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An Evaluation of the Proposed Performance-Based Pay Plan for Teachers in the D.C. Public Schools

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Abstract

In recent years, many school systems have begun experimenting with performance-based pay for teachers in order to improve student achievement and attract teachers to difficult-to-staff schools. The chancellor of the D.C. Public Schools, Michelle Rhee, has proposed introducing a pay for performance plan for teachers in the D.C. Public Schools. Her proposal has been the center of a great deal of controversy, with its critics claiming that it will be unfair to teachers and its advocates arguing that it will lead to much-needed gains in student achievement. The purpose of this project is to review the literature on pay for performance schemes and analyze the chancellor's proposed plan for the D.C. Public Schools. Ultimately, I will argue that although the research on the effectiveness of pay for performance schemes is inconclusive, the chancellor's plan seems to be well designed and has the potential to bring about gains in student achievement.

Introduction

"Merit pay can help to motivate people to high levels and attract more high achievers, showing that we do value teachers as much as we value the other professions we associate high achievement with. I also think that the more people are motivated and supported (professional development, etc.) to succeed at high levels, a snowball effect of change can begin. People will see how powerful a force a teacher is in impacting real change and forward movement; the more it happens on a district level, and the more people are rewarded for teaching well, the more our country's high achievers will consider teaching as an option." – Michelle Rhee[1]

Since taking over the District of Columbia Public Schools (DCPS) in 2007, Chancellor Michelle Rhee has proposed radically changing the way that teachers within DCPS are paid. Her proposal, which has been the subject of much debate, is to align pay with performance by tying teacher pay to elements such as student test scores and teacher evaluations. DCPS is currently negotiating Rhee's pay for performance proposal with the Washington Teachers' Union (WTU) in hopes of reaching an agreement with which both parties are satisfied.

The issue of pay for performance for teachers is, for good reason, highly contentious. Critics of pay for performance systems argue that such systems are inherently unfair to teachers and will result in paying different teachers within the same school different salaries for the same work. These critics also contend that pay for performance systems can be divisive and can destroy the morale of a school. Advocates of pay for performance, on the other hand, claim that it is an innovative approach to teacher compensation that can motivate teachers to achieve higher levels of performance and raise the average quality of teachers within a school system. These policymakers note that the current salary schedules of schools do not reward teachers for qualities that are associated with high effectiveness and productivity. By aligning pay with performance, advocates of pay for performance schemes argue that it is possible to bring about substantial positive changes to struggling school systems.

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[1] Rhee, M. Personal communication, March 5, 2009.

The purpose of this paper is to explore the literature on pay for performance schemes and analyze the effectiveness of such schemes. This paper will discuss the many issues surrounding pay for performance plans for schools and will assess the likelihood that Chancellor Rhee's proposed pay for performance plan will bring about positive changes to DCPS. Ultimately, this paper will argue that while one cannot be certain that a pay for performance scheme will be effective, Rhee's proposal has many strengths that have the potential to bring about gains in student achievement in DCPS. This paper will also discuss the weaknesses in Rhee's proposal that must be successfully addressed in order for the pay for performance scheme to have positive effects on DCPS.

Background

Nearly all school systems in the United States use salary schedules to determine teacher pay (Podgursky & Springer, 2007). Under such schemes, pay is based on a teacher's experience and education level, which are "two variables weakly correlated, at best, with student outcomes" (Podgursky & Springer, 2007). In a search to develop more cost-effective means of achieving the outcomes that schools desire, many school systems have experimented with non-traditional ways of paying teachers (Odden, 2004).

According to Odden (2004), research shows that providing pay raises for all teachers in a school or school system does not necessarily result in a measurable improvement in teacher quality. Odden (2004) argues that teacher pay increases should be market- or performance-based in order to achieve the school system's desired outcome of improving teacher quality. Because school systems do not have the resources to provide all teachers with significant pay raises, they

may experiment with pay for performance schemes in an effort to retain their best teachers in the most cost-effective manner possible.

While studies show that most teachers enter the teaching profession for the intrinsic satisfaction of working with children, low pay was the second most common reason cited for leaving the profession, following a lack of efficacy (Odden & Kelley, 1997, p. 72). Additionally, studies have shown that low pay causes substantial turnover rates among teachers as teachers search for jobs in districts with higher pay (Odden & Kelley, 1997, p. 72). For these reasons, new ways of compensating teachers may be necessary if schools wish to reduce teacher turnover and retain their best teachers.

The Purpose of Pay for Performance

Pay for performance is a "reward system that hinges on student outcomes attributed to a particular teacher or group of teachers rather than on 'inputs' such as skills or knowledge" (Podgursky & Springer, 2007). The purpose of pay for performance systems is to retain "good" teachers and provide all teachers with an incentive to produce greater effort (Atkinson, et al., 2008). In theory, a properly designed and implemented pay for performance scheme should be able to improve average teacher quality, as it is defined by the school system's pay for performance plan (Atkinson, et al., 2008).

One problem with the traditional single salary schedule is that it makes it difficult for pay and performance to align after hiring a new teacher (Podgursky & Springer, 2007). As a result, there are few monetary incentives for teachers to perform well or improve upon their performance once they earn tenure status, which often occurs after only three to five years of teaching (Podgursky & Springer, 2007; Podgursky, 2008). Pay for performance schemes, on the

other hand, are designed to "attract and retain individuals who are particularly good at the activity to which incentives are attached, and repel those who are not" (Podgursky & Springer, 2007).

According to Podgursky and Springer (2007), pay for performance schemes are designed to have two effects: a sorting effect and a motivation effect. The sorting effect is the idea that teachers who are good at the activity to which the incentives are attached should be attracted to the school system, while those who are not good at those particular activities will seek other employment outside of the school system (Podgursky & Springer, 2007). The motivation effect states that teachers will respond to incentives by producing greater effort than they otherwise would have produced in an effort to earn performance-based rewards (Podgursky & Springer, 2007). Podgursky and Springer (2007) contend that pay for performance schemes have substantial sorting effects that raise the overall quality of the workforce, in addition to motivation effects that raise the productivity of the individual teachers in the school system.

Performance-based pay schemes are also designed to align teacher incentives with the overall goals of the school and school system (Lavy, 2007). Consider, for example, a cost-benefit analysis of a student dropping out. With a traditional salary schedule, a teacher may only consider a student's individual costs and benefits of dropping out when working with a student whom she knows is considering dropping out of school (Lavy, 2007). If a pay for performance scheme incorporates the costs of dropouts to society in its reward structure, the teacher may be encouraged to work harder to persuade the student not to drop out of school (Lavy, 2007).

Another example of how a pay for performance system might align the school's goals with the teacher's incentives has to do with the assignment of homework. At times, a teacher may decide not to assign extra homework that he knows will have value to his students because

of the extra time that it will take him to grade the homework (Lavy, 2007). In a system with a pay for performance scheme in place, however, aligning incentives with educational goals may provide the incentive necessary to motivate the teacher to assign the extra homework (Lavy, 2007). In this way, the pay for performance incentive scheme can be used as a tool to align teachers' incentives with the goals of the school and school system.

Pay for performance schemes are based on the assumption that some teachers are more effective than others. This assumption can be quite controversial, especially among teachers' unions, because it suggests that gains, or lack of gains, in student achievement can and should be attributed to individual teachers, rather than to other exogenous factors. Research suggests that a wide variation in "teacher effects" on student achievement exists among teachers (Podgursky, 2008). In a study conducted in Tennessee, researchers found that "after three years of ineffective teachers, students score at levels less than half those of their peers with more effective teachers" (found in Koppich, 2008). Additionally, Hannaway and Rotherham (2008) note, "according to one estimate, the achievement gap between advantaged and disadvantaged students could be closed if disadvantaged students had a good teacher for just five years in a row." Thus, evidence exists to support the claim that some teachers are more effective than others (Podgursky, 2008; Koppich, 2008; Hannaway & Rotherham, 2008).

Some researchers suggest that potential gains in student achievement would be quite large if students with the teachers rated lowest for "teacher effectiveness" instead had the teachers rated highest for "teacher effectiveness" (Podgursky, 2008). Whether this variation in teacher effectiveness is due to inherent differences between teachers or to factors such as enthusiasm and motivation is unclear (Podgursky, 2008). Pay for performance schemes, however, address both of these potential causes of teacher effectiveness by attempting to

motivate all teachers to higher levels of performance, while, at the same time, attracting more effective teachers to the school system (Podgursky & Springer, 2007). Although it is unclear why variation in teacher effectiveness exists, this is clearly an issue of utmost importance; as Koppich (2008) states, "those with less effective teachers play a constant game of academic catch-up."

Another purpose of pay for performance schemes may be to attract teachers to urban schools. In large urban school districts, dozens of schools are required to use the same salary schedule (Podgursky, 2008). The teaching environment in these large school districts varies greatly across schools, which means that some schools will have much more pleasant teaching environments than others (Podgursky, 2008). As a result, it may be difficult to staff the schools that have unpleasant teaching environments (Podgursky, 2008).

Podgursky (2008) notes that teachers with seniority will often transfer from undesirable schools to more desirable locations, leaving these schools with teachers that have less seniority and education. Because the teachers who remain at these schools often have less education and experience, they receive lower salaries (Podgursky, 2008). Thus, Podgursky (2008) notes, "an unintended consequence of a district-wide salary schedule is lower spending per student in high-poverty schools." Additionally, research suggests that during their first few years of teaching, novice teachers have lower achievement gains than teachers who have already been teaching for several years (Podgursky, 2008). Students in high poverty schools will, therefore, have an automatic disadvantage compared to their counterparts at more desirable schools (Podgursky, 2008). Performance-based pay can provide one solution to this problem by compensating teachers for taking positions in difficult-to-staff schools (Podgursky, 2008).

The Theory behind Pay for Performance

Pay for performance schemes draw upon several theories of worker motivation, the most prominent of which is expectancy theory. According to Odden & Kelley (1997, p. 60), expectancy theory states that if three conditions are met, individuals will alter their behavior in a favorable way in response to the implementation of an incentive program. Those conditions are expectancy, line of sight, and valence (Odden & Kelley, 1997). Odden and Kelley (1997) note that in order to meet the criteria of expectancy:

> People must believe that they can accomplish the goal embodied in the incentive plan and that doing so is substantially within their control; that is, successful goal accomplishment must be seen as realistic, and workers must believe that they have the ability, skills, competencies, and authorities to accomplish the task being rewarded. (p. 60)

It is easy to understand why the condition of expectancy is necessary for a pay for performance scheme to achieve its desired outcome; if individuals do not believe that they can achieve the goals laid out in a plan, they will have no reason to work toward those goals.

The line of sight condition that Odden and Kelley (1997, p. 60) describe is based on the idea that an incentive program cannot be successful unless employees "perceive a connection between their individual effort and the receipt of a reward." The third condition, valence, requires that an incentive scheme involve rewards that employees value enough to put forth the extra effort that will be required for them to obtain the reward (Odden & Kelley, 1997, p. 60). Thus, in order for an incentive plan to be effective, employees must believe that they are capable of achieving the goals laid out in an incentive plan, be able to see a connection between their efforts and their ability to receive an award, and place a high enough value on the reward to put forth the extra effort needed to obtain it (Odden & Kelley, 1997, p. 60).

Another important theory to consider when designing a pay for performance scheme is contingency theory. The idea behind contingency theory is that in order for an incentive

program to be effective, it must be designed so that the incentives fit well with the organization's characteristics and strategies (Odden & Kelley, 1997, p. 59). For instance, if an organization requires a high degree of teamwork to meet its goals, incentives should be structured to reward teams, rather than individuals (Odden & Kelley, 1997, p. 59). When looking at pay for performance plans for teachers, one must consider that the nature of teaching involves both team and individual components. Therefore, contingency theory suggests that for an incentive program for teachers to be effective, opportunities for both individual and team rewards should exist.

Issues to Consider

Measurement

The design and implementation of pay for performance schemes can be quite complex. As a result, policymakers must consider many issues when designing such schemes. One of the most prominent issues that they must examine is that of determining how to measure performance. Belfield and Heywood (2008) note that performance-based pay schemes are difficult to implement if performance has too many dimensions to be easily measured or if the "wrong dimensions are the most easily observable." In the case of teachers, this is an incredibly important issue because teacher performance is much more difficult to measure than performance in many other professions (Podgursky & Springer, 2007).

Teacher performance is particularly difficult to measure because a teacher's "output," the education that they provide to students, has many components, many of which cannot be quantified (Podgursky & Springer, 2007). This matter is further complicated by the fact that

many factors beyond the teacher's control influence a student's achievement (Podgursky & Springer, 2007).

One major cause of concern with pay for performance schemes is that such schemes will attach incentives to certain measurable outcomes and that this will cause teachers to focus their efforts on achieving those outcomes, while neglecting other, equally important tasks (Podgursky & Springer, 2007). For example, teachers may spend more time on tested subject areas, such as reading and math, at the expense of untested areas, such as art and music (Lavy, 2007). Teachers may also put greater emphasis on the skills necessary to do well on standardized tests, rather than instilling qualities such as curiosity and creative thinking in their students (Lavy, 2007).

Podgursky and Springer (2007) contend, "[w]hen there is structural misalignment between an organization's overall mission and the activity to which incentives are attached, not surprisingly, employees tend to shift work toward the metered, rewarded activity, and away from other important activities." Schools have many purposes and goals besides those that are easily measured as part of pay for performance schemes (Dee & Keys, 2004). Consequently, systems that implement pay for performance schemes run a substantial risk of creating a misalignment between their many goals and the activities to which they attach incentives (Podgursky & Springer, 2007).

Evaluations of Teachers by Principals

Many pay for performance systems incorporate principal evaluations of teachers into the overall evaluation of teacher performance (Lavy, 2007). This practice raises questions about whether principals have the ability to consistently and accurately evaluate teacher performance (Lavy, 2007). Podgursky & Springer (2007) note that evidence suggests that performance

rewards based on satisfactory principal evaluations are associated with high student achievement gains and improvements in teacher effectiveness.

Research in the 1970s concluded that principal evaluations can reliably identify high and low performing teachers (Podgursky & Springer, 2007). However, studies indicate that principals are not able to distinguish between teachers in the middle of a distribution of teachers as well as they are able to distinguish between high and low performing teachers (Lavy, 2007). Jacob and Lefgren have demonstrated that principal evaluations are a statistically significant predictor of current student achievement (Podgursky & Springer, 2007).

It is important to note, however, that just because principals can properly identify adequate and inadequate teachers on a survey does not mean that they will continue to do so in a "high stakes environment" (Podgursky & Springer, 2007). In fact, a study of Chicago Public Schools by the New Teacher Project found that out of 36,000 teacher evaluations from 2003 to 2006, "only .3 percent of teachers were rated as unsatisfactory. Only 5 percent of schools assigned any unsatisfactory ratings over the three year period…[and] 79 percent of failing schools did not issue even a single unsatisfactory rating" (Hannaway & Rotherham, 2008). Thus, while the evidence suggests that principals may be *capable* of conducting useful evaluations, past experience demonstrates that teacher evaluations by principals are almost always positive, even in failing schools (Hannaway & Rotherham, 2008).

Despite the fact that principal evaluations could play an important role in determining whether or not a teacher is effective, the school systems that require the most principal observations only require that teachers with tenure be observed once a year for 45 minutes; shockingly, teachers without tenure are only observed for a total of around 135 minutes per year in these school systems, approximately .23 percent of their teaching time (Hannaway &

Rotherham, 2008). Thus, under traditional pay systems, principal evaluations occur very infrequently (Hannaway & Rotherham, 2008). For a pay for performance system to rely on principal evaluations of teachers as a substantial part of its compensation structure, school systems would need to require principals to spend much more time evaluating each teacher in order to ensure that principals have sufficient information upon which to base their evaluations of teachers. The effects of making this change could be profound in that principals would be forced to become much better informed about the effectiveness of their teachers and would face a significant increase in the demand for their time.

The original reason for implementing salary schedules for teachers was to eliminate principal biases, nepotism, and discrimination (Podgursky & Springer, 2007). Jacob and Lefgren argue that principals tend to discriminate against males and untenured faculty in their evaluations of teachers (Lavy, 2007). Thus, while principals may be capable of identifying high and low performing teachers, it is important to keep in mind that they may not be well equipped to distinguish between the performances of teachers that fall in the middle of a distribution of teacher performance and they may systematically discriminate against certain groups of teachers (Lavy, 2007; Podgursky & Springer, 2007).

Individual versus Group-Based Incentives

Another issue that policymakers should consider when designing pay for performance schemes is whether incentives should be group-based or individual-based. Odden and Kelley (1997, p. 52) contend that individual rewards are most appropriate when the individual has the ability to control his own work and can be easily evaluated based on that work. Group-based incentives, on the other hand, are more appropriate when "no single person is responsible for

meeting organizational goals, but the service or product relies heavily on the work of many persons and interactions among them" (Odden & Kelley, 1997, p. 52). Because schools require many interactions among teachers and the school's "service" depends upon the work of many individuals, Odden and Kelley (1997, p. 74) argue that team incentives are more appropriate in a school setting than individual incentives and are able to overcome many of the problems that individual incentives create.

Demoralization of Teachers

Closely related to the issue of individual versus group rewards is the issue of the potential for pay for performance plans to demoralize teachers. Many researchers argue that because individual-based performance pay goes against the team nature of teaching, it creates competition among teachers, which can be unhealthy and demoralizing for the school as a whole (Odden, 2000; Podgursky & Springer, 2007). If pay for performance schemes reduce cooperation among teachers by creating competition, schools run the risk of actually reducing school achievement, rather than improving it (Podgursky & Springer, 2007). It is important to note, however, that this demoralization effect may be reduced if there is no cap on the number of teachers that can receive a reward, since this would eliminate the need for teachers to compete against each other for rewards (Podgursky & Springer, 2007).

Teachers may also be demoralized because they feel like the evaluation system used in the pay for performance scheme is questioning their competence or is unfair (Lavy, 2007). Furthermore, financial incentives may undermine the intrinsic motivation that many teachers have for helping children (Lavy, 2007). Thus, pay for performance systems may demoralize teachers by taking away from the value that they place on helping children succeed (Lavy, 2007).

A corollary to this is that teachers may not be swayed by financial rewards because their primary motivation comes from helping children, rather than from making money (Lavy, 2007).

Review of Previous Pay for Performance Systems

Studies have found variations in achievement and test scores among students across classrooms and teachers, which suggests that teachers can have an effect on growth in student achievement over time (Podgursky & Springer, 2007). After the first two to three years of a teacher's career, variation in teacher effects on student achievement seem to be unrelated to traditional pay measures, such as the type of teaching certificate that a teacher holds, the teacher's level of education, or the teacher's years of experience (Podgurksy & Springer, 2007). Thus, Podgursky and Springer (2007) note, "any policy that can retain and sustain the performance of teachers in the upper tail of the distribution, and enhance the performance of or counsel out teachers in the lower tail, possesses potential for substantial impact on student growth."

Podgursky and Springer (2007) go on to say that if pay for performance systems were able to retain high performing teachers and encourage "low productivity teachers" to leave the school system, teacher turnover could become "part of a virtuous cycle of quality improvement, rather than a problem to be minimized." The question then becomes, does the evidence from previous pay for performance systems suggest that this is possible? As of yet, the evidence on this topic is not conclusive. An exploration of pay for performance schemes that have already been implemented can provide useful insight into the issues surrounding the effectiveness of such schemes.

School-based Incentive Programs

One type of pay for performance scheme involves rewarding an entire school for reaching certain goals, such as a reduction in drop out rates or an increase in student achievement, as measured by scores on standardized tests. Such pay for performance systems are designed to overcome many of the challenges of measuring the performance of individual teachers and of maintaining a culture of cooperation and teamwork, rather than of competition.

In a look at three school-based incentive programs within the United States, Lavy (2007) notes that for two of the three programs, studies show that teacher motivation and student outcomes improved after the implementation of an incentive program. Lavy cautions the reader, however, that these studies are inconclusive because they did not include control groups; as a result, causality could not be established (Lavy, 2007). In a study of an incentive program in South Carolina that included both school-based and individual rewards, evidence suggests that student achievement improved under the incentive program (Lavy, 2007). The evidence from this study is also inconclusive because the teachers in the program had to opt in to the program, a factor that indicates that "high performing" teachers may have self-selected to participate (Lavy, 2007). Thus, the achievement gains among students whose teachers chose to participate could be due, in part, to the fact that their teachers were already high performers (Lavy, 2007).

Lavy (2007) also describes the international evidence that pertains to the effectiveness of school-based incentive programs. A study of a school-based incentive program in Israel provides the strongest evidence in favor of pay for performance systems (Lavy, 2007). In this program, performance was measured based on the average number of credits per student, the percentage of students that received a matriculation diploma, and the school dropout rate (Lavy, 2007). Schools were ranked based on performance, with only the top schools winning

performance awards (Lavy, 2007). 75 percent of the awards went directly to teachers as salary bonuses, while the other 25 percent went to the improvement of faculty facilities in the schools (Lavy, 2007).

Lavy (2007) notes that the plan did not distinguish between individuals within a school, but rather, measured school performance as a whole (Lavy, 2007). In his analysis of the program, Lavy (2007) concluded that the program led to improvements on all three measures that were used in the program. Although Lavy (2007) notes that this is the strongest evidence in favor of pay for performance systems, he cautions the reader that it is unknown whether the success of the Israeli program can be replicated in the United States. Thus, while the evidence suggests that school-based pay for performance systems may be effective, conclusive evidence of their effectiveness within the United States does not yet exist.

Denver, Colorado

The public school system in Denver implemented the Professional Compensation System for Teachers (ProComp), which has been called "'the nation's most ambitious teacher pay plan'" (Koppich, 2008). The system, which originally began as a pilot program in 16 schools, was implemented throughout the Denver Public Schools in 2004 (Koppich, 2008). The plan was the result of extensive negotiations with the local teachers' union (Koppich, 2008). Brad Jupp, the chief negotiator of the teacher union, said that the Board of Education eventually "offered 'a trade-off our members couldn't refuse'" (Hannaway & Rotherham, 2008).

The pilot program, which began in 1999, allowed teachers to set measurable goals for themselves and then earn pay bonuses upon meeting those goals (Koppich, 2008). After several years, the pilot program was evaluated and researchers found that "teachers in the pilot schools

established and met increasingly rigorous student performance objectives and these results were reflected in higher student scores on Colorado's standardized student achievement test" (Koppich, 2008). Pleased with the positive results of the pilot program, the Denver Public Schools implemented the ProComp plan for the entire school system in 2004 (Koppich, 2008).

ProComp allowed teachers to earn extra pay for improving their knowledge and skills, for working in hard-to-staff schools or subjects, for obtaining satisfactory evaluations by administrators, and for increasing their students' test scores (Koppich, 2008). Teachers could choose in which, if any, of these incentive areas they wished to participate (Koppich, 2008) Although participation in ProComp is voluntary, about half of the teachers in the Denver Public Schools have chosen to participate in the incentive program (Koppich, 2008).

While the evidence from the pilot program suggests that ProComp improves student achievement, researchers have not yet evaluated the effect of the implementation of ProComp throughout the school system (Koppich, 2008). Thus, it is unclear whether the program is successful in reaching all of its goals (Koppich, 2008). For one goal of the program, attracting teachers to hard-to-staff schools, it is fairly clear that the program had its intended effect. Koppich (2008) notes, "preliminary data collected by the district suggest that the system has contributed to increasing Denver's supply of teachers willing to work in hard-to-staff and hard-to-serve schools." In 2005-06, schools classified as hard-to-staff had more than twice the number of applicants as they had openings; by 2007-08, they had eight times the number of applicants as they had openings for those schools (Koppich, 2008). Therefore, while it cannot yet be said that the program is a complete success, anecdotal evidence suggests that ProComp has been successful in achieving at least some of its goals (Koppich, 2008).

Researchers attribute much of the preliminary success of ProComp to the fact that performance is based on objectives that teachers choose and that the plan is "the result of 'persistence, tenacity, inventiveness, and a capacity for improvisation'" (Koppich, 2008). If nothing else, Denver's experiment with pay for performance makes a case for designing a system with the help of teachers that allows for flexibility and improvisation, rather than a "one-size-fits-all" approach.

Little Rock, Arkansas

Between 2004 and 2007, five elementary schools in Little Rock, Arkansas experimented with a pilot pay for performance program (Winters, et al., 2008). The program, which was called the Achievement Challenge Pilot Project (ACPP), had the goal of improving student achievement gains on a national standardized test by motivating faculty and staff to higher performance (Winters, et al., 2008). The only criterion upon which rewards were determined was student improvement on the Iowa Test of Basic Skills (Winters, et al., 2008). Teachers in the program received pay bonuses based on "average spring-to-spring achievement gains of students in the teacher's class on the composite score" of this test (Winters, et al., 2008).

Winters, Greene, Ritter, and Marsh (2008) evaluated the effectiveness of this program in three of the five elementary schools that participated. They found evidence that "students whose teachers were eligible for performance pay made substantially larger test score gains in math, reading, and language than students [whose teachers were not eligible for performance pay]" (Winters, et al., 2008). This suggests that the program was effective at achieving its goal of motivating teachers to produce higher student achievement gains on the Iowa Test of Basic Skills. Additionally, the researchers found that the performance pay rewards appeared to have

the greatest effect on the teachers who had previously been ineffective at improving their students' achievement (Winters, et al., 2008). The researchers note, "the most striking thing suggested by this analysis is that performance pay may have the greatest effect on improving the teachers who were previously the least effective at producing learning gains for students" (Winters, et al., 2008). This finding suggests that pay for performance systems could be effective at closing the achievement gap since minority students generally have less effective teachers than their non-minority counterparts (Winters, et al., 2008).

Although researchers were only able to evaluate the evidence from three schools during the Little Rock pilot program, the evidence from these schools suggests that pay for performance has the potential to motivate teachers to bring about significant gains in student achievement on standardized tests. Additionally, the research of Winters and his colleagues (2008) has important implications for the ability of pay for performance schemes to improve the performance of low-performing teachers. While this evidence suggests that pay for performance schemes may be quite useful, it is important to take note of the fact that the program defined performance very narrowly. While this preliminary evidence is helpful for understanding pay for performance systems, the narrow definition of performance in the Little Rock pilot program may mean that the student achievement gains in standardized test scores came at the expense of other, equally important areas of educational development.

Researchers who evaluated the Little Rock pay for performance experiment also found that teachers were not demoralized by the plan; in fact, teachers who participated in the performance-based pay scheme were more satisfied with their compensation structure than teachers in the comparison group (Barnett, et al., 2007). Additionally, the researchers note, "Of the potential negatives often associated with merit pay programs, we found that

counterproductive competition did not increase, that the school environment became more positive, and teachers did not view low-performing students as a burden" (Barnett, et al., 2007). This suggests that a well-designed pay for performance scheme may not have many of the negative effects that researchers have theorized that they will have (Barnett et al., 2007).

Teacher Unions and Pay for Performance Systems

Teacher unions generally oppose pay for performance systems because they view such systems as a threat to their ability to engage in collective bargaining (Lavy, 2007). Additionally, teacher unions are opposed to differentiation among members based on criteria other than years of experience and education level (Hannaway & Rotherham, 2008). Over 80 percent of public school teachers in the United States belong to either the NEA or the AFT, the nation's two largest teacher unions. Koppich (2008) notes that these two teacher unions are some of the most "ardent defenders of the standard single salary schedule" in the country. Thus, policymakers must consider the views of teacher unions when designing pay for performance systems (Koppich, 2008).

Generally, teacher unions express four main concerns about pay for performance schemes (Hannaway & Rotherham, 2008). Firstly, teacher unions are concerned about the fact that many subjects cannot be easily tested and, therefore, cannot be easily included in pay for performance schemes (Hannaway & Rotherham, 2008). Teacher unions note that about half of teachers either teach non-tested, specialized subjects or teach at the high school level, where it is often difficult to measure gains in student achievement for many subjects (Hannaway & Rotherham, 2008). Another concern of teacher unions is that performance incentives may lead to "unwanted instructional distortions" (Hannway & Rotherham, 2008). For example, teachers may focus their

efforts on tested subjects at the expense of other subjects or may focus on teaching testing skills at the expense of "higher order thinking skills" (Hannaway & Rotherham, 2008).

A third area of concern among teacher unions is that if there was a scarcity in funding for a pay for performance program, cooperation among teachers would be greatly threatened as teachers competed with each other for rewards (Hannaway & Rotherham, 2008). This could have disastrous consequences for the school environment (Hannaway & Rotherham, 2008). Finally, teacher unions express concern about the fundamental fairness of measuring teacher performance (Hannaway & Rotherham, 2008). Measures used to determine the effectiveness of teachers may not be accurate and may not take into account school characteristics or any unusual testing conditions that may occur on test day (Hannaway & Rotherham, 2008). For these reasons, teacher unions assert that schools should continue to use salary schedules to ensure that compensation systems are fair and create an environment that fosters educational achievement among students (Hannaway & Rotherham, 2008).

Pay for Performance and the District of Columbia Public Schools

Overview

Since taking over the District of Columbia Public Schools (DCPS) in 2007, Chancellor Michelle Rhee has taken many controversial approaches to reforming the failing school district. Rhee told *Time Magazine*, "We're in Washington, D.C., in the nation's capital…[a]nd yet the children of this city receive an education that every single citizen in this country should be embarrassed by" (Ripley, 2008). Rhee's proposed pay for performance plan for teachers in DCPS is certainly among the most controversial initiatives that Rhee has brought to DCPS.

Rhee's proposed plan would create two compensation tiers for teachers: a more traditional tier, known as the red tier, and a more aggressive tier, known as the green tier (Anonymous Interview 1).[2] Teachers currently in the system will be able to choose the tier in which they wish to participate (Anonymous Interview 1). New teachers who come to DCPS, however, will be required to participate in the more aggressive compensation tier (Anonymous Interview 1). Thus, by choosing to teach in DCPS, new teachers would essentially be "choosing" to participate in Chancellor Rhee's pay for performance scheme.

The more traditional tier would continue to utilize the traditional compensation structure for teachers, while adding across the board raises for teachers (Anonymous Interview 1). For teachers who choose to participate in the more aggressive tier, pay would rise very rapidly early in their careers if they met certain standards, which is much different than the traditional slow climb of teacher salaries (Anonymous Interview 1). Teachers choosing this option would have the potential to earn salaries as high as $100,000 per year as early as six or seven years into their teaching career at DCPS and even higher salaries after that (Anonymous Interview 1). Under the current salary schedule, new teachers in DCPS can only earn up to around $60,000 to $70,000 per year after six to seven years of teaching (Anonymous Interview 1).

The green track of Chancellor Rhee's proposed pay for performance plan would also eliminate salary differentials based on the educational degree of teachers (Anonymous Interview 1). The reason for this change is that research suggests that advanced degrees are not correlated with teacher effectiveness beyond the first several years of teaching (Anonymous Interview 1). Unlike teachers on the more traditional tier, teachers who choose to participate in the more

[2] The subjects of the interviews used in this paper remain anonymous because officials are not allowed to discuss the pay for performance proposal during the ongoing contract negotiations between DCPS and the Washington Teachers' Union.

aggressive tier would also have the opportunity to earn fairly significant pay bonuses (Anonymous Interview 1). These pay bonuses would be based on several factors, including student achievement growth over the course of the school year and observations (Anonymous Interview 1).

According to a DCPS official who was involved in designing this plan, the bonus opportunities for teachers on the green tier should not be viewed as the most important part of the pay plan; rather, these bonuses are only one piece of a larger strategy to create an innovative approach to teacher compensation (Anonymous Interview 1). This official suggested that increasing teachers' base pay and getting rid of salary differentials based on the degrees that teachers hold are at least as significant, if not more so, than the bonus opportunities for teachers on the green tier (Anonymous Interview 1).

One of the most controversial features of Chancellor Rhee's pay for performance plan is that teachers on the green track would be required to give up their tenure for one year, thus exposing them to the risk of being dismissed (Anonymous Interview 1). This feature distinguishes Rhee's pay for performance plan from the numerous other plans that have been implemented throughout the country by adding a different twist to the incentive structure for teachers. After giving up their tenure, teachers will then have to meet some threshold to earn it back (Anonymous Interview 1).

Analysis: Motivation and Sorting Effects

In analyzing Chancellor Rhee's pay for performance plan, the most important question that one must ask is whether or not the plan will work if it is implemented. The answer to this question is not simple. Firstly, one must decide how to determine whether or not the pay for

performance scheme is successful. Pay for performance schemes often have many goals, including higher student achievement on standardized tests, lower dropout rates, improved attendance rates, improved teacher "productivity," as well as any number of other goals. These schemes can also have negative effects, which must be weighed against any positive outcomes. Because no formula exists for creating an effective pay for performance plan, the issues of determining the goals of a pay for performance scheme, as well as determining whether it is likely to be successful, have proven to be quite controversial. Given that researchers have not yet come to many conclusions about the effectiveness of pay for performance plans, sufficient literature does not yet exist to accurately predict the effectiveness of a particular proposal.

When examining the proposed pay for performance plan for DCPS, one must ask whether it will produce the motivation and sorting effects that performance-based pay schemes intend to produce. For the motivation effect, it is fairly clear that if any DCPS teachers volunteer for the more aggressive pay tier, the potential for pay bonuses will likely lead to some sort of motivation effect among those teachers. It is important to note, however, that if the plan is not well designed and implemented, the motivation of these teachers may not be channeled into the types of efforts and activities that will produce higher student achievement or any of the other goals of the pay for performance scheme. Also, if current teachers do not choose to take part in the more innovative compensation tier, the motivation effect will be limited to new teachers who are required to take part in the performance-based pay tier.

Evidence from the Little Rock, Arkansas pay for performance scheme suggests that pay for performance schemes have the potential to motivate previously underperforming teachers to higher levels of performance (Winters, et al., 2008). This preliminary evidence has strong implications for the potential effectiveness of pay for performance schemes that are implemented

on a larger scale. If pay for performance schemes are successful in motivating underperforming teachers to bring about higher student achievement, such schemes could substantially increase student achievement. More evidence is needed on this subject before any conclusions can be drawn.

The sorting effect is a bit more complex. The idea behind the sorting effect is that with pay for performance schemes, effective teachers will be attracted to the school system and ineffective teachers will eventually be repelled from the school system (Podgursky & Springer, 2007). In this way, the sorting effect should lead to an increase in average teacher quality by essentially replacing ineffective teachers with effective teachers. Chancellor Rhee has added a new twist to the sorting effect by requiring teachers who choose the more aggressive pay tier to give up their tenure for one year.

Because teachers under the proposed pay for performance plan for DCPS can choose their compensation tier, the issues surrounding the sorting effect are not as straightforward as they may seem. If teachers were randomly assigned to the two compensation tiers, then there would certainly be both effective and ineffective teachers in each tier.[3] As a result, ineffective teachers in the green tier, which uses performance incentives, would likely leave DCPS, either because they are dismissed or because they realize that they are ill suited for teaching since they are not receiving any performance rewards.

In actuality, since teachers will not be randomly assigned to pay tiers, it is conceivable that ineffective teachers may recognize their ineffectiveness, or simply be risk-averse, and will choose the more traditional pay tier, rather than the performance-based pay tier. Because both

[3] This argument relies on the assumption that "effective" and "ineffective" teachers exist. While this point is debatable, for the purpose of this paper, the fact that variations in teacher effectiveness exist will be assumed.

tiers involve substantial pay increases, it would be a rational decision for risk-averse teachers, or teachers who know that they are only mediocre teachers, to keep their tenure and stay on the red tier, which would still involve a significant salary increase. Consequently, the sorting effect may not be as strong as expected, since ineffective teachers may simply choose not to participate in the pay for performance scheme. Of course, this notion would require that ineffective teachers be able to recognize that they are ineffective and make a rational decision based on that knowledge. While this may not always be the case, the same effect would occur if teachers who are unsure of their effectiveness simply chose to avoid risk and stay on the traditional compensation tier.

The sorting effect is also meant to attract effective teachers to a school system. With Chancellor Rhee's plan, there is ample opportunity for this to occur. The school system ought to be able to hire more effective teachers if for no other reason than that increased salaries should lead to an increase in applications for teaching positions within DCPS. Since all new teachers will be on the green tier, new teachers will likely be evaluated more intensely than they are currently evaluated. As a result, DCPS will have more criteria upon which to make a decision as to whether or not a teacher is effective before giving the teacher tenure. It is important to note that it is impossible to predict how effectively this process will occur once the pay for performance plan is put into place.

Analysis: Difficult-to-Staff Schools

One aspect of Chancellor Rhee's pay for performance plan that should have a positive effect on DCPS is that the plan allows teachers on the green tier who teach in high poverty schools or difficult-to-staff subject areas to receive additional pay bonuses (Anonymous

Interview 1). This should make it much easier to staff schools and subject areas that have traditionally been difficult to staff. Evidence from Denver's ProComp plan suggests that providing additional compensation for teachers who teach in difficult-to-staff schools can be extremely effective at attracting teachers to these positions (Koppich, 2008). Since school environments vary greatly across the many schools in DCPS, this provision of the pay for performance plan should help alleviate any problems that DCPS has with attracting teachers to certain schools or subject areas.

Analysis: Expectancy Theory

Expectancy theory states that if a performance-based pay plan is to be effective, employees must believe that they can achieve the goals of the plan, must perceive a connection between their efforts and the likelihood that they will receive a reward, and must value the reward enough to alter their behavior (Odden & Kelley, 1997, p. 60). According to this theory, in order for the chancellor's plan to be effective, teachers must perceive the goals of the plan to be obtainable. Due to the ongoing contract negotiations between DCPS and the Washington Teachers' Union, little information about the specifics of the pay for performance plan has been released. For this reason, it is difficult to assess whether the plan will include goals that teachers perceive to be obtainable. While this element of the proposal cannot be evaluated at this time, its importance cannot be understated since it has the potential to make or break the pay for performance scheme.

Analysis: Measurement of Performance

One of the most contentious issues surrounding pay for performance schemes is the issue of how performance will be measured. A DCPS official indicated that under the chancellor's plan, performance will be based on student test scores, observations of teachers by principals, and an assessment of whether or not teachers meet certain goals that they make at the beginning of each school year (Anonymous Interview 1). According to this official, there are many other components of performance that DCPS may consider including in its evaluations of teachers in the long run, such as the content knowledge of the teacher or student satisfaction (Anonymous Interview 1).

One concern about basing teacher compensation on student test scores is that such a scheme would essentially hold teachers responsible for student achievement, rather than the students themselves (Anonymous Interview 2). Critics of pay for performance schemes argue that school systems should make an effort to motivate students to improve their achievement, rather than placing all of this responsibility on teachers (Anonymous Interview 2). Critics also point out that many factors affecting student achievement are far beyond the control of teachers. For example, factors related to parent involvement, family conflict, and socio-economic status are often correlated with student achievement. Advocates of pay for performance schemes argue that teachers play a critical role in determining student achievement, as is evidenced by studies about variations in teacher effects on student achievement (Podgursky, 2008; Koppich, 2008; Hannaway & Rotherham, 2008). These advocates of pay for performance argue that aligning pay with performance is a common-sense way of working to improve teachers' incentives to boost their students' achievement.

Another problem with measuring teacher effectiveness is that many subject areas are not tested. DCPS plans to have principals work with teachers in non-tested subjects to develop goals for student achievement and then evaluate how successful teachers are in reaching those goals in order to determine if the teachers are eligible for performance rewards (Anonymous Interview 1). For example, a music teacher might set a goal that 80 percent of students be able to play a certain piece of music on their instruments by the end of the semester (Anonymous Interview 1). Evaluating teachers in this way would create ambitious, but reasonable, goals for teachers to work toward. A DCPS official noted that all teachers should be able to articulate the goals toward which they are working; evaluating teachers based on these goals makes sense when the goals are reasonable and reflect the overall goals of the teacher and school (Anonymous Interview 1). This official noted that since all teachers should have goals toward which they are working, evaluating teachers based upon these goals is reasonable as long as the goals are not overly ambitious (Anonymous Interview 1).

Another concern that many critics of pay for performance schemes cite is that tying pay to performance may cause teachers to "teach to the test," or focus on test-taking skills, rather than other important skills. This is an incredibly important concern, both with pay for performance schemes and with legislation such as No Child Left Behind. An official at DCPS expressed that tying pay to content standards is not necessarily a bad thing (Anonymous Interview 1). This official noted that content standards are in place because those are the things that school systems want teachers to teach; evaluating and compensating teachers based on how well they teach those specific concepts is, therefore, not necessarily a bad idea (Anonymous Interview 1). This official argued that as long as teachers teach the material in a rich way, rather than simply emphasizing test-taking skills, they are doing exactly what the school system wants

them to do by teaching the specific content that policymakers have decided is important (Anonymous Interview 1).

While this argument makes sense in theory, considerable concern remains that teachers will emphasize test-taking skills and concepts that are likely to be on tests at the expense of other content. Schools have many goals besides those that are easily tested. For example, schools value instilling curiosity, a love of learning, higher order reasoning skills, and positive character traits in students. Instituting pay for performance schemes creates a significant risk that teachers will avoid working to improve these qualities among students so that they can focus on increasing the likelihood that their students will perform well on test day. While pay for performance schemes are promising tools for improving student achievement, significant literature does not yet exist to address the topic of whether pay for performance schemes result in "teaching to the test" and other instructional distortions.

Analysis: Evaluations of Teachers

Another issue that DCPS must address is how to ensure that observations and evaluations of teacher performance are fair. While the research indicates that principals are capable of identifying high and low performers, principals have proven to be less capable of distinguishing between teachers that fall in the middle of a distribution of teachers (Lavy, 2007). Chancellor Rhee has indicated that the school system hopes to make use of "impartial master teachers" to evaluate teachers in an unbiased manner (Turque, 2009). It will be important for DCPS to put measures into place to prevent these "impartial" evaluators from evaluating teachers in an arbitrary or discriminatory way. These evaluators should also undergo rigorous training to ensure that they are capable of accurately evaluating teachers.

DCPS is currently in the process of overhauling its evaluation system for teachers (Turque, 2009). Many people fear that Rhee will use the new evaluation system to identify and fire underperforming teachers (Turque, 2009). Turque (2009) notes, "[n]either side is happy with the current teacher evaluation system, which involves a series of classroom observations by principals, who often have neither the time nor the expertise in subject matter to render a fair judgment on a teacher's effectiveness." The new system should address many of these concerns by providing more opportunities for teachers to be observed by professionals who are trained to conduct impartial evaluations (Turque, 2009). While the new evaluation system may ultimately be more effective than the current system, questions remain about how fairly teachers will be evaluated. The original reason for implementing salary schedules was to eliminate principal bias in determining teacher compensation. Taking away salary schedules exposes teachers to the risk that they will be unfairly or arbitrarily evaluated, which is a very serious matter for teachers.

Analysis: Competition and Demoralization of Teachers

Much of the literature on pay for performance schemes argues that team-based incentives are more appropriate for teachers than individual incentives (Odden & Kelley, 1997). Researchers make the case that team-based incentives will prevent excessive competition between teachers and will reduce the chance that pay for performance plans result in the demoralization of teachers (Odden & Kelley, 1997). The pay for performance plan for DCPS does not currently incorporate a team-based incentive component (Anonymous Interview 1). Instead, DCPS has a bonus program based on school-wide performance that is currently in place, which is called Together Everyone Achieves More (TEAM) (Anonymous Interview 1).

If the TEAM program is viewed as a supplement to the pay for performance plan, one could argue that DCPS has adequately addressed the issues surrounding individual versus team-based rewards. The TEAM program, which has provided approximately $1.5 million in rewards to schools, is clearly a separate program from the pay for performance proposal and will most likely be viewed as such. As a result, it may not prevent competition and demoralization of teachers since the pay for performance program that is currently being considered will be based entirely on individual performance (Anonymous Interview 1). Consequently, the pay for performance plan may lead to some competition among teachers as teachers feel a pressure to compete with and outperform their coworkers.

Evidence from the Little Rock pay for performance scheme suggests that pay for performance schemes do not necessarily result in competition and the demoralization of teachers (Barnett, et al., 2007). In fact, researchers note that the Little Rock pay for performance scheme seems to have had a positive effect on the school environment, rather than a negative effect (Barnett, et al., 2007). Thus, while conventional wisdom suggests that individual incentives will increase competition, evidence from one individual-based performance pay scheme suggests otherwise.

No matter how well designed Chancellor Rhee's pay for performance plan may be, it still has the potential to demoralize teachers by undermining the intrinsic value that teachers place on teaching. Given that current DCPS teachers will not be required to participate in the pay for performance scheme, this effect should be minimal among current teachers since the teachers who self-select for the program may be less likely to believe that attaching financial incentives to student achievement undermines the intrinsic value of teaching. New teachers who do not have a choice about participating in the pay for performance scheme may find that the pay for

performance scheme diminishes their intrinsic satisfaction of working with children. If this occurs, the demoralization of teachers could pose a significant problem for DCPS.

Final Analysis

The evidence from previous pay for performance schemes suggests that such schemes have the potential to bring about positive gains in student achievement and other positive effects for schools. According to Chancellor Rhee, the more we improve teacher compensation, "the more our country's high achievers will consider teaching as an option" (Rhee, M. Personal communication. March 5, 2009). Thus, pay for performance schemes may completely reshape the way that the teaching profession is viewed in our society by attracting more people to the profession. The preliminary evidence on pay for performance schemes comes with a strong cautionary note because the long-term effects of these schemes are unknown. Chancellor Rhee's plan appears to be well designed in many respects. Until it is implemented and tested, its effectiveness will remain unknown.

A major strength of the pay for performance plan for DCPS is that it will allow teachers to earn significantly higher salaries fairly early in their teaching careers, which should attract teachers to DCPS. The implementation of pay for performance also has the potential to improve the motivation levels of teachers within DCPS, as it did among teachers in Little Rock, Arkansas. As higher pay levels attract more teachers to DCPS, a sorting effect should occur in which ineffective teachers are replaced by effective teachers, raising average teacher quality within the school system. Finally, the pay for performance plan should be successful in attracting teachers to difficult-to-staff schools and subject areas. When these elements are combined with a new,

and hopefully better, evaluation system for teachers, administrators will have better tools with which to evaluate and reward teachers.

One flaw of the pay for performance proposal is that it requires teachers opting to participate in the green tier to give up their tenure for one year. The purpose of including this requirement is clearly to allow schools to dismiss teachers that are considered to be underperformers. This element of the proposal could be disastrous for the morale of teachers. While the effects of this element cannot be accurately predicted, the dismissal of teachers after they give up tenure will certainly cause quite an uproar among teachers and may even undermine the effectiveness of the entire pay for performance proposal. While this would be the worst-case scenario, it is not entirely unrealistic.

Another potential problem with the DCPS pay for performance proposal is that it does not include group-based rewards, which may lead to an increase in competition among teachers. Other areas of concern involve the development of clear, obtainable goals for teachers, the measurement of teacher effectiveness, and the creation of protections against unfair or arbitrary evaluations. These are serious issues that must be successfully addressed in order for the pay for performance proposal to bring about gains in student achievement.

Administrators must also work to ensure that instructional distortions do not occur as teachers "teach to the test." As noted above, there can be clear benefits to having teachers work toward teaching specific content to students; as long as teachers do so without endlessly drilling students on test-taking strategies, this may not be a major problem for DCPS. If, however, instructional distortions lead to an overemphasis of some content and skills at the expense of teaching other content and skills, the pay for performance plan will create many problems in the long run. Thus, while the plan has great potential for bringing about positive changes in DCPS,

there are certainly many elements of the plan that could undermine its effectiveness. Only time will tell whether the plan is capable of accomplishing its goals.

Alternatives to Pay for Performance

George Parker, the president of the Washington Teachers' Union, has argued that pay for performance is not a panacea for solving the problems within D.C. Public Schools (Parker, 2009). Instead, he argues that Chancellor Rhee needs a more comprehensive plan for turning DCPS around (Parker, 2009). Critics of the pay for performance proposal note that Rhee should investigate why many teachers are unable to bring about advances in student achievement and then address those problems (Anonymous Interview 2). For example, many teachers may benefit from improved professional development opportunities and many students may be having trouble in school due to community factors that are affecting their ability to concentrate and stay motivated to perform well (Anonymous Interview 2). Taking a closer look at these issues and coming up with a comprehensive plan for solving these problems may be much more successful than the implementation of pay for performance at raising student achievement in the long run.

Another alternative to pay for performance would be to create an "evidence-based" salary schedule, in which salaries are not tied to the attainment of advanced degrees, but rather, are tied to "characteristics associated with greater effectiveness" (Vigdor, 2008). Vigdor (2008) argues that school systems should be "rewarding younger members of a profession for their rapid early gains in expertise" by aligning salary schedules with the gains in effectiveness that teachers have early in their careers. Vigdor makes an excellent case that such an approach would be cost-effective and would attract more people to the teaching profession.

Another alternative to the implementation of pay for performance is to simply observe and evaluate teachers more rigorously and make staffing decisions based on that information. If school systems did not extend tenure to teachers so early in their careers, they could make use of more rigorous evaluations to determine whether or not teachers are likely to be effective. While this type of scheme would not lure new teachers into a school system with the promise of pay bonuses, it may still have the potential to raise average teacher quality in the long run by ensuring that teachers within a school system are effective. Each of these alternatives could be considered as part of an overall strategy to improve DCPS.

Conclusion

"Setting up an effective performance-related pay system is not a one-time task, but an ongoing effort. Even with the best preparation, initial implementation is likely to be problematic. Measurement will have a random component. Teachers will find ways to game the system. Any initial system will almost certainly be flawed. But if the effort is seen as an ongoing one, it should be possible to make progress gradually in addressing each of the challenges…Eventually incentives will be developed that motivate the desired teaching behaviors and will be perceived by teachers as fair and accurate" (Lavy, 2007)

It is impossible to predict whether a pay for performance scheme will bring about significant gains in student achievement. While Chancellor Rhee's plan for the D.C. Public Schools has the potential to have positive effects on student achievement and teacher motivation, many problems could arise that will undermine the effectiveness of the plan. As Lavy (2007) notes above, this effort must be seen as "an ongoing one." No plan will be perfect, but that does not mean that a plan cannot have any positive effects. The chancellor's pay for performance plan, if carefully implemented, could bring substantial improvements to DCPS and to the teaching profession in general. If the plan is unsuccessful, one can only hope that the

administration will learn from its mistakes and make another attempt at developing a comprehensive plan to improve the public schools in D.C.

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