

# RESEARCH BRIEFS

*Brief #20*

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## What Do We Know About Merit Pay?

### A brief history of teacher pay

Teacher pay in the U.S. evolved from rural schools where compensation consisted primarily of room and board (1800-1890), to grade-based salaries tied to the level taught (1890-1920), to the single salary schedule, first implemented in 1921. These changes reflect the changing nature of schooling, which grew from small, one-room country schools that often provided just 8 years of education; to graded systems, when children were first organized by grade levels into geographically larger, consolidated districts; to highly organized, hierarchical K-12 systems responsible for the education of thousands of students.

The graded system saw pay that was differentiated, based on race, gender, and grade level. In Boston, in 1876, for example, male high school teachers earned from between \$1700 and \$4000 dollars, while women earned \$2000 maximum. At the grammar school level, women earned from \$600 to \$1200 with men making more than twice as much.<sup>1</sup>

In response to such disparity, Margaret Haley, organizer of the Chicago Teachers Federation, formed in 1897, called for standardized pay and improvements in working conditions. Her efforts started a national movement. In 1911, New York passed a law requiring equal pay for women, and, by 1925, 80 percent of cities had equal pay for female teachers. The single salary schedule, an expression of the equity movement, was first implemented in 1921 in Des Moines and Denver.

In 1944, the National Education Association issued a report suggesting that existing measures of teacher merit found with the old grade-based salary system were unreliable, furthering the advance of standardized salary schedules. By 1950, 97 percent of all school districts in the United States had adopted the single salary schedule.

### Advantages of the single salary schedule

The single salary schedule holds many advantages that led to its adoption throughout the United States.

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- **Fairness:** by eliminating differentiated pay among those teaching different grade levels, between men and women, and between minorities and others within a given school district, the schedule promoted pay equity and fairness within the profession.
- **Objectivity:** By eliminating subjective judgment about who is a good teacher, the single salary schedule allowed administrators and teachers to focus on instruction instead of personnel issues, and perceived injustices were minimized.
- **Ease of administration:** The salary schedule allowed for predictable funding year-to-year, and required minimal administrative effort to supervise.
- **Collegiality:** Because the pay system is based on objective criteria that all teachers can attain and understand, staff avoided pay-based disgruntlement.

The single salary schedule also encouraged scores of teachers to advance their education because pay was based in part on one's degree and coursework.

## Definition of merit pay/pay for performance

Merit pay and pay for performance are often used interchangeably. They are labels applied to pay systems that include a range of components—there is no single definition. The pay systems usually include evaluation as one component, and, today, there is growing pressure to include standardized test scores as a measure of teacher performance.

Merit pay for teachers is a system of compensation in which teachers who are “better” at their jobs (meaning they are more effective) are rewarded with higher compensation, although other forms of differentiated pay often are included. There are two basic systems: (1) those that reward teachers for what they do, and (2) those which reward teachers for what their students do. Many performance pay systems combine both these elements.

Pay systems that reward teachers for what they do include career ladders, where teachers earn more for increased responsibilities such as mentoring. Advances in skills and knowledge, such as National Board Certification, also are rewarded.

Pay systems that reward teachers for student outcomes might include test score and graduation rate benchmarks, which if met or exceeded trigger bonus pay.

Some pay for performance systems include one-time bonus arrangements that do not increase base pay and need to be met annually; others allow for increased base pay once performance measures are met. The challenge with any system of merit pay is to define

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what it means to be an effective teacher and then to measure that effectiveness in ways that are valid, reliable, and objective.

## **Rationales for merit pay**

Those promoting merit pay point out that the uniform salary schedule does not reward better teachers and believe that teaching will improve if schools introduce competitive pay models. Critics of the single salary schedule also argue that there is little connection between course work (credits that increase pay) and student achievement, or between experience (after the first 5 years) and student achievement. Therefore, critics maintain, the uniform salary schedule does not have incentives that are aligned with student achievement. As a result, other incentives are needed.

The private sector, however, rarely bases professional pay on strict quantitative measures or goals for individual employees. Bonus pay systems do exist, but they are of a different kind. In a thorough review of national employment surveys, economists found that only six percent of merit pay systems in the private sector were based on individual quantitative measures. Instead, bonuses often relate to a company's overall profitability, or general sales increases. Very few professional workers in the private sector have their pay based on a complex set of quantitative measures, but yet that kind of system is now promoted for teachers.<sup>2</sup>

## **The history of merit pay**

Merit pay for teachers is not a new idea. Researchers trace its origins back to England in the 1860s, although earlier accounts extend as far back as 1710. After a 30 year try, British schools abandoned merit pay by 1900 due to cheating scandals, cramming, the growing influence of the testing bureaucracy, and the extent to which teacher concern about financial awards and punishment were warping the educational system.<sup>3</sup>

Canada instituted a merit pay system in 1876 but dropped it by 1883, when public outcry opposed teaching to the test and the fact that students most likely to do well on tests were receiving more help than other students.

The first known merit pay system in the U.S. was implemented in 1908 in Newton, Massachusetts, but formal systems of pay for performance gained little national traction. In 1918 almost half of school districts surveyed suggested that teacher pay was based in part on "merit," a subjective evaluation that resulted in lower pay for women.

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In the late 1960s, President Nixon introduced “performance contracting,” which offered incentives to private firms to improve student achievement. By the early 1970s, over 150 school districts contracted with companies to deliver instruction, as the Nixon Administration initiated a vast privatization experiment in Texas and Arkansas.

None of these performance contracting experiments significantly improved instruction. After charges of corruption, teaching to the test, and a lack of results, the program was abandoned and the single salary schedule continued to dominate school districts throughout the U.S.<sup>4</sup>

In the 1960s, only 10 percent of districts around the country reported some form of merit pay, and by 1978 a national study of districts with more than 300 students found that only 4 percent based pay on student performance.<sup>5</sup>

The 1983 publication, *A Nation at Risk*, a Reagan Era critique that blamed the nation’s economic downturn on poor schooling, recommended increased pay for teachers and pay for performance as two strategies to improve the nation’s system of education.

A number of districts adopted pay for performance programs, including a nationally acclaimed system in Fairfax County, Virginia. The Fairfax experiment, however, only lasted a few years. A major study found that most merit pay plans are discontinued after about six years, due largely to problems with administering the program, bargaining issues, and a lack of funding.<sup>6</sup>

In the 1990s, the idea of merit pay once again resurfaced. Academics identified a new emphasis on educational *outputs* in school reform (instead of the traditional analysis of inputs such as spending or teacher qualifications) as one reason for this shift. A second factor was new research suggesting a strong link between teacher quality and student achievement. Advances in testing and statistical modeling also led some to suggest that we now have the science to measure teacher effectiveness in the form of “value added” gains (see *Research Brief #8*).

While these academic explanations for a renewed interest in merit pay are important, the role of powerful interest groups promoting market incentives in education cannot be underestimated. Merit pay has been tried repeatedly, but the systems never seem to make a difference and then generally disappear. Despite this failed history, calls for performance pay forge ahead.

The renowned historian David Tyack suggested that at different times in the past, educators were unduly influenced by the language of business, adopting corporate models

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of organization both as a strategy to block further criticism of the schools and as a way to adapt to new cultural environments that valued profit-making and efficiency above other qualities. Once again it appears that undue corporate influence is forcing changes in the schools.<sup>7</sup>

## **Pay for performance today**

Today, pay for performance or merit pay is a national trend, pushed by the federal government which, in 2008, established funds for incentives, including the use of test scores. Cities from Minneapolis to Denver, Toledo, Chicago, New York and San Antonio adopted performance pay systems. By 2008, Alaska, Arizona, Arkansas, Florida, Minnesota, North Carolina and Texas had systems that base teacher pay in part on performance. Other states are currently considering such legislation.<sup>8</sup>

The performance pay systems vary. Some are based more on evaluations than test scores. Florida mandates that 60 percent of a bonus be based on test scores. Arizona uses a career ladder as its model of pay for performance. Not all school districts in these states participate in performance pay systems. Only one-third of the school districts in Texas participate. In Minnesota, pay systems must be bargained locally. Some states provide bonuses to entire school districts, while others allow for individualized merit pay.

## **Problems with merit pay**

There are at least six important issues that arise with merit pay systems in general and with the use of test scores specifically as a measure of teacher performance.

### **1. No evidence that merit pay actually works**

The fact that merit pay systems did not improve student achievement historically is one important factor in their demise. Recently, a highly rigorous study of performance pay was undertaken in Tennessee. Hundreds of teachers agreed to receive significant bonuses for improved test scores, and were compared to teachers not receiving such bonuses. Researchers found *no difference* in student achievement between the two groups. A major study of pay incentives in New York City schools by RAND Corp. also determined that merit pay was ineffective. As a result, the city ended its pay for performance program in July 2011.<sup>9</sup>

### **2. Nature of teacher motivation is complex**

The fact that teachers on their own might want to improve student achievement is not considered by competitive pay models, which suggest instead that human behavior is

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primarily motivated by nominal cash incentives. A number of researchers suggest that this is a flawed assumption.

Dan Ariely, a behavioral economist at Duke University, found that people are much more motivated by a sense of purpose than by monetary incentives. Ariely has repeatedly demonstrated that idealism is more important to individuals than simple cash rewards.

Other behavior experts such as Daniel Pink, author of *Drive*, reinforce the idea that sense of purpose is a better motivator than monetary bonuses.

A keen observer of human behavior, the preeminent business consultant Edward Deming opposed merit pay because it was bad for corporations. By providing incentives to meet individual, short-term goals—instead of engaging in long-term thinking—pay for performance advances behavior that is good for an individual instead of the overall organization.<sup>10</sup> Deming developed strategies to promote and maintain high quality operations within complex systems.

Although teachers believe they are underpaid in general, they are more motivated by factors that help them succeed. This is why teachers consistently identify lack of support and working conditions as reasons for leaving the profession. In 2000, Public Agenda questioned more than 900 new teachers and almost as many college graduates who did not chose a career in education. The report found that working conditions and other factors were “significantly more important to most teachers and would be teachers” than monetary incentives.<sup>11</sup>

### **3. No clear definition of a good teacher**

If fifty individuals were asked to identify good teaching, they would describe many common qualities. These might include dedication, an ability to motivate and interest students, good communication skills, and a caring and respectful attitude toward children.

Pay for performance proponents suggest that it is possible to identify the most important qualities of good teaching, to measure them, to assign a numeric value to each, and then to place them into a model that generates a score for performance. They believe they can develop a single formula to define good teaching for all students in different environments.

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## 4. Difficult to administer

The act of measuring effectiveness must be cost-effective, both in time and resources. This means that even if it were possible to develop a perfect and objective (free of personal bias) measure of teacher effectiveness, it would not be of much value if the process of collecting, analyzing, and using data required administrators at the building and district levels to spend an inordinate amount of their time measuring and reporting teacher performance.

## 5. Hard to sustain

Funding is a persistent issue. In some instances, the number of teachers qualifying for rewards grew annually, thereby diminishing bonus dollar amounts, or preventing teachers who performed better than the prior year from receiving a bonus in year two. Long term sustainability of award systems also is problematic, with state legislatures and school districts often doing away with funding streams that grew too costly.

## 6. Good teaching is defined as changes in test scores through time

Standardized tests are more and more becoming the most important criteria used to measure the success of schools and teachers. This is because they are easy and cheap to administer, compared to the kind of detailed analysis needed to truly assess what we value in education.

Tests do not measure the full extent of what we want our children to know and do. Moreover, there are unintended consequences that arise from an over-reliance on test scores. These include narrowing of the curriculum, diminished student interest in drill and kill testing environments, and gaming, where districts do what they can to show improved test scores.<sup>12</sup>

Test scores are influenced by outside factors, such as student motivation, the mother's level of education, and the socioeconomic status of children. It is difficult if not impossible to measure "teacher effects" separate and apart from all the other factors that affect student learning.

Even "value added" testing cannot measure classroom effects, as some proponents claim. A study by RAND Corp. concluded that value added measurements are unable to discern or reliably identify the specific effects that teachers have on student learning, and similar findings have now been made by economists at UC Berkeley and elsewhere (see *Research Brief #8*). Despite this consensus within the scientific community, the move to tie teacher pay to test scores marches on.

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## Conclusion

Merit pay is a simple idea that has been tried repeatedly and does not work. Cash incentives do not motivate teachers to help students more than they already are. Test scores, moreover, are not a reliable measure of teacher effectiveness because too many factors outside the classroom affect results.

We could improve teacher pay by simply paying teachers more. Quality might be better improved by substantially increasing starting salaries and increasing entry level standards for the profession, selecting only top graduating candidates. Mentoring for new teachers and targeted, on-going professional development are also important components of any effort to improve teacher quality. As such, career ladders with progressive levels of responsibilities and demonstrated skills represent a viable alternative to merit pay.

## Endnotes

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<sup>1</sup> Jean Protsik, "History of Teacher Pay and Incentive Reforms," Consortium for Policy Research in Education, UW-Madison

<sup>2</sup> Richard Rothstein, "The Perils of Quantitative Performance Accountability," Economic Policy Institute, 2010.

<sup>3</sup> Donald B Gratz, "The Problem with Performance Pay," Educational Leadership, November 2009; Jean Protsik, "History of Teacher Pay and Incentive Reforms," Consortium for Policy Research in Education, UW-Madison.

<sup>4</sup> Carol Ascher, Performance Contracting: A Forgotten Experiment in School Privatization, *Phi Delta Kappan*, Vol. 77, 1996.

<sup>5</sup> Gratz, "The Problem with Performance Pay."

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<sup>6</sup> Richard Murnane and D.K. Cohen, "Merit pay and the evaluation problem: Why most merit pay plans fail," *Harvard Educational Review* 56 (1986).

<sup>7</sup> David Tyack, *The one best system: a history of American urban education*, 1974.

<sup>8</sup> *Education Week*, "Advancing Pay for Performance," January 10, 2008.

<sup>9</sup> "Teacher Pay for Performance: Experimental Evidence from the Project on Incentive in Teaching," Vanderbilt University, September, 2010; *Education Week*, "Study Leads to End of Merit Pay Program," July 20, 2011.

<sup>10</sup> Diane Ravitch, "Thoughts on the Failure of Merit Pay," *Education Week*, March 29, 2011.

<sup>11</sup> *Education Week*, September 17, 2003.

<sup>12</sup> Rothstein, "The Perils of Quantitative Performance Accountability."