

Teacher Pay for Performance

Context, Status, and Direction

Pay for performance is poised to become more reality than simple rhetoric, but much work must be done to ensure these programs are effective.

By Matthew G. Springer and Catherine D. Gardner

It's hard to miss the news about pay for performance in the American K-12 public education system. For the past decade, Google News reports an average of 4,558 news stories per year on teacher pay for performance. This doesn't even begin to tally the countless blogs, tweets, and other popular information tools.

Financial investments in pay for performance programs and policies have also grown substantially. Florida, Minnesota, and Texas have allocated over \$550 million to incentive pay programs that reward teacher performance. Funding for the federally sponsored Teacher Incentive Fund (TIF) quadrupled in 2010, and the Obama Administration's 2011 budget request designated an additional \$950 million for a new Teacher and Leader Innovation Fund that would support the development and implementation of performance-oriented approaches to recruiting, retaining, and rewarding highly effective educators.

In spite of its near universal adoption, the single salary schedule has not been without detractors.

Perhaps more important than the direct allocation of dollars, current education reform efforts, including the Race to the Top program, put performance pay center stage. In some states, in order to get a piece of the coveted \$4.35 billion Race to the Top pie, state legislators met in special sessions to remove institutional barriers to judging teacher performance, retaining and rewarding their most effective practitioners, and counseling out the lowest performers. The largest portion of the 500-point Race to the Top rubric for grading state applications is pay for performance (U.S. Department of Education 2009).

Although policy makers and the media are paying more attention to performance pay, the concept itself isn't new. Discussions about pay for performance for teachers go back as early as 1867 and were part of almost every decade of the last century. Understanding some of the history of pay for performance helps put the current discussion in context.

A BRIEF HISTORY

In its earliest forms, teaching in the United States was a community affair. Schools in the 1800s were small, one-room buildings where students focused on the 3R's: reading, writing, and arithmetic. More than 77% of Americans lived in rural communities (Protsik 1995: 2).

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In the classroom, the requirements for teachers focused more on moral character and less on education. Many teachers, most of whom were women, were quite young and had only an elementary education themselves. Teaching was considered a temporary post until a woman married, when she was expected to dedicate herself to motherhood and house-keeping. Indeed, some schools mandated that female teachers retire upon marriage (Protsik 1995: 4).

Compensation systems reflected these early priorities. Many teachers were remunerated through a system called the *boarding round* or *room and board* compensation model, which meant that teachers moved into the home of a student for a week at a time, rotating among student homes throughout the school year. Families covered room and board and supervised the comings and goings of the teacher to ensure that she had the proper moral character to be a good role model for their children.

As the nation's economic foundation shifted from agriculture to industry, the purpose and role of schooling also shifted. Multi-room buildings where students were separated by age and ability slowly replaced one-room schoolhouses. As academic requirements and rigor intensified, so did standards for teachers and administrators. And, with new standards came a new approach to teacher pay known as the *grade-based* compensation model. Grade-based compensation was intended to reflect the level of skill needed to educate a child at his or her grade level, such as elementary or high school. High school teachers typically earned more than elementary teachers because it was believed that elementary students were easier to educate. Though a dramatic improvement from the boarding rounds model, the graded compensation model was still far from fair.

Most grade-based compensation policies, particularly those in large urban school systems, fostered gender inequities. Women were typically relegated to grammar schools, where they earned around one-half to one-quarter that of male teachers at the same school. Even if a female teacher managed to secure a high school post, high school principals frequently used a subjective performance evaluation of teachers, which further intensified the pay gap between men and women.

As the 20th century turned, however, pay practices began to reflect new modalities, including equalizing pay for women and reducing nepotism, which invariably favored white males. In 1921, Denver, Colo., and Des Moines, Iowa, successfully negotiated and introduced the *position-automatic* or *single salary* schedule for teachers. In this system, a teacher's salary was based on two criteria deemed most important: degree held and years of teaching experience. Endorsed by the National Education



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TABLE 1.
Examples of Teacher Compensation Reform

Career Ladders Popular in the 1980s and early 1990s, career ladders create different categories, or levels, that reward teachers with higher salaries. Each level is associated with increased mastery or competence. In most instances, career ladders require teachers to pass either formal or informal credentialing or to assume additional responsibilities in order to advance. Career ladders provide new roles with additional pay and responsibilities as teachers increase their knowledge and skills.

Knowledge- and Skills-Based Pay Knowledge- and skills-based pay rewards teachers for acquiring additional knowledge and skills thought to improve a teacher’s overall effectiveness. For instance, teachers may be rewarded above and beyond the traditional salary schedule increase for pursuing an advanced degree. Examples may include taking additional professional development coursework, pursuing dual certification, completing a teaching portfolio, or completing National Board for Professional Teaching Standards certification.

Pay for Performance Pay for performance, or merit pay, offers financial incentives to individual teachers, groups of teachers, or whole schools based on predetermined tasks related to measurable student achievement outcomes. Awards can be given for a multitude of reasons, including student performance, increased student attendance rates, graduation rates, dropout rates, classroom observations, and portfolio completion. Unlike knowledge- and skills-based pay, which rewards teachers for activities thought to correlate with increased effectiveness, pay for performance plans reward teachers for measurable outcomes of their effectiveness.

Hard-to-Staff Bonuses Hard-to-staff bonuses, or market-oriented compensation, reward teachers based on market factors, including teaching location and subject, and are characteristically a response to broader supply-and-demand considerations in a particular school, district, or state. The most prevalent forms are hard-to-staff school or subject and so-called combat pay. Hard-to-staff schools are commonly those that serve a high proportion of economically disadvantaged, minority, or low-achieving students and are generally in urban or remote rural areas. Hard-to-staff subjects are typically mathematics, science, and special education. They are identified as hard-to-staff by a relative dearth of qualified applicants. Hard-to-staff subjects can be based on individual school or district needs.

A common mechanism for awarding hard-to-staff bonuses is through recruitment and retention bonuses. Recruitment stipends are awarded to new teachers at a school and are used as a tool for influencing the teacher to accept a teaching position in the school. In some locations, recruitment stipends are awards for multiple years after a teacher accepts the new position (see, for instance, AISD REACH in Austin, Texas). Retention stipends are distributed to teachers who continue working in their position or school following the summer vacation. Retention stipends are generally thought to improve student achievement in hard-to-staff schools by decreasing the continual turnover and overabundance of novice teachers emblematic of these schools.

Association (NEA) in 1944, 97% of all schools had adopted the single salary schedule by 1950. By the 1999-00 school year, nearly 100% of teachers were paid according to the single salary schedule (Podgursky 2009).

A PERFECT STORM

In spite of its near universal adoption, the single salary schedule has not been without detractors. Efforts to reform teacher compensation, including

various attempts at implementing more performance- and market-oriented pay policies, have been nearly constant in the education policy cycle (see Table 1 for a summary of some of the more prominent types of teacher compensation reform). However, efforts at reforming teacher pay practices, like many reforms in the U.S. education system, failed to take root.

While stakeholders may be skeptical and ask, “Why now?” or think to themselves, “Here we go

again,” dismissing current reform efforts *carte blanche* misses an important point: Things are different now. Several of the key differences follow.

Data Systems and Measures of Effective Teaching

One of the most influential critiques of teacher pay for performance came in 1986, when Richard Murnane and David Cohen documented the experiences of six districts where performance pay had been in place for more than five years. According to the authors, performance monitoring — or measuring the output of teachers — was one reason why pay for performance failed.

Compared with other professionals, teacher performance is more difficult to measure in valid, reliable, and fair ways. For instance, a salesman can be measured by his total sales, and a doctor can bill according to her hours. But how do we measure student learning and attribute this learning to an individual teacher?

Today, the relevance of this argument may be waning. Many states and districts have developed sophisticated longitudinal data systems that permit matching administrative records on individual students and their teachers. With this have come more exact techniques that allow estimation of the contribution of a teacher to a student’s learning. In addition, research that seeks to develop and validate promising measures of effective teaching is gaining momentum.

As data systems and tools for collecting this information continue to be upgraded and the evaluative measures to assess teacher performance are advanced even further, the ability for education systems to measure the output of teachers could potentially rival those found in other sectors.

Teachers Matter

In addition to advances in data systems, several studies have quantified the importance of effective teaching on student learning, thereby focusing attention more squarely on developing strategies for improving the quality of the teacher workforce.

Using data collected as part of the Income Maintenance Experiment, a welfare reform experiment in the early 1970s in Gary, Ind., economist Eric Hanushek was among the first scholars to undertake a value-added analysis of teacher effectiveness. He found the most effective teachers in Gary produced 1.5 grade-level equivalents of annual achievement growth in their students while the least-effective teachers produced only .5 grade levels worth of growth (Hanushek 1992).

Similar conclusions have been reported in a number of other empirical studies. For example, a 1996 study authored by value-added pioneer William

Sanders reported a difference of 50 percentile points in student achievement between students who encountered three consecutive years of teachers at or above the 80th percentile of performance and those students who encountered three consecutive years of teachers in the bottom 20th percentile of performance (Sanders and Rivers 1996).

Finally, based on data from several Texas school districts, Hanushek and Steven Rivkin (2004) further highlighted the importance of effective teaching by concluding that if a student encounters an above-average teacher for five years in a row, that could overcome the achievement gap typically found between students qualifying for free or reduced-price lunches and those from higher-income backgrounds. Combined, these research findings have helped focus both education stakeholders and policy makers on the singular importance of teachers.

Inefficiencies and Rigidities in Pay Practices

Another reason pay for performance systems stand a better chance this time around is a matter of dollars. Simply put, the single salary pay schedule is riddled by inefficiencies. Most teachers in the United States’ 15,000 public school districts are paid based on years of experience and level of education (that is, the single salary schedule), both of which have been found to be only weakly correlated with student achievement (Goldhaber 2002; Hanushek, Kain, and Rivkin 1999). In other words, teachers are now paid according to criteria that researchers suggest have little connection to actual performance of teachers in the classroom.

What’s more, teacher compensation accounts for most of a school district’s operating budget. According to the U.S. Department of Education, school districts spent \$179 billion on salaries and \$50 billion on benefits for instructional personnel during the 2004-05 school year, accounting for around 60% of K-12 current expenditures and 90% of current instructional expenditures. This has led some to characterize the current pay practices as an extremely costly and inefficient use of resources.

Furthermore, in a 2009 report, Marguerite Roza and Raegen Miller addressed the importance of decoupling teacher salary from master’s degrees. The sheer amount of money spent on the master’s degree pay bump is staggering, particularly given the fact that about 90% of teachers’ master’s degrees are not subject specific and bear no relation to student achievement. While an education-specific master’s degree appears to be irrelevant in terms of teacher effectiveness, the financial incentives for earning a master’s degree are strong. Indeed, between 1997 and 2007, the education-specific master’s had the

highest growth rate of all master's degrees (Roza and Miller 2009).

In addition to simple dollars, research from the personnel economics literature adds an important perspective. More specifically, evidence suggests that pay for performance programs will tend to attract and retain individuals who are particularly good at the activities to which incentives are attached, and they will repel those who are not. That is, while incentives can raise the productivity of the typical employed worker, pay for performance systems can also raise the overall quality of the workforce simply by attracting more effective workers into the profession (Lazear 2003; Podgursky and Springer 2007).

Shifting Attitudes

Another reason pay for performance programs are poised to be more than a passing fad involves a shift in stakeholder attitudes. In many ways, pay for performance programs have been their own worst enemy. Poorly designed and ill-conceived first-generation attempts at implementation left teachers and their unions with decidedly negative views. These experiences left many reluctant to participate in newer programs and, more generally, stigmatized the performance pay movement as something teachers unwaveringly oppose.

In recent years, however, a growing number of studies on teacher attitudes toward compensation reform suggest teachers aren't necessarily as op-

TABLE 2.
Experimental and Quasi-Experimental Evaluations of Teacher Pay for Performance Programs

Program	Study Period	Sample
United States		
Project on Incentives in Teaching Nashville, Tenn.	2007 - 2009	147 treatment and 152 control teachers (grades 5-8).
Project on Team-Level Incentives in Teaching Round Rock, Texas	2009 - 2010	41 treatment and 41 control group teams (grades 6-8).
Recognizing Excellence in Academic Leadership Program Chicago, Ill.	2008 - 2011	32 Teacher Advancement Program (TAP) schools.
School-Wide Performance Bonus Program New York, N.Y.	2008 - 2009	191 treatment and 131 control group schools (elementary, middle, and K-8). More than 100,000 students in grades 3-8.
Texas Educator Excellence Grant Program	2007 - 2009	2,150 schools were eligible for treatment.
International		
International Christelijk Steunfonds Incentive Program Kenya	1998 - 1999	100 primary schools, 1,000+ teachers, 50,842 students.
Randomized Evaluation Project Andra Pradesh, India	2006 - 2008	300 schools and 68,000+ student observations.
Ministry of Education's School Performance Program Israel	1994 - 1997	62 schools (37 nonreligious, 18 religious, and 7 Arab schools).
Teacher-Incentive Experiment Israel	2001	4,109 students and 27 schools.
Carrera Magisterial Mexico	1998 - 2003	850,000+ classroom-year observations. 810 primary school teachers, 209 secondary school teachers.
	2000 - 2002	76,567 teachers and 27,123 schools.

posed to pay for performance systems as once thought. In Austin, Texas, for example, 74% of teachers thought their district's pay for performance program was a positive change in teacher pay practices (Burns, Gardner, and Meeuwssen 2009).

Moreover, many current programs have responded to critiques of earlier experiences. For instance, in many of the early programs, teachers competed against one another for bonus awards. As such, early studies, including the critique by Murnane and Cohen, cautioned that this competitive structure potentially reduced teacher collaboration and, as a consequence, may decrease the overall productivity of schools. While this may have been the case, as the education sector learns more about designing perform-

ance pay plans, several locations are experimenting with systems that don't place teachers or schools in direct competition for bonus awards. Performance pay programs may also reward teams of teachers or

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all personnel in a school, further reducing the risk of competition and decreased collegiality.

In addition to changes in educator attitudes, support of teacher pay for performance policies now transcends political boundaries (Goldhaber 2009; Hannaway and Rotherham 2008). Historically, Republicans led the charge for teacher pay reforms. In the 2008 presidential election, however, the three leading Democratic presidential candidates advocated for performance pay policies in education. Furthermore, other leaders, such as Rep. George Miller (D-Calif.), chairman of the House Education and Labor Committee, have been on the front lines in support of performance pay. Indeed, Miller recently noted that, "If we want our students to succeed, we have to begin giving our teachers the respect and resources they deserve. . . . This will require a seismic shift in the way we talk about and treat teachers, and it starts with [an] important investment in programs that reward teacher excellence" (Anderson 2009).

Finally, the nation's two leading teacher associations — the NEA and American Federation of Teachers (AFT) — have also augmented their position on teacher compensation reform in recent years. Traditionally adamantly opposed to market- and performance-oriented pay reforms, both unions, the AFT in particular, have participated in the design and implementation of several high-profile programs, including Denver's ProComp, Austin's REACH, and Nashville's Project on Incentives in Teaching. In fact, following the successful negotiation of New York City's School-Wide Performance Bonus Program in 2007, AFT president Randi Weingarten (then president of the New York City United Federation of Teachers) stated, "Rather than being pilloried as an obstacle. . . we created a program that may promote the collaboration and respect that are necessary for great schools. . . . We have taken a negative — individual merit pay — and come up with a positive alternative that makes it a plus for educators and kids" (Weingarten 2007).

Results

In progress

In progress

In progress

In progress

No effect

Modest, positive effect for high-stakes assessment. No effect on low-stakes assessment.

Modest, positive effect on high-stakes assessment (about 0.12 to 0.19 standard deviations after year one and 0.16 to 0.19 standard deviations after year two).

Modest, positive effect for average credit hours earned, average science credits earned, average test score, and proportion of students taking Israel's matriculation exam.

Modest, positive effect for number of exit exam credits earned in mathematics (increased 18%) and in reading (increased 17%).

No effect for primary school teachers; modest, positive effect for secondary school teachers (about 3% to 15% of standard deviation).

Small, positive effects (<10% of standard deviation).

WHAT'S NEXT?

Taken as a whole, pay for performance is now poised to become more reality than simple rhetoric. That said, moving forward deliberately and purposefully will be important. In particular, research must play a critical role. To date, the little research surrounding pay for performance paints a mixed picture (see Table 2), with many of the most rigorous studies still under way or having been conducted abroad.

Policy makers and education stakeholders at all levels would benefit from more unbiased assessments of teacher compensation reform programs and policies, as well as the effect of their various design components. For instance, should individual teachers or teams of teachers be rewarded, or perhaps a combination of both? Should the measure be based on student growth or attainment? What criteria should be included? Should it be based strictly on student test scores, or should other measures, like principal evaluations, be included? If other measures are included, what should be the weight of each element? Since the design of an incentive program can lead to dramatic effects on students, teachers, and administrators, we must take the lessons learned from these evaluations and continue to both evaluate and refine programs to maximize their effectiveness.

In addition to ongoing research and evaluation, data systems need continued development. Even though these systems at the state- and district-level have helped drive policy innovations around teacher compensation, they haven't been designed to inform high-stakes personnel decisions. Among the weaknesses are seemingly mundane errors, such as inaccurate course codes, to more significant errors, such as assigning the same unique identifier to multiple students. Many structural errors can also be found,



"You're wearing black caps and gowns because you'll be in mourning when you see the job market."

including systems that don't account for student mobility (both within and between schools) and too few data snapshots to accurately capture what's happening in schools and classrooms. When these systems are used to reward teachers, it's imperative they accurately capture what's happening in classrooms.

Related to the development of data systems, there needs to be a continued push for more accurate and reliable tools for assessing individual and team performance. As many teachers will attest, far more happens in a classroom than can be measured on a standardized assessment. And roughly 70% of educators don't instruct a course or a grade covered by a standardized assessment. Research is ongoing in this area and must be included in the design of pay for performance systems.

Balancing the interests of all stakeholders is crucial when designing and developing pay for performance systems. While stakeholder engagement and buy-in is critically important, the interests and preferences of individual actors may water down the power of the incentive. For example, a study of a pilot incentive pay program in Texas, in which multiple stakeholders were engaged in plan development, found that many schools chose to distribute relatively small awards across all school personnel, regardless of individual performance. The relatively weak incentive system didn't appear to induce any significant changes in teacher productivity (Taylor and Springer 2009).

Finally, we must stay focused on the bigger picture of schooling. Even if pay for performance programs and policies ultimately play an important role in reforming K-12 public schools, these reforms can't be implemented in a vacuum. Teacher pay alone will not improve the quality of teaching and, by extension, improve levels of student learning. Compensation reform is just one element to be implemented alongside reforms that retool resource allocation and deployment norms; teacher hiring, tenure, and dismissal practices; and the standards and assessments systems, among other areas. **K**

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