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# Performance Pay System Preferences of Students Preparing to Be Teachers[1]

**Anthony Milanowski**

Many education policy makers, academics, reformers, and pundits (e.g., Hunt, 2004; Hess, 2004; Teaching Commission, 2004) are currently championing the concept of basing at least some of the salaries of K–12 teachers on their performance. This current wave of interest follows the advocacy of new pay systems, such as merit pay (Hatry, Greiner, & Ashford, 1994) and career ladders (Brandt, 1990), beginning in the 1980s, aroused in part by the famous *A Nation at Risk* report (Timar, 1992). It is typically argued that moving from the current teacher pay system based on seniority and educational attainment to a system 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 (Heneman & Gresham, 1998; Jenkins, Mitra, Gupta, & Shaw, 1998; Mitchell, Lewin, & Lawler, 1990). Performance-based pay seems to be a plausible way both to motivate teachers to direct effort at performance goals and to attract and retain teachers who are high performers. This second effect of performance pay is important and at times overlooked. Performance pay enables organizations to use scarce financial resources to retain high performers (and, by tying pay to performance, may encourage poorer performers 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 régime, one of the few ways 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 pattern tends to concentrate higher performing teachers in districts with higher pay/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 it would seem that there is a case to be made for performance pay, at least in the abstract, teachers do not seem to have rushed to embrace the concept. Though teacher pay reform has been advocated at least since the 1980s, 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://DenverProComp.org/) and among the approximately 30 schools and two districts using the Milken Foundation's teacher compensation design (see www.mff.org/tap/tap.taf)—it is hard to see 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.

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There are a number of reasons teachers might be suspicious of performance pay, even while being aware of some of the limitations of the traditional schedule. One frequently cited reason for teacher opposition to performance pay is the difficulty in accurately evaluating teacher performance. Murnane and Cohen (1986) provided a good discussion of the difficulty of assessing performance and related problems that limit the motivational impact of performance pay. 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 is low.[2] 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.

Another reason teachers might be skeptical of performance pay, especially in large urban districts, is their experience of district (and state) inconsistency in educational policy and programming. 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 by Kelley, Heneman, and Milanowski (2002) found that many teachers simply did not believe that the state would continue to fund or pay performance bonuses, even when schools achieved the performance goals the state set. In Cincinnati, teachers we interviewed about that district's proposed performance pay program were concerned not only about whether performance evaluation would be too subjective, but also about whether the district, with a recent history of financial difficulties and dependence on regular public referenda for increased financial support, could afford the performance pay program. Many felt that the district would place quotas on how many teachers could receive performance pay. Some perceived the program as a way to hold down or cut pay for senior teachers. Add to this specific skepticism the general distrust urban teachers seem to harbor toward the central administration, and it is not hard to see why experienced teachers would be wary of performance pay.

Many teachers may also view the current seniority-based schedule as deferred compensation. Given the perception that starting salaries for teaching are lower than those in other occupations requiring a college degree, teachers may regard the pay increases they receive near the end of their careers as a recompense for relatively low initial salaries: being "underpaid" early in the career is offset by higher pay later. Whether or not the discounted lifetime earnings stream is actually comparable to what the teacher might have earned in another occupation, once a teacher has put in a few years, he or she may perceive sunk costs (in the form of lost income) and may want the certainty of a future payoff in the form of an automatic (seniority-based, rather than performance-based) progression to the top of the pay schedule. Thus, teachers with several years in under the seniority-based schedule will want to maintain it, due to the virtual certainty of a future payoff (given performance sufficient to retain their jobs).

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

All of these considerations suggest that teachers' lack of enthusiasm for performance pay could be a learned response, learned either through experiences with the current pay and performance evaluation approaches or through socialization by fellow teachers with these experiences. It may be that new teachers—those 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. If this is so, there may be hope that teachers could one day embrace performance pay. If the conditions that produced teacher skepticism can be changed, and performance pay systems designed to be more fair, objective, and stably funded, new teachers coming into the field, as well as some experienced teachers, may be "converted" to accept performance pay, and the argued advantages of this system may then accrue. Some evidence that less experienced teachers may be more favorable toward performance pay was provided by a recent Public Agenda survey of new teachers (those with 5 years of experience or less), which found that 69% supported pay differentiation based on performance in the abstract, though most also opposed rewards or sanctions tied to the performance of their students (Farkas, Johnson, & Foleno, 2000).

On the other hand, it might be that K–12 teachers' lack of enthusiasm for performance pay is related to their personality traits and values. This is a variation on the familiar "teachers are not motivated by money" argument. But though that generalization is unlikely to be true, it is plausible that people attracted to teaching are less interested in financial rewards at the margin. The fact that most students going into the field already know it is a low-paid occupation and nonetheless persist in pursuing a teaching career supports this view. It may be that people who become teachers have values or characteristics that make them uninterested in or even uncomfortable with performance pay. If this is the case, then even beginning teachers who have not yet been socialized to prefer the traditional system will not be interested in performance pay or likely to support changes from the current system.

Complicating this question is the existence of different forms of performance-based pay. The more sophisticated proponents of performance pay (e.g., Odden & Kelley, 2002) have drawn distinctions between *merit pay* (an annual percentage increase to base pay based on a principal's largely subjective assessment of a teacher's prior year performance), *school-based performance awards* (a bonus paid to all teachers in a school when the school achieves pre-set performance goals), and *knowledge- and skill-based pay* (base pay increases determined by the acquisition of relevant knowledge and skills as demonstrated in the classroom). Another performance pay concept that is occasionally advocated is differentiating pay based on the test scores of individual teachers' students or, more appropriately, the learning gains of each teacher's students. In one variation of this system, teachers who "produce" the biggest learning gains (or add the greatest value) would receive bigger pay increases.

For a variety of reasons, teacher preferences for these different forms of pay for performance may differ. One reason may be the degree of control teachers believe they have over the outcomes that trigger the pay incentive. The less control, the more other factors (and other people) may intervene to influence performance, and the less certain teachers can be that their efforts will lead to a pay reward. One might expect that teachers would perceive that they have the most control over the development of their own knowledge and skills and so would favor performance pay systems based on knowledge and skill over systems that base rewards on the performance of students or on the attainment of school-wide goals. It could also be argued

that teachers would prefer to be rewarded based on the performance of their particular students to being rewarded based on their school's performance, again because they have more influence on the performance of their own students. Both Kuhn and Yockey (2003) and Bretz and Judge (1994) found that college students preferred rewards based on individual performance to those based on group performance. On the other hand, it is often argued that effects on student achievement are not easily separable into the contributions of individual teachers, so it could be that teachers would be more comfortable with a group basis for performance pay.

To explore whether teachers' attitudes toward pay for performance are the result of experience or socialization, or whether teachers are already predisposed to prefer pay systems not based on performance, and whether some forms of performance pay might be preferred to others, a study was conducted of the pay system preferences of students preparing to be teachers at a large Midwestern public university. The study was guided by three research questions:

1. Do students preparing to be K–12 teachers view pay for performance as a desirable or 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, group-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 first by holding a series of focus group discussions about pay for performance with university students with education majors or pre-majors, and with students with other majors or pre-majors. Then, a survey of a sample of this population was conducted to assess preferences for different performance pay systems.

## Focus Groups

### *Method*

Focus groups were held to explore the attitudes of potential teachers toward pay for performance. The groups were held in the first part of the spring semester. Each session was scheduled for 90 minutes, but some concluded in less time. Four groups were held with students interested in a teaching career; four with students intending to pursue math, science, applied science, or engineering majors; and two with students intending to pursue majors in social work. The intent was to look at differences in these groups' attitudes toward pay for performance before further socialization by educational and job experiences.

#### *Participants*

Participants were freshmen and sophomores at a large Midwestern research university. Freshmen and sophomores were invited to participate because we wanted the opinions of students who had not yet made a strong commitment to a major. Students interested in teaching were recruited via short presentations and handouts in several large mathematics classes and via

emails sent to the university email addresses of students indicating the intention of majoring in education. The presentations, handouts, and emails explained that the research concerned career choice and the role of pay in career and job decisions; they also told students the basic requirements of participation in the research and the incentive offered ($25). Email addresses were obtained from the school of education's student advising department. In all, 23 students participated. All groups had between five and seven participants. Nineteen participants were female, four were male. The average age was 19.7 years, and the average self-reported GPA was 3.4.

Mathematics, science, and technology students were recruited via presentations and handouts in large math courses required for math, science, and technology majors. Again, the purpose of the research was explained, and a $25 incentive offered. Nineteen students participated in four groups. Intended occupations represented in these groups included actuarial science, astronomy, chemistry, biochemistry, computer science, engineering (mostly computer engineering), medicine, nursing, pharmacy, and veterinary science. Thirteen of the participating students were female, six were male. The average age was 18.3 years, and the average self-reported GPA was 3.26.

Students interested in pursuing a social work major were recruited via presentations and handouts in introduction to social welfare classes. Ten students participated in two groups. Nine were female, one was male. The average age was 19.6 years, and the average self-reported GPA was 3.3.

### *Procedure and Analysis*

Before beginning the discussions, participants completed a short demographic questionnaire. Discussions were then conducted by a professional facilitator who asked the students to respond to a set of discussion questions. The discussion protocol began with questions related to another study and then introduced questions about preferences for pay-for-performance systems. It ended with questions about teaching as a career and the influence of salary level on the attractiveness of a teaching career. The sessions were taped, and the tapes transcribed. Transcripts were then content-analyzed to identify and record broad themes.

## *Results*

Table 1 summarizes the attitudes toward performance-based pay that were expressed in the focus groups. These results provide evidence that students preparing to be teachers are open to pay for performance, though they are aware of the potential difficulties with measuring performance.

There is also evidence that some forms of pay for performance may be more attractive than others to those preparing to be teachers. Most participants in the teacher focus groups seemed more comfortable with pay based on individual performance or knowledge and skill development than with pay based on group performance. The students seemed all too 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. The results also suggest that the attitudes toward performance pay of students preparing to be teachers are not that different from those of students preparing for other occupations. There was support for the concept of performance pay from all groups, and most participants in all groups agreed with the position that those who contribute more should be rewarded. Perhaps the optimism of youth was a factor here, for many participants expressed the belief that they would be the good performers and would be likely to benefit from performance pay. Further, except for the intended social workers, almost all participants 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.

Two differences among the groups are worth noting. First, both the intended educators and the intended math and science majors had less discomfort with individual pay for performance and more concerns about group pay for performance than the intended social workers. Perhaps the latter group was more "collectivist" in values. It may be the case that since teachers and many mathematicians and scientists work individually, more individualistic people are drawn to these fields. Second, intended teachers had more concerns about measurement problems and subjectivity in pay for performance than the intended math and science majors. The latter seemed to accept pay for performance as a given in the workplace, while the former were more concerned about potential unfairness.

These results provide at least circumstantial evidence that those interested in becoming teachers are not predisposed by personality and work values to oppose pay for performance, suggesting that attitudes toward pay for performance are the result of socialization and prior experiences rather than personality and values.

## Survey

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

### *Method*

#### *Participants*

The sample consisted of sophomores and juniors at a large Midwestern public research university who had declared education or pre-education as their major. The choice of university was based on convenience in this exploratory study. The university registrar's office provided a list of sophomores and juniors 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 be intending 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 excluded from the sample. Eighty sophomores and 105 juniors provided enough data to be included in the analyses, resulting in a response rate of 27% for the sophomores and 34% for the juniors. The achieved sample was 79% female, with an average age of 20.1 years.

### *Procedure*

Students in the sample were invited to participate in the study via an email message sent to their university email address. They were asked to log on to a Web site and complete a survey, which they were told would take about 30 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 skill, as judged by administrators and peers; (c) pay for team performance, as measured by objective factors such as school-wide improvement in student achievement; and (d) pay increases regardless of 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 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 to 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 40 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 (Meglino & Ravlin, 1998; Ravlin & Meglino, 1987). This measure has a forced-choice format, in which respondents are asked to choose which of two statements better describes the work value they feel should receive the 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. On order 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 as measured by this eight-item scale and pay system preferences. Participants were asked to agree or disagree, on a 5-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, & Mits-Cash, 2000; Heneman & 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 was imputed for one or more scales in eight cases.

## *Results*

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 receiving a straight percentage not based on performance. Table 2 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 that the respondent perceived the pay increase method as undesirable, and a positive rating, that he or she perceived it as desirable. The mean ratings for pay for individual performance and pay for developing knowledge and skills were similar, and significantly higher than ratings for pay for group performance or pay increases not based on performance. The distributions of ratings show that clear majorities rated the pay increases based on knowledge and skill and based on objective indicators of individual performance as desirable. Respondents showed less consensus on the desirability of pay for group 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 to 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 3 shows the average rating of each of the three performance pay systems compared to pay increases not based on performance, the percentage of respondents ranking each system most

desirable, 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, whereas pay based on group performance was seen as no more attractive. 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 to a straight percentage increase, whereas pay for group performance was rated as comparatively desirable by only a small proportion of students. Consistent with the rating results, the rankings suggest that pay for individual performance and pay for knowledge and skill were viewed more favorably than pay for group 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 prospective teachers do not find performance pay unattractive, at least as operationalized in the scenarios. Most preferred the pay for knowledge and skill development or pay for individual performance measured by objective indicators to the straight percentage pay increase not based on performance. The results also show that some pay-for-performance systems were viewed as more attractive than others, with pay based on knowledge and skill development and on objective indicators of individual teacher performance preferred over group performance pay. This finding is consistent with the results of the focus groups. 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 are 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 group performance, .35; and between pay for knowledge and skill and pay for group 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 group-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 group performance pay.

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 constructed by standardizing the two forms of desirability ratings for each of the three performance pay systems, then averaging the six *z*-scores. This score had an acceptable degree of internal consistency (coefficient alpha = .75). (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 4. The personality and values variables had, individually, only weak and non-significant relationships to the global pay-for-performance attitude, though their coefficients generally had the signs expected. Because the personality and attitude measures were in some cases moderately intercorrelated, it could be that including them all inflated standard errors and

reduced *t* statistics for individual variables. However, the difference in $R^2$ between (a) a model with only the gender, parent in education, and grade point variables and (b) a model with the value and personality variables was not quite significant at the .05 level ($R^2 \Delta = .057$, $F = 2.21$). 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.

This type of analysis was repeated separately using the two preference ratings for each of the three pay-for-performance approaches. 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 rating. There was a small but statistically significant negative effect of having a parent in education on preference rating for group rewards, 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 participants' rankings of the performance pay systems and the personality, work value, GPA, gender, and parent in education variables. 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 group performance first, and 22 ranked pay not based on performance first. (Eight respondents gave ties for the first rank.) Using a backward stepwise method of selecting variables, none of the personality or work value variables were 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% of the cases into *pay for individual performance* and *no pay for performance* groups. These results are consistent with the regression results, suggesting that personality and work value variables are not strongly associated with the respondents' pay system preferences.

## Discussion

This research found that students preparing to be teachers held more favorable attitudes toward pay for performance than might be expected. Most students indicated a preference for some form of pay for performance. Focus group results suggested that these students seem to accept the general idea that those who contribute more should be rewarded more, though they are aware of difficulties with 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 group (school) performance. This preference appeared to be 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 teacher associations and others have raised about holding individual teachers accountable for the performance of their particular students, it is somewhat surprising that a form of pay for performance based on this sort of objective indicator was the one most

favored by study participants. The study also found that the personality traits and work values measured were not related to expressed preferences for different performance pay systems or performance pay in general.

These results imply that the suspicion, if not outright opposition, many experienced teachers seem to harbor toward pay for performance may be due to socialization and experience rather than to personality or work values they brought to their teaching career. Beginning teachers may be more favorable to performance pay than their more experienced colleagues, and this may provide an opening for advocates of performance pay to obtain support for changing from the traditional salary structure.

It is important to emphasize, however, that the openness of beginning teachers toward performance pay could turn into opposition if programs are not well designed and implemented. Research on Cincinnati's proposed performance pay plan (Milanowski & Heneman, 2001; Heneman & Milanowski, 2003) showed that implementation problems can reduce the credibility of a performance pay system and contribute to its rejection. Another factor to consider is what happens when the optimism of youth wears off. Beginning teachers may accept the idea of pay differentiation based on performance until they experience not receiving a performance-based increase because their performance is not good enough. Since most employees believe they are good performers, not receiving a performance-based increase is likely to create some cognitive dissonance. This can develop into rejection of the performance measurement system and perhaps the pay system as a whole. Almost inevitably, some teachers will receive smaller pay increases than they would have under the traditional schedule. No doubt some who do not receive the expected increases will leave the district (or profession)—a result that may be desirable if it is the poor performers who leave. Alternatively, those who do not receive the increases they believe they deserve might, instead of "exiting," exercise "voice," perhaps via their associations, to attempt to get the performance pay system modified or eliminated. To maintain support for performance pay, school districts need to ensure that the performance criteria are seen as fair and that assistance is provided to teachers who are not performing well enough to receive a performance-based pay increase so that they see a chance to improve their 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 socialization in their preparation programs. For example, in states 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 with suspicion terms of employment, like performance-based pay, that provide employer discretion.

Other limitations arise from the implementation of the study. Because this project was part of a larger multipurpose data collection effort, the questionnaire to which students were asked to respond was relatively long. This probably led to a lower response rate, lower levels of attention to individual items, and less reliability, which could account for the attenuated relationships with expected work value and personality predictors of attitudes toward

performance pay. Another limitation is that the pay systems were not described in as much detail as might be desirable. Survey participants probably had to make some assumptions in interpreting the descriptions—about the ways in which the different pay systems would work and the specific features highlighted by the descriptions. Unfortunately, that means reactions might have been different if different details had been given. From this perspective, it would probably have been better to describe the *pay not based on performance* alternative as one in which pay increases were based explicitly on seniority or educational attainment.

### *Future Research*

This line of research could be usefully continued in several ways. First, the attitudes of teachers in training from other universities and other parts of the country should be assessed before too much is made of the results reported here. More performance pay scenarios, based on proposals or programs being developed in places like Denver, could be developed, and additional explanation given in focus groups or on surveys. This would give program designers more relevant information on teacher preferences. Second, it would be useful to assess the performance pay preferences of more experienced teachers, especially teachers who have had 3–5 years of experience. This group may still be new enough to accept performance pay, but will have had some of the socialization experiences that might reduce enthusiasm for it. If socialization is an important influence on performance pay attitudes, we 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 3–5 years on the job to see if attitudes change, and if they do, what factors contribute to this change. Continued research of this sort on teacher preferences for 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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Table 1
*Summary of Focus Group Themes*

| | Intended education majors | Intended social work majors | Intended math and science majors |
|---|---|---|---|
| General attitudes toward pay for performance | Majority supported concept based on fairness of paying more to those who do more and motivating performance and on unfairness of paying high-performing new teachers less than low-performing senior teachers.<br><br>Concerns with how performance would be measured common (subjectivity in measurement and decision-maker bias). | Majority supported idea that good workers should make more and that need some differentiation between good and poor workers.<br><br>Concerns expressed about performance criteria, subjectivity of evaluation, and lack of control over client success. | Most supported the concept; seen as common employer practice, with advantages for employer.<br><br>Concerns about measurement and fairness mentioned, but less frequently than in teacher groups; a few mentions of added stress. |
| Reactions to pay based on individual performance | Concerns about criteria for performance, risk of getting no raise, and fact that first year of teaching is already difficult without extra pressure.<br><br>Most would be willing to take a job in which 10% of pay was based on individual performance. | Reactions mixed. Some confident they would get incentive. Minority not comfortable with concept. Cited less friction with co-workers if all get the same.<br><br>About half would be willing to take a job in which 10% of pay was based on individual performance. | Most seemed comfortable with individual pay for performance, though a few concerned with high risk in first year of job.<br><br>Most willing to take a job in which 10% of pay was based on individual performance. |
| Reactions to pay based on individual knowledge and skill development | All participants comfortable with concept; many saw it as extension of current system or consistent with need to keep on learning.<br><br>All would be willing to take a job in which 10% of pay was based on developing knowledge and skills. | Most, but not all, comfortable with concept.<br><br>About half would prefer a job in which 10% of pay was based on developing knowledge and skills to one with 5% guaranteed. | All participants comfortable with concept; many saw it as incentive to learn or recognition of learning on the job.<br><br>All would prefer a job in which 10% of pay was based on developing knowledge and skills to one with 5% guaranteed.. |
| Reactions to pay based on group (school) performance | Few comfortable with group basis for pay; concerns about lack of control over what other teachers do and difficulty of inner city schools in meeting performance goals; several cited experience with free riders in group projects.<br><br>Most would prefer not to take a job in which 10% of pay was based on group performance. | Most comfortable with concept; liked team aspect, though some cited free rider problem seen in school group projects.<br><br>About half would prefer a job in which 10% of pay was based on group performance to one with 5% guaranteed.. | Reactions mixed. Recognition of this as a common practice, but concerns about quality of co-workers and free riders.<br><br>Most would prefer a job with 5% guaranteed to one in which 10% of pay was based on group performance. |

Table 2
*Mean Desirability Responses and Response Distribution*

| Pay increase based on: | Mean (std. dev.) | -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% |

***Note.*** *N* = 183–185. All differences in means except between *individual performance* and *developing knowledge and skills* are significant at the .01 level.

Table 3
*Results for Other Measures of Pay Increase System Preference*

| Pay system | Rating of attractiveness vs. pay not based on performance[a] | Percentage ranking most desirable[b] | Mean rank[c] |
|---|---|---|---|
| Pay for individual performance | 0.9 (1.0) | 49% | 1.8 |
| Pay for knowledge and skill development | 0.8 (0.9) | 30% | 2.2 |
| Pay for group performance | - 0.0 (1.1) | 9% | 2.9 |
| Pay not based on performance | | 12% | 3.2 |

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

Table 4
*Relationship of Work Value and Personality Factors to Global Pay for Performance Attitudes*

| Variable | Regression coefficient | Standard error | Standardized regression coefficient |
|---|---|---|---|
| Grade point average | -.199 | .117 | -.127 |
| Gender ($F$ = 1) | .105 | .127 | .063 |
| Parent in education ($Y$ = 1) | -.234* | .112 | -.154 |
| Career risk aversion | -.105 | .102 | -.081 |
| Achievement work value emphasis | .016 | .025 | .049 |
| Openness | .011 | .007 | .123 |
| Conscientiousness | .088 | .006 | .101 |
| Aversion to evaluation | -.071 | .082 | -.068 |

*Note.* $N$ = 180. $R^2$ = .091.
*Significant at the .05 level

# 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% 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, your would get a 10% increase, if very good, a 6% increase, if minimally acceptable, a 3% increase, and if poor, 0% (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% 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% pay increase. If you developed all of the skills to a satisfactory level, you would receive a 6% increase. If you developed some, but not all of the skills, you would receive a 3% increase. If you did not develop any of the skills, you would get 0% (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% 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% increase, if very good, a 6% increase, if about average, a 3% increase, and if poor, 0% (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% 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 or risk of getting less.

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