# PERFORMANCE PAY SYSTEM PREFERENCES OF STUDENTS PREPARING TO BE TEACHERS

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**Abstract**

This study explored the potential acceptability of performance pay to new teachers by investigating attitudes toward performance pay of students preparing to be teachers. Focus groups and a survey of students preparing to be teachers at a large U.S. university were conducted. Most students expressed a preference for some form of performance pay and tended to prefer pay based on individual performance or pay for knowledge and skill development instead of pay based on school performance. Personality traits and work values were not related to preferences for different performance pay approaches or performance pay in general. These results suggest that teachers' experiences rather than personality or work values may be the dominant influences on attitudes toward performance pay. This implies that beginning teachers may view performance pay more favorably than their more experienced colleagues, suggesting a strategy of applying performance pay to new teachers only.

## 1. INTRODUCTION

Performance pay for K–12 teachers is currently undergoing one of its periodic revivals. A range of educational policy makers, academics, reformers, and pundits (e.g., Hess 2004; Hunt 2004; Teaching Commission 2004) have championed the concept. The U.S. Department of Education is seeking to give $99 million to states or districts willing to pursue performance pay innovations in low-performing schools. The states of Texas, Florida, and Alaska have joined Minnesota, North Carolina, and Arizona in promoting the concept (McNeil 2006). This wave of interest follows one that began in the 1980s, aroused in part by the famous *A Nation at Risk* report (Timar 1992), which led to advocacy of interventions such as merit pay (Hartry, Greiner, and Ashford 1994) and career ladders (Brandt 1990).

During both waves, it has been argued that differentiating teacher pay based on performance would improve teacher motivation, attract and retain more highly skilled teachers, and be a more efficient use of the education dollar. There is substantial evidence from other occupations that performance pay programs do contribute to improved performance of individuals or organizations (Mitchell, Lewin, and Lawler 1990; Heneman and Gresham 1998; Jenkins et al. 1998). Performance-based pay seems a plausible way both to motivate teachers to direct effort at performance goals and to attract and retain teachers who are high performers. The importance of this second effect of performance pay—attracting and retaining high-performing teachers—is important and at times overlooked. Performance pay helps organizations direct scarce financial resources toward retaining high performers and, by limiting the pay of poorer performers, may encourage them to leave. In contrast, the current teacher pay system may encourage high-performing teachers to leave districts with more difficult students or poorer working conditions. Under the current pay regime, one of the few ways in which high-ability, high-performing teachers can obtain additional compensation for their higher skill and performance is by being hired by a district that pays a higher base salary and/or offers better working conditions. This would tend to concentrate higher-performing teachers in districts with higher pay and better working conditions. A performance pay system might give districts with less desirable working conditions a better chance to hold onto their high-performing teachers.

Though there may be advantages to performance pay, teachers have not rushed to embrace the concept. The so-called single salary schedule remains almost universal as the method of setting teacher salaries in public school districts. In 2000, the National Education Association's constituent assembly rejected a resolution supporting experimentation with new forms of pay. In May 2002, Cincinnati (Ohio) teachers overwhelmingly rejected a new pay system that would have linked base pay rates to evaluated teacher performance.

While experimentation continues to take place—most notably in the Denver, Colorado, school district (see http://www.DenverProComp.org/) and among the approximately thirty schools and two districts using the Milken Foundation's teacher compensation design (see http://www.mff.org/tap/tap.taf)—there does not appear to be a groundswell of interest on the part of teachers in changing from the traditional pay system based on seniority and educational attainment to one based primarily on performance.

There are a number of reasons teachers might be unenthusiastic about, if not opposed to, performance pay. Though a comprehensive model of the determinants of teachers' attitudes toward pay systems has not yet been developed, studies of other types of employees have found that four broad types of influences operate:

1. *Employee characteristics*, such as age, ability, personality traits, and values (Turban and Keon 1993; Cable and Judge 1994; Mamman 1997; Kuhn and Yockey 2003);
2. *Design and implementation of the system*, including how directly effort can be linked to the performance rewarded (St-Onge 2000), how consistently pay system policies are followed, whether the procedures are viewed as fair, and whether the program is adequately funded (Miceli et al. 1991);
3. *Employee beliefs about how the organization works*, which influence attitudes such as trust in decision makers that in turn influence attitudes toward performance pay systems (St-Onge 2000; Siegall and Worth 2001); and
4. *The outcome* of a particular type of pay system for the employee (Miceli et al. 1991).

Note that some of these influences (e.g., system design) are under the control of organizations, whereas others (e.g., personality and values) are not.

Applying this typology, we might consider whether teachers' attitudes toward performance pay are due to their personality traits and values. People who become teachers may have values or characteristics that make them uninterested in or even uncomfortable with performance pay. People attracted to teaching may be less interested in financial rewards at the margin. Since most students going into the field already know it is a low-paid occupation, they are not likely to put as high a value on pay as students going into more highly paid occupations. Studies by Bradley (1983) and Young (1995) support the assertion that students preparing to be teachers do not put a high value on pay. Further, some have suggested that teachers are likely to be harmony seeking and conflict avoiding (e.g., Sears, Kennedy, and Kaye 1997), which may make performance pay unattractive to them, given the differentiation inherent in

such systems. Similarly, teachers and those preparing to be teachers may be risk averse (Davis 1994; Wagner 2001) and therefore prefer the certainty of the traditional pay schedule.

Several system design and implementation features could negatively affect teacher attitudes. Though few teachers have experienced a performance pay system, most have experienced the measurement of teaching performance. The literature on teacher performance evaluation tends to support teacher concerns about pay increases based on judgments about performance by principals or other administrators. Medley and Coker's (1987) classic study of the relationship between performance evaluation ratings of teachers and the achievement of those teachers' students concluded that the accuracy of principal judgment was low.[1] After a qualitative review of the literature, Peterson (2000) concluded that principals are not accurate evaluators of teacher performance and that both teachers and administrators have little confidence in performance evaluation as a process. Not surprisingly, one frequently cited reason for teacher opposition to performance pay is the difficulty of accurately evaluating teacher performance. Murnane and Cohen (1986) have provided a good discussion of how the difficulty of assessing performance may limit the motivational impact of performance pay.

The degree to which teachers believe they can influence the performance to be rewarded is also important and may be influenced by pay program design and teaching experiences. Designs such as school-based performance awards (a bonus paid to all teachers in a school when preset school-level performance goals are met) and knowledge- and skill-based pay (base pay increases determined by the acquisition of relevant knowledge and skills as demonstrated in the classroom; see Odden and Kelley 2002) are likely to be perceived differently as to the degree to which rewarded performance is under the teachers' control. One might expect teachers to perceive that they have the most control over the development of their own knowledge and skills, and so they would favor performance pay systems based on knowledge and skill over systems that base rewards on meeting schoolwide goals. Teachers might prefer to be rewarded based on the performance of their particular students (e.g., based on the classroom average learning gain or value added) rather than their school's performance because they have more influence on the former. On the other hand, teachers' experience may suggest to them that student achievement is not easily separable into the contributions of

1. Milanowski, Kimball, and Odden (2005) present some evidence that better designed and implemented evaluation systems may yield ratings that have a stronger relationship to student learning than that found by Medley and Coker (1987). But these systems appear to be the exception rather than a common feature of teachers' experience.

individual teachers, so they may be more comfortable with a group basis for performance pay. Teachers' experiences may also convince them that they have little control over student outcomes, or even their own classroom performance, due to frequently changing reform programs, tests, and curricula; uninvolved parents; and apathetic or disadvantaged students.

Teachers may also have relatively little confidence that any type of performance pay system would be implemented consistently or have staying power. The "reform du jour" syndrome, the relatively short tenure of urban superintendents, and the experience of recurrent budget crises may prompt teachers to wonder how long any performance pay system is likely to last. Research on school-based performance awards (teacher bonuses) in Kentucky found that many teachers simply did not believe that the state would continue to fund or pay performance bonuses, even if schools achieved the performance goals the state set (Kelley, Heneman, and Milanowski 2002). Teachers may also have little trust in district decision makers. Urban teachers seem to harbor considerable distrust toward both their principals and the central administration, which would likely reduce the attractiveness of pay systems allowing management discretion in setting goals or judging performance.

Teachers are also likely to have concerns about whether they will fare better or worse under a performance pay system. Those employed more than five to seven years under the current seniority-based system may regard future seniority-based increases as deferred compensation. Given the perception that starting salaries for teaching are lower than those for other occupations requiring a college degree, teachers may regard the pay increases they receive near the end of their careers as a recompense for their relatively low initial salaries. Whether or not discounted lifetime earnings streams are actually comparable to what teachers might have earned in another occupation, once teachers have put in several years they may perceive sunk costs (in the form of lost income) and want the certainty that they will receive a future payoff in the form of an automatic (seniority-based rather than performance-based) progression to the top of the pay schedule.

The above discussion suggests that experienced teachers may be more likely to have negative attitudes toward performance pay, implying that states and school districts may want to consider applying such systems only to newly hired teachers. New teachers, who have not yet experienced the subjectivity of evaluation and the instability of programs and funding, and who have not become accustomed to the traditional pay schedule, might be more accepting of performance-based pay. Some evidence that less-experienced teachers may be more favorable toward performance pay was provided by a Public Agenda survey of new teachers (those with five years of experience or less), which found that 69 percent supported performance pay (Farkas, Johnson,

and Foleno 2000). In the case of Denver's performance pay system, only newly hired teachers would be required to participate; experienced teachers would be given the option of joining. This strategy might result over time in sustained implementation of performance pay systems, as experienced teachers paid under the current system are replaced with new teachers under performance pay. (Of course, this presupposes that states or districts can effectively implement systems that avoid encouraging negative attitudes, a subject addressed later in the article.) However, if people who become teachers have values or personality traits that make them uninterested in or even uncomfortable with performance pay, then even beginning teachers may be unlikely to be interested in performance pay or to support changes to the current system. And districts that require performance pay for new teachers may be at a competitive disadvantage in attracting them.

## 2. RESEARCH QUESTIONS

To explore whether new teachers are likely to be predisposed against performance pay even before experience on the job, the preferences of students preparing to be teachers for various performance pay systems were investigated. This study also explored the role of personality and work values in these preferences. The study was guided by three research questions:

1. Do students preparing to be K–12 teachers view pay for performance as an undesirable attribute of a teaching job?
2. Do students preparing to be K–12 teachers prefer some forms of pay for performance (i.e., knowledge- and skill-based pay, school-based performance pay, or individual performance pay based on objective indicators such as student achievement) over others?
3. Do students' work values and personality characteristics influence their preferences for performance pay or for different performance pay systems?

These questions were addressed by two related studies. First, a series of focus group discussions about pay for performance were held with university students, education majors or pre-majors, and students with other majors or pre-majors. Second, a survey of a sample of this population was conducted to assess preferences for different performance pay systems.

## 3. STUDY 1: FOCUS GROUPS

### Method

#### *Participants*

Four focus groups were held with students who were freshmen or sophomores at a large Midwestern public university and interested in a career in

teaching. Freshmen and sophomores were chosen to limit the exposure participants might have had to the negative influences on attitudes to performance pay discussed above, since these students were unlikely to have experienced field placements or student teaching. Students were recruited in two ways: (a) through a short presentation and a handout distributed in several large mathematics classes, and (b) through an e-mail sent to the university e-mail addresses of students who had indicated an intention to major in education. Students were offered $25 to participate, and twenty-three students were recruited. Nineteen participants were female, four were male. The average age was 19.7 years, and the average self-reported grade point average (GPA) was 3.4.

### *Procedure*

Prior to beginning the discussions, participants completed a short demographic questionnaire. Discussions were then conducted by a professional facilitator guided by a preestablished protocol. The discussions lasted 60–90 minutes. The sessions were taped, and the tapes were transcribed. Transcripts were content analyzed to identify broad themes.

## Results

Most students supported the concept of performance pay, citing reasons such as the fairness of paying more to those who do more, the need to motivate performance, and the unfairness of paying high-performing new teachers less than low-performing senior teachers. Students expressed concerns, however, about how performance would be measured and about potential decision-maker bias, and they found some forms of performance pay more attractive than others. Pay increases based on improving knowledge and skills were attractive to almost all participants. Many saw this approach as an extension of the traditional pay system or as consistent with the need to keep on learning. Pay increases based on school performance were attractive to relatively few. The students were well aware of problems associated with free riders. Many cited experiences with group projects in which some students did not pull their weight. The students were also concerned about putting their potential pay raise in the hands of colleagues they could not be sure would perform. Another concern was the fairness of school-based incentives for teachers working in low-performing schools. Increases based on individual performance measured by objective criteria were seen as more acceptable, though concerns were expressed about criteria for performance, the risk of getting no raise, and the additional stress this approach might add to the first year of teaching.

These results suggest that at least some students preparing to be teachers are open to pay for performance, though they are aware of the

potential difficulties with measuring performance. The results also suggest that some forms of pay for performance may be more attractive than others. More participants seemed more comfortable with pay based on individual performance or knowledge and skill development than with pay based on school performance. It was notable that nearly all were comfortable with pay based on developing knowledge and skills, even after being told that a supervisor or peers would judge skill development. Many participants attributed their comfort to the expectation that they would be learning on the job in any event. Perhaps participants' experiences as students, in which their major focus is learning, also influenced their comfort with this concept.

## 4. STUDY 2: SURVEY

### Method

In order to assess the attitudes of a larger sample of prospective teachers, a survey of attitudes toward performance pay was designed and conducted.

#### *Participants*

The sample consisted of students who were sophomores or juniors at a large Midwestern public research university and who had declared education or pre-education as their major. Sophomores and juniors were chosen because these students had had less exposure to teaching than seniors and thus were less likely to have picked up negative attitudes toward performance pay. Seniors were more likely to have done student teaching, potentially exposing them to experienced teachers' attitudes toward performance pay. The choice of university was based on convenience in this exploratory study.

The university registrar's office provided a list of juniors and sophomores with an education or pre-education major. Students whose programs were not related to classroom teaching (e.g., art, dance, kinesiology, occupational therapy, and rehabilitation psychology, programs included in this university's school of education) were dropped, leaving 295 sophomores and 308 juniors likely to intend to be classroom teachers. All of these students were sent invitations to participate. Because students might have changed their minds since they declared majors or pre-majors, they were asked to list their current major. Respondents who indicated they were no longer majoring in education or pre-education were then excluded from the sample. A total of 80 sophomores and 105 juniors provided enough data to be included in the analyses, resulting in a response rate of 27 percent for the sophomores and 34 percent for the juniors. The achieved sample was 79 percent female, with an average age of 20.1 years.

### Procedure

Students in the sample were invited to participate in the study via an e-mail message sent to their university e-mail address. They were asked to log on to a Web site and complete a survey, which they were told would take about thirty minutes. They were also told that they would receive $15 for completing the survey. Five days after the initial invitation, students who had not responded received a second invitation. A third and final invitation was sent one week after the second. Sophomores were invited to participate in the fall and juniors in the spring. The survey included 159 mostly closed-ended items (including items relevant to another study). Students responded to the items by clicking on the radio button associated with the chosen response option. Some open-ended items were also included, such as the occupation respondents were planning to pursue when they finished their education, the annual salary they expected to receive in this job, and the occupations of their parents.

### Measures

*Performance pay preferences.* Students' performance pay preferences were assessed in three ways. First, students were asked to rate the desirability of four different methods of providing pay increases: (a) pay for individual performance based on objective indicators such as student achievement; (b) pay for developing knowledge and skills, as judged by administrators and peers; (c) pay for school performance, as measured by objective factors such as school-wide improvement in student achievement; and (d) pay increases not tied to performance, as long as performance was good enough to keep the job. Each pay increase method was described in a short paragraph presented above a rating scale (see the appendix for the descriptions). Students were asked to rate each method on a 9-point scale ranging from −4 (*highly undesirable*) to +4 (*highly desirable*), with 0 as the neutral point. Second, students were asked to rank the desirability of the four alternatives, from high to low. Third, students were asked to rate the extent to which one of the three pay-for-performance methods would make a job more or less attractive compared with a similar job without pay for performance. A 5-point rating scale was used, ranging from −2 (*much less attractive*) to +2 (*much more attractive*), with 0 labeled *neither more nor less attractive*.

*Personality and work values measures.* To explore the potential impact of personality and work values on performance pay preferences, students were asked to respond to several measures of personality and value-related constructs. Personality was measured using Saucier's (1994) "mini-markers" of the "Big 5" personality dimensions: agreeableness, conscientiousness, emotionality, extroversion, and openness to experience. Respondents were required to choose how well each of forty adjectives (e.g., bold, kind, shy) applied to them. Each

personality dimension was represented by eight adjectives. The response scale ranged from 1 (*does not apply to me*) to 9 (*applies a great deal*). Ratings of related adjectives were summed to form the scale for each trait. In this study, only two dimensions, openness and conscientiousness, were used. Openness was intended to reflect students' comfort with challenges, while conscientiousness was intended to reflect persistence in achieving goals. Both personality features would be expected to be associated with confidence that performance goals would be reached. Work values were assessed using the Comparative Emphasis Scale (Ravlin and Meglino 1987; Meglino and Ravlin 1998). This measure has a forced-choice format, asking respondents to choose which of two statements better describes the work value they feel should receive greater emphasis if a choice of action were called for. The scale produces a rank ordering of four work values (individual achievement, concern for others, fairness, and honesty) or an interval scale value for one work value, when only one is of interest. This study used the subscale for individual achievement, on the rationale that more achievement-oriented students would prefer to see performance rewarded. To assess risk aversion, Cable and Judge's (1994) career risk aversion scale was used. Cable and Judge found a relationship between attitudes toward career risk measured by this eight-item scale and pay system preferences. Participants were asked to agree or disagree, on a five-point Likert scale, with items such as "I am not willing to take risks when choosing a job or company to work for" and "I prefer a high-security job with a steady salary over one offering high risks and high rewards." Attitude toward evaluation was assessed using a four-item scale created for this study. Representative items included "I usually feel uncomfortable having my performance evaluated" and "I never worry about being evaluated since I know I can do well in almost any situation." The motivation for assessing this attitude was that other research on teacher performance evaluation has reported teacher discomfort with rigorous evaluation (Davis, Pool, and Mits-Cash 2000; Heneman and Milanowski 2003).

*Treatment of missing values*. Though participants were asked to complete all items, sporadic missing values occurred for several items of the personality and career risk scales. Missing values within these scales were imputed using the method of adjusted mean substitution described by Raaijmakers (1999). Data were imputed for one or more scales in eight cases.

## Results

*Performance pay preferences*. As discussed above, attitudes toward pay for performance were assessed using three methods. The first involved asking respondents to directly rate the desirability of four pay increase scenarios, including

**Table 1.** Mean Desirability Responses and Response Distribution

| Pay Increase Based On: | Mean (SD) | −4 or −3 Highly Undesirable | −2 or −1 | 0 Neutral | +1 or +2 | +3 or +4 Highly Desirable |
|---|---|---|---|---|---|---|
| Individual performance | 1.7 (2.1) | 5% | 12% | 4% | 32% | 46% |
| Developing knowledge and skills | 1.8 (1.8) | 3% | 9% | 10% | 38% | 40% |
| School performance | 0.3 (2.3) | 14% | 25% | 9% | 32% | 19% |
| Not based on performance | −0.4 (2.2) | 23% | 23% | 18% | 26% | 10% |

*Notes*: $N = 183–85$. All differences in means except between "Individual performance" and "Developing knowledge and skills" are significant at 1%. SD = standard deviation.

receiving a straight percentage not based on performance. Table 1 shows (a) the means and standard deviations of the ratings of the different pay increase scenarios and (b) the distribution of respondents' ratings. Recall that a negative rating means the respondent perceived the pay increase method as undesirable, and a positive rating indicates that he or she perceived it as desirable.

The mean ratings for pay for individual performance and for developing knowledge and skills were similar and were significantly higher than ratings of pay based on school performance and pay increases not based on performance. The distributions of ratings show that clear majorities rated pay increases based on knowledge and skills and on individual performance as desirable. Respondents showed less consensus on the desirability of pay for school performance and pay increases not based on performance.

Respondents were also asked (a) to rate the attractiveness of a job under each of the three performance pay methods compared with that of a job in which pay increases are not based on performance and (b) to rank the overall attractiveness of the four pay increase methods. Table 2 shows the average rating of each of the three performance pay systems compared with pay increases not based on performance, the percentage of respondents ranking each system most attractive, and the mean rank of each system.

Both the individual performance and knowledge- and skill-based systems were rated as more attractive than pay increases not based on performance, and by about the same degree. Pay based on school performance, in contrast, was seen as no more attractive than pay increases not based on performance. The distributions of ratings of attractiveness of the three pay-for-performance methods versus pay increases not based on performance (not shown) were quite similar to those for the simple rating of desirability. Considerably more than half the students in the sample rated pay for individual performance or for knowledge and skill development as desirable compared with a straight

**Table 2.** Results for Other Measures of Pay Increase System Preference

| Pay Increase Based On: | Rating of Attractiveness vs. Pay Not Based on Performance[a] | Percent Ranking Most Desirable[b] | Mean Rank[c] |
|---|---|---|---|
| Individual performance | 0.9 (1.0) | 49% | 1.8 |
| Developing knowledge and skill | 0.8 (0.9) | 30% | 2.2 |
| School performance | −0.0 (1.1) | 9% | 2.9 |
| Not based on performance | | 12% | 3.2 |

[a]Standard deviations in parentheses.
[b]Of the 176 respondents who ranked without ties.
[c]All 185 respondents, including those who gave ties.

percentage increase, whereas pay for school performance was rated as comparatively desirable by only a small proportion of students. Consistent with the rating results, respondents ranked pay for individual performance and pay for knowledge and skill as more attractive than pay for school performance or a system based on a similar increase for all, regardless of performance. Sixty percent of the respondents ranked either pay for individual performance or pay for knowledge and skill either first or second.

These results suggest that many prospective teachers may not find performance pay unattractive, at least as operationalized in the scenarios. Most respondents preferred the pay for knowledge and skill development or pay for individual performance measured by objective indicators over the straight percentage pay increase not based on performance. Respondents also found some pay-for-performance systems more attractive than others, with pay based on knowledge and skill development and on objective indicators of individual teacher performance preferred over school-based performance pay. This finding is consistent with the focus group results.

Though there is some tendency for those who find pay for individual, objectively measured performance attractive to also find knowledge- and skill-based pay attractive, the ratings of the different performance pay alternatives were only moderately correlated. The average correlation between the ratings of pay for individual, objectively measured performance and pay for knowledge and skill was .49; between pay for individual, objectively measured performance and pay for school performance, .35; and between pay for knowledge and skill and pay for school performance, .26. Though a substantial number of respondents appeared to find all pay-for-performance alternatives relatively attractive, many of those who found knowledge- and skill-based pay or individual pay for performance attractive did not appear to find school-based pay for performance attractive. Those who favored no pay for performance also tended to rate knowledge- and skill-based pay or individual pay for performance as more attractive or desirable than school-based performance pay.

**Table 3.** Relationship of Work Value and Personality Factors to Global Pay for Performance Preference Measure

| Variable | Regression Coefficient | Standard Error | Standardized Regression Coefficient |
|---|---|---|---|
| Grade point average | −.315 | .176 | −.134 |
| Gender (F = 1) | .187 | .190 | .075 |
| Parent in education (Y = 1) | −.336* | .168 | −.147 |
| Career risk aversion | −.149 | .154 | −.076 |
| Achievement work value emphasis | .025 | .037 | .050 |
| Openness | .016 | .010 | .121 |
| Conscientiousness | .012 | .009 | .105 |
| Aversion to evaluation | −.118 | .123 | −.075 |

$R^2 = .094$
*Note:* $N = 180$.
*Significant at 5%.

To address the third research question (Do students' work values and personality characteristics influence their preferences for performance pay or for different performance pay systems?), two sets of analyses relating attitudes toward pay for performance to personality and work values were conducted. The first involved regressing a global pay-for-performance attitude score on the personality and values measures. The global score was intended to represent respondents' attitudes toward the general concept of performance pay. It was constructed by (a) standardizing the two forms of desirability ratings for each of the three performance pay systems, (b) conducting a principal components analysis of the six items, and (c) constructing a factor score from the first principal component. The first component explained 45 percent of the variance, and all items loaded at .50 or above. Because a few respondents did not respond to all of the items making up the scale, the sample size was reduced to 180 for this analysis. The results of this analysis are shown in table 3.

The personality and values variables had, individually, only weak and nonsignificant relationships to the global pay-for-performance attitude, though their coefficients generally had the signs expected. Only having a parent working in K–12 education had a statistically significant relationship with the global attitude. This relationship was negative, as might be expected if the kinds of experiences teachers have that cause them to be suspicious of pay for performance are communicated to their children.

Separate regression analyses were performed for each type of performance pay using the average of the two standardized preference rating measures for each of the three pay-for-performance approaches. The results (not shown) were generally similar to those in table 3 in that the personality and work values

factors did not have a strong relationship with the performance pay desirability or attractiveness ratings. There was a small but statistically significant negative effect of having a parent in education on preference rating for school-based performance pay, and a similarly sized significant positive effect of being female on preferences for pay based on individual performance. A small but significant negative effect of reported GPA on preference for pay based on individual performance was also found.

The second type of analysis conducted was a discriminant analysis that explored the potential relationships between the rankings participants made of the performance pay systems and the personality and work values variables, as well as GPA, gender, and having a parent in education. The type of pay system the respondent ranked first was taken as the group membership indicator. Of the 173 respondents who ranked a system first without giving ties, 81 ranked pay for individual performance measured objectively first, 52 ranked pay for knowledge and skills first, 15 ranked pay for school performance first, and 22 ranked pay not based on performance first. (Eight respondents gave ties for the first rank.) A backward stepwise method of selecting variables resulted in none of the personality or work values variables being retained in the discriminant function. Only GPA was retained, but a discriminant function based on this variable was unable to reproduce the four-group structure and could correctly classify only 33 percent of the cases into *pay for individual performance* and *no pay for performance* groups. These results are consistent with the regression results, supporting the conclusion that personality and work values variables were not strongly associated with the respondents' pay system preferences.

## 5. DISCUSSION

The results of this exploratory study suggest that students preparing to be teachers may have favorable attitudes toward pay for performance. Most of the students participating in the study indicated a preference for some form of pay for performance compared with pay not based on performance. Focus group results suggested that these students accept the general idea that those who contribute more should be rewarded more, despite being aware of the difficulties of measuring performance. These students also tended to prefer performance pay based on individual performance, as measured by objective factors, or pay for knowledge and skill development to performance pay based on school performance. Focus group results suggested that this preference was based on concerns about free riders, lack of control over others' performance, and potential disadvantages of teaching in low-performing schools under such a system. Given the concerns that teacher associations and others have raised about holding individual teachers accountable for the performance of their

particular students, it is somewhat surprising that this form of pay for performance was the most favored by study participants. The study also found that the personality traits and work values measured were not related to preferences for different performance pay systems or performance pay in general, suggesting that teacher attitudes toward performance pay are not due to these factors.

Though this study was exploratory and is based on a relatively small sample, it does have a potential implication for designers of performance pay systems for teachers. If those preparing to teach do not come to the teacher labor market set against performance pay, it is likely that a system requiring that only new teachers participate, while giving more experienced teachers the option, may gain acceptance.

However, even if required only for new teachers, performance pay systems will be sustainable only if the experiences new teachers have after hire do not counteract favorable initial attitudes. Based on studies of the typology of influences presented at the beginning of this article, program administrators should be concerned with (a) system design and implementation, including effort-reward linkage, fairness, and funding; (b) the ability to foster trust in decision makers; and (c) the potential earnings under the performance pay system.

Other things equal, programs that reward performance that is within teachers' control are more likely to be accepted. This implies that performance rewards might be best focused on teachers' own skill level, classroom performance, or their own students' performance, rather than on schoolwide performance. It also suggests that value-added indicators of student achievement should be used in place of attainment indicators. Measures of performance, whether they apply to teacher skill, classroom performance, or student achievement, also need to be reliable and valid. In particular, more attention to preventing test scoring snafus, like those that affected Tennessee (Galley 2003), New York, and Indiana (Steinberg and Henriques 2001), is needed, as is attention to issues affecting the attribution of student achievement to teachers, such as nonrandom assignment and controls for background characteristics (Ballou, Sanders, and Wright 2004). Performance measures must be not only reliable and valid, but also perceived by teachers as such, suggesting that the procedures adopted to ensure reliability and validity should be communicated to them. Teachers need to believe that the district or state has the capacity to run the program fairly and to fund it consistently. Research on Cincinnati's proposed performance pay plan (Heneman and Milanowski 2003) showed that implementation problems and doubts about the adequacy of funding for the program can reduce the credibility of the performance pay system and contribute to its rejection.

Program administrators also need to be concerned with maintaining trust toward the people who make the design and distribution decisions. More transparency in decision processes, fewer arbitrary-seeming changes in programs, and more teacher involvement in decision making would all help to prevent teachers from viewing management as inconsistent or punitive. Trust may also be increased if teachers believe that management has provided the resources they need to improve performance (e.g., books and curricular materials, targeted professional development, and task-specific feedback on performance). These are especially important for promising new teachers who may not initially perform well enough to be rewarded. Those who are not performing well enough to receive a performance-based pay increase need to perceive that support is available to help them improve their performance.

Performance pay systems will be more acceptable when designed so that teachers have a reasonable chance to receive more pay than under the traditional schedule. Acceptance will be higher if performance pay is treated as a supplement over and above the traditional schedule. But this commits program administrators to funding the existing schedule at competitive levels and providing additional money for performance pay. If the total amount to be devoted to pay is not to be increased, the amount that a teacher with acceptable performance can earn needs to be greater than what could have been earned under the traditional schedule, or greater than what could be earned working for other districts with traditional schedules. Note that in this case pay will be redistributed based on the performance measures. Since most employees believe they are good performers, not receiving a performance-based increase is likely to create cognitive dissonance, which could develop into rejection of the performance measurement system and the pay system as a whole. No doubt some who do not receive the expected increases will make comparisons and leave the district or profession, which may be desirable if it is the poor performers who leave. But it could also result in agitation to change back to the traditional system.

It is an open question whether states and school districts will be able to design and run performance pay programs that do not reverse the positive attitudes this study suggests new teachers may have toward performance pay. The implementation and scaling-up literatures (e.g., Odden 1991; Elmore 1996; Berends, Bodilly, and Kirby 2002) illustrate as many failures as successes in the execution of complex reforms. But some hopeful signs do exist. North Carolina and Dallas have consistently funded their school-based performance award programs over long periods. Denver has attempted to lock in stable funding for its program. Increasing attention has been paid to the validity of teacher performance assessments. The National Board for Professional Teaching Standards has developed a highly reliable performance assessment process

that could serve as a model (Jaeger 1998; Myford and Engelhard 2001). Iowa and Cincinnati have developed teacher evaluation approaches using multiple raters and substantial rater training, which promise improved reliability and validity. At least one performance pay program has been able to develop a culture in which teachers believe that they can trust decision makers to act fairly and give them the resources they need to succeed (Kellor 2005). The challenge for those wishing to implement sustainable performance pay programs is to combine sound program design, consistent funding, communication, and support for improving performance.

### Limitations

This research was exploratory, and the usual qualifications related to small sample size and a single geographical area apply. In particular, generalizability to the U.S. population of teachers in training may be limited, because teachers in training at different universities in different parts of the country may face different teacher labor markets or may have received different messages about performance and pay in their preparation programs. For example, in areas where teacher associations and labor unions have more influence and the political climate is more collectivist, teachers in training may have been socialized by their parents to view terms of employment that provide employer discretion, like performance-based pay, with suspicion.

Another limitation is that the questionnaire to which students were asked to respond was relatively long, potentially lowering the response rate and the level of attention paid to individual items. The latter could have reduced reliability, attenuating relationships between work values and personality measures and attitudes toward performance pay. A further limitation is that due to space limitations, the pay systems were not described in as much detail as might be desirable, perhaps limiting respondents' ability to fully understand how the systems would work.

### Future Research

This line of research could be continued in several ways. A comprehensive model of the determinants of pay system preferences should be developed to guide future empirical work. Future empirical studies could also assess the attitudes of teachers in training from other universities and other parts of the country, using performance pay scenarios based on programs being developed in places like Denver. This research would give program designers more relevant information on teacher preferences. It would also be useful to assess the performance pay preferences of more experienced teachers, especially teachers who have had three to five years of experience. This group may

still be new enough to accept performance pay but will have had some of the experiences that might reduce enthusiasm for it. If experience is an important influence on performance pay attitudes, one would expect to see less acceptance of the concept from this group. Ideally, one might follow a cohort of teachers in training from the decision to major in education through the first three to five years on the job to see if attitudes change and, if they do, what are the contributing factors. Continued research on teacher preferences for performance pay systems is likely to help dispel myths about teacher pay preferences and may help both districts and organizations representing teachers design performance pay systems that can win teacher acceptance.

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## APPENDIX

### Pay System Scenarios

Below are descriptions of four different methods of providing pay increases to workers. Please read each description, then circle the number that indicates how desirable or undesirable you would find that pay increase method for your first job in your chosen occupation or career field.

#### *1. Pay for individual performance*

In this system, you could get up to a 10 percent pay increase each year, depending on your individual job performance, as measured by objective factors such as improvements in student achievement, parental satisfaction, or student attendance. If your job performance was excellent, you would get a 10 percent increase; if very good, a 6 percent increase; if minimally acceptable, a 3 percent increase; and if poor, 0 percent (no increase).

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highly Undesirable | −4 | −3 | −2 | −1 | 0 | +1 | +2 | +3 | +4 | Highly Desirable |

#### *2. Pay for developing your knowledge and skills*

In this system, you could get up to a 10 percent pay increase each year, depending on how well you develop a specified body of teaching knowledge and skills, as judged by your supervisor and a group of more experienced peers. If you developed all of the specified skills to a high level, you would receive a 10 percent pay increase. If you developed all of the skills to a satisfactory level, you would receive a 6 percent increase. If you developed some but not all of the skills, you would receive a 3 percent increase. If you did not develop any of the skills, you would get 0 percent (no increase).

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highly Undesirable | −4 | −3 | −2 | −1 | 0 | +1 | +2 | +3 | +4 | Highly Desirable |

***3. Pay for team performance***

In this system, you would get up to a 10 percent pay increase each year depending on your team's (e.g., school's) performance. Performance would be measured by objective factors such as improvements in student achievement, parental satisfaction, or student attendance. If your team's performance was excellent, you would get a 10 percent increase; if very good, a 6 percent increase; if about average, a 3 percent increase; and if poor, 0 percent (no increase).

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highly Undesirable | −4 | −3 | −2 | −1 | 0 | +1 | +2 | +3 | +4 | Highly Desirable |

***4. Pay not based on performance***

In this system, you would get a 5 percent pay increase each year regardless of how well or poorly you or your team performed, or how well you developed your skills, as long as you performed well enough to keep your job. All other teachers would also get this increase, and there would be no opportunity to get more and no risk of getting less.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highly Undesirable | −4 | −3 | −2 | −1 | 0 | +1 | +2 | +3 | +4 | Highly Desirable |