014 (0.086)
10-14 Years as a Full Time Teacher	0.154 (0.116)	0.146 (0.115)	0.139 (0.115)	0.136 (0.115)	0.065 (0.099)
15-19 Years as a Full Time Teacher	0.031 (0.110)	0.029 (0.108)	0.007 (0.108)	-0.003 (0.108)	-0.085 (0.108)
Expects to Teach 1-3 more years	0.246 (0.154)	0.287* (0.152)	0.286* (0.154)	0.281* (0.154)	0.341* (0.175)
Expects to teach 4-6 more years	0.541** (0.158)	0.539** (0.158)	0.546** (0.159)	0.532** (0.160)	0.583** (0.180)
Expects to teach 6-10 more years	0.438** (0.138)	0.446** (0.141)	0.451** (0.141)	0.445** (0.140)	0.547** (0.178)
Expects to teach more than 10 years	0.502** (0.153)	0.496** (0.153)	0.514** (0.152)	0.504** (0.152)	0.600** (0.171)
Teachers Union	-0.061 (0.064)	-0.062 (0.064)	-0.054 (0.062)	-0.086 (0.063)	-0.054 (0.064)
Male	-0.104 (0.081)	-0.029 (0.083)	-0.023 (0.085)	-0.037 (0.083)	-0.047 (0.085)
Hispanic	-0.059 (0.109)	-0.072 (0.107)	-0.061 (0.109)	-0.082 (0.105)	-0.046 (0.101)
Black	0.201 (0.129)	0.170 (0.128)	0.166 (0.127)	0.077 (0.130)	0.106 (0.132)
Asian	0.180 (0.259)	0.226 (0.249)	0.142 (0.276)	0.109 (0.280)	0.244 (0.361)
Holds at least an MA	-0.073 (0.058)	-0.079 (0.057)	-0.073 (0.055)	-0.069 (0.055)	-0.059 (0.064)
Teaches FCAT subject/grade	-0.005 (0.068)	0.001 (0.067)	0.000 (0.066)	0.010 (0.066)	-0.009 (0.062)
Elementary School	-0.231 (0.144)	-0.256* (0.143)	-0.272* (0.143)	-0.330** (0.167)	-0.138 (0.265)
Middle School	-0.143 (0.133)	-0.134 (0.132)	-0.157 (0.135)	-0.192 (0.142)	-0.038 (0.212)
High School	-0.144 (0.140)	-0.126 (0.138)	-0.143 (0.140)	-0.115 (0.159)	-0.459 (0.294)
View of Principals	0.143** (0.035)	0.125** (0.034)	0.130** (0.033)	0.130** (0.035)	0.115** (0.034)
View of Other Teachers	-0.069 (0.058)	-0.071 (0.059)	-0.074 (0.059)	-0.058 (0.059)	-0.033 (0.053)
Self-Reported Efficacy Score		0.960** (0.369)	0.967** (0.370)	1.028** (0.371)	1.191** (0.354)
Self-Reported Efficacy Score Squared		-0.093** (0.044)	-0.095** (0.044)	-0.102** (0.044)	-0.123** (0.042)
Risk Seeking Behavior			0.015** (0.006)	0.014** (0.006)	0.012* (0.006)
Impatience			0.339** (0.147)	0.340** (0.146)	0.306* (0.161)
Impatience Squared			-0.007** (0.003)	-0.007** (0.003)	-0.006* (0.003)
Missing Risk Seeking			0.573** (0.276)	0.559* (0.291)	0.440* (0.267)
Missing Impatience			2.823 (1.806)	2.852 (1.790)	2.610 (1.957)

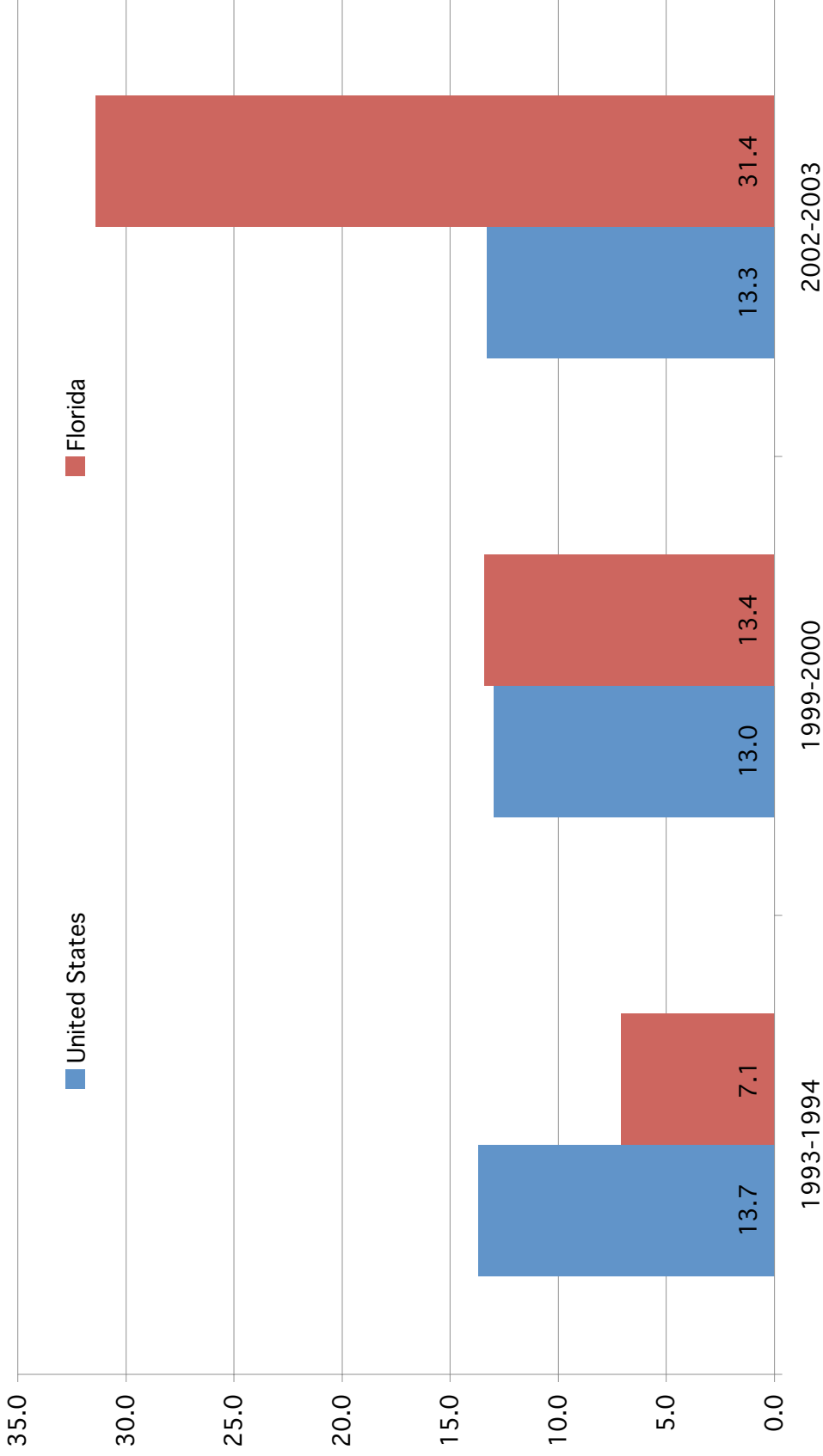
<i>School-Level Characteristics</i>					
Math/Reading Proficiency				0.003	
				(0.003)	
Enrollment/100				-0.003	
				(0.009)	
% of Black Students				0.007**	
				(0.003)	
% of Hispanic Students				0.005*	
				(0.002)	
Response Rate				-0.006	
				(0.305)	
Includes school fixed effects?	No	No	No	No	Yes
Mean (s.d.) of dependent variable					
N	1614	1614	1614	1614	1614
R2	0.034	0.047	0.061	0.067	

Notes: The outcome measure 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.

FIGURE I: PERCENT OF TEACHERS REPORTING BONUS PAYMENTS AS PART OF TOTAL COMPENSATION: UNITED STATES AND FLORIDA PUBLIC SCHOOLS



Source: National Center for Education Statistics' *Schools and Staffing Survey*, 1993-1994, 1999-2000, and 2003-2004
 Note: The numbers presented above are expressed in percentages of the total number of respondents

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