Team Performance Pay and Motivation Theory: A Mixed Methods Study

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Abstract

This study was conducted to explore teachers' perceptions of a team performance pay program in a large suburban school district through the lens of motivation theories. Mixed data analysis was used to analyze teacher responses from two archival questionnaires (Year 1, n = 368; Year 2, n = 649). Responses from teachers who participated in the team pay performance system reflected high levels of expectancy. Results were mixed for teachers' perceptions of equity. Some teachers expressed concerns related to distributive justice and procedural justice of the performance pay process. Implications for researchers and practicing educators are discussed.

Keywords: Teacher performance, Team performance pay, Performance pay, Motivation theory

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In recent years, an increasing number of U.S. school districts have implemented teacher performance pay programs to retain teachers and motivate them to improve student achievement. Politicians, business leaders, and educational reformers have promoted teacher performance pay, as evidenced by a number of programs being implemented across the country (Delisio, 2012; Podgursky & Springer, 2007). However, a dearth of empirical studies exists to support the increase of these programs. As such, more research about performance pay is needed (Lavy, 2002; Podgursky & Springer, 2007). The purpose of this study was to explore teachers' perceptions of a team performance pay program in a large suburban school district through the lens of motivation theories (i.e., expectancy, [Vroom, 1964]; and equity [Adams, 1965]).

Review of the Empirical Literature

Taylor and Springer (2009) defined performance pay programs as measures to reward teachers "for the additional effort" invested in effective teaching (p. 3). Essentially, performance pay programs are designed to motivate teachers to improve students' academic achievement. Because performance pay has been detrimental to collaboration among teachers, team performance pay systems have been implemented in recent years (see Springer, 2010; Springer & Balch, 2010).

Performance Pay Issues in Schools

Performance or merit pay in schools has been fraught with controversy. Some educator groups have argued against the merits of performance pay for teachers (Baker et al., 2010). The two largest teacher organizations, the National Education Association (NEA) and the American Federation of Teachers (AFT), opposed the inclusion of performance pay experiments in the No Child Left Behind Act (NEA, 2011). They claimed that the focus on performance pay obscured the real problem of inadequate teacher salaries. More recently, the unions have moderated their strong stance against performance pay, and NEA (2011) has expressed its support if districts utilizing such programs agreed to use collective bargaining processes. Some researchers have attributed the lack of success of performance pay systems to an unfair reliance on standardized testing as the basis for pay (Eberts, Hollenbeck, & Stone, 2002) and to internal dissension among educators caused by perceived inequities in award distribution (Murnane & Cohen, 1986).

Team Performance Pay and Teacher Collaboration

To counter the criticisms of individual performance pay systems, team performance pay approaches, called school-based performance awards (SBPA), have been implemented to promote teacher collaboration (Odden & Kelley, 2002). Researchers focused on motivation implications of SBPAs have suggested important design considerations (Kelley, Heneman, & Milanowski, 2002). Teachers must believe they will actually receive the performance award if earned. This expectation is problematic when school systems might not have the resources to insure sustainability of SBPAs. Moreover, teacher expectancy is critical. Teachers must believe the programs are fair and that goals are attainable. Kelley et al. (2002) concluded that "motivational impact is not guaranteed simply by promising teachers a bonus" (p. 397).

Several problems associated with team performance pay are as follows: (a) measurement problems (e.g., fair and accurate evaluations); (b) negative effects on collegiality; (c) unintended consequences (e.g., cheating); (d) increased costs; (e) union opposition; and (f) past failures of performance pay systems (Lavy, 2007). Additionally, *free riders*, or teachers who receive awards based on the efforts of their team members, were identified as a problem (Eberts et al., 2002; Lavy, 2007). Strategies to overcome these obstacles include structuring group incentives, encouraging peer pressure, and monitoring free riders (Lavy, 2007). In conclusion, team awards have encouraged teacher collaboration without many of the inherent problems of perceived fairness in individual performance pay programs (Raham, 2000).

Conceptual Framework

The conceptual framework for this study was based on expectancy theory and equity theory, which informed the study in a variety of ways. First, these theories were used to organize the data during the data analysis phase. Second, the theories were utilized to understand the motivational benefits of a performance pay system in schools, particularly in making sense of teachers' perceptions during the data interpretation phase. Finally, when applying the concepts of expectancy and equity to school settings, several key motivation concepts were considered in drawing conclusions from the results.

Expectancy

An important and applicable motivational construct is expectancy theory. Vroom's (1964) expectancy theory suggests that employees will intentionally choose to put forth effort if they believe their efforts will be realized and rewarded with something that they perceive will meet their personal goals. Vroom's theory describes a motivational process rather than a cause and effect relationship (Fudge & Schlacter, 1999). Quick (1988) outlined the following steps for enacting expectancy theory: (a) define expectations, (b) make work valuable and doable, (c) give regular feedback, and (d) reward employees when they meet expectations. Isaac, Zerbe, and Pitt (2001) summarized Vroom's description of expectancy theory as a way people determine behavior based on their individual perceptions in order to increase pleasure and reduce pain. When evaluating the relationship between expectancy theory and incentive programs, Mathibe's (2008) research indicated that respondents' low levels of motivation were due to the absence of incentive programs to reward performance.

Equity Theory

Equity theory relates to how individuals continually assess the personal return they receive for the investment they put into the organization. Adams (1965) originally postulated that the extent to which people believe they are being treated in an equitable and fair manner could profoundly affect their motivation. Adams (1965) suggested that a motivational tension was created when a worker senses inequity when comparing one's inputs (effort) and outcomes (rewards) with those of other workers. Workers perceiving inequities might have feelings of anger or guilt. Further, a perceived lack of equity often serves as a de-motivator for workers (Mathibe, 2008). Robbins and Judge (2009) posited that when employees perceive inequity, they could be predicted to react in a variety of ways including exerting less effort, changing their rates of productivity, altering their perceptions of

others, or even quitting their jobs. Likewise, Milanowski (2000) proposed that teachers' perceptions of fairness were related to the "motivational power of monetary performance rewards" (para. 19).

In summary, these motivational theories provided a framework in this study for evaluating teachers' perceptions about a team performance pay system. Key concepts in these theories included the extent to which teachers believed their efforts would be rewarded and the perceived fairness of the performance pay process.

Method

Teachers' perceptions of the team performance pay program were elicited using mixed-item questionnaires that were administered over a period of two consecutive academic years. Mixed methods techniques were used in the data integration and data interpretation stages (Onwuegbuzie & Teddlie, 2003). Results were interpreted through the lens of the motivational theories described in the previous section.

Sample

The sample included all teachers from at-risk elementary schools and middle schools that implemented the District Awards for Teacher Excellence (DATE) team performance pay program in the selected school district. The DATE program schools were Title I campuses with high percentages of students in poverty. In the first year, 368 teachers represented 13 elementary schools and six middle schools in the program. In the second year of implementation of the team performance pay program, 649 teachers participated from 14 elementary schools and seven middle schools. More teachers were included in Year 2 because of

student growth in the schools and the addition of two new schools.

All schools were located in a large, fast growing urban/suburban school district with a student enrollment of 106,000 students. The DATE program lasted for three years and was discontinued due to state funding shortages. For this school district, DATE was designed to increase teacher retention on at-risk campuses and to motivate teachers to collaborate for improved student performance.

Instrumentation

Archived data were obtained from the National Center on Performance Incentives (NCPI) at Vanderbilt University Peabody College. Data were collected by NCPI researchers using questionnaires to measure attitudes about DATE, the school environment, and professional practices (Springer et al., 2010). Some of the questions were based on prior, validated surveys including the Schools and Staffing Survey and the Consortium on Chicago School Research. The questionnaire included 33 questions divided into the following sections: (a) professional title, (b) attitudes about the DATE program, (c) school environment, (d) curriculum and instruction practices, (e) background information and teacher compensation information. The survey had been administered to teachers in the NCPI Nashville study and in the evaluation of the Texas' performance pay programs; therefore, it had been subjected to tests for internal reliability (J. Lewis, personal communication, April 28, 2011). For this study, we analyzed 55 common items (closed and open-ended responses) from the NCPI questionnaires.

Data Analysis

Qualitative, quantitative, and mixed analysis techniques were used. First, using an *a priori* approach, all questionnaire items were categorized into thematic clusters that most reflected the motivational theories applied in the study. Using a constant comparative approach established by Strauss and Corbin (1990), this sorting was conducted by reading each item and coding items most related to the major tenets of each theory. To increase the qualitative research validity (Johnson, 1997), an expert peer reviewer was asked to code the items separately, and the initial intercoder agreement rate was 94%. Next, descriptive statistics were generated for each of the closed-item responses.

Conclusions were drawn using a mixed data analysis approach (Combs & Onwuegbuzie, 2010). Quantitative and qualitative data were mixed using cross-over analysis strategies, specifically that of data integration (Onwuegbuzie & Teddlie, 2003). A parallel mixed analysis process was used, which involves the independent analysis of quantitative and qualitative data. Finally, the data were combined in the data interpretation stage where inferences were constructed.

Findings

Mixed methods analysis of quantitative and qualitative data from the questionnaires revealed several results related to teachers' perceptions of the team performance pay program. These results were examined through the lens of the conceptual framework and are organized using these motivational theories.

Expectancy

In both years of the study, teachers expressed high levels of expectancy related to performance pay. They believed that their efforts would lead to an award, that they would be rewarded for their performance, and that they would meet their personal goals. For example, most teachers (78.4%) in Year 1 responded that they had a clear understanding of the criteria to earn an award. Even more teachers in Year 2 (90.6%) claimed a clear understanding. Teachers believed that criteria established in the incentive plan were worthy of extra pay, with an 85.2% agreement rate. In Year 1, 56.5% of the teachers expected to receive an award, increasing to 78.8% in Year 2.

Additional insights related to expectancy theory were gained from open-ended comments. One teacher described the motivational benefit of a goal focus to earn an award: "The pay incentive has been an excellent tool in motivating me to take more staff development classes." However, another teacher provided a clearly articulated statement of negative expectancy: "From what I have seen so far is that the goals set by the program are not reachable nor is it enough money to motivate a teacher to go beyond what is already required of them."

Equity

Research findings were mixed for the category of equity (i.e., distributive justice, organizational justice, and procedural justice). The quantitative data suggested high levels of equity, but the qualitative data reflected concerns, especially about distributive justice (i.e., fairness of award distribution).

Teachers believed that the incentive plans used in their schools were fair (i.e., 80.3% in Year 1; 71.1% in Year 2). The percentage of agreement in Year 2, although still substantially high, was 9.2% lower than Year 1 results. In both years, the qualitative data reflected concerns about equity, particularly related to the rules for allocating awards. Statements related to a lack of fairness were more prevalent in Year 2 even though more teams (81% vs. 64%) received an award the second year. In addition, most teachers believed that the award amounts were large enough to be motivating. A reverse-coded item identified that a small number of teachers agreed that the award was not large enough to be motivating to them (i.e., 17.5% in Year 1; 16.4% in Year 2).

The majority of the open-ended comments expressed teachers' discontent about the perceived uneven distribution of awards. The number of comments in this category increased during Year 2, perhaps because teachers became aware of the differences in award amounts. Comments frequently reflected perceptions of a lack of distributive and procedural justice. According to one teacher, "The difference in the amount of money available to teachers is so great that those of us who do not teach an academic class do not feel that our position really holds any value."

Discussion

The majority of teachers surveyed in both years reported positive overall perceptions of team performance pay. The results provided evidence of teachers' motivational beliefs related to the pay program and their efforts to improve student outcomes. Some data suggested an increase in teacher agreement rates in Year 2, with more teachers expecting awards and believing that their efforts mattered. .

Much of the evidence focused in the area of equity theory (Adams, 1965; Mathibe, 2008), which related to teachers' perceptions of distributive justice (i.e., fairness of award amount and distribution), organizational justice (i.e., fairness of the workplace), and procedural justice (i.e., fairness of the process). In responding to close-ended items, teachers expressed beliefs that the program was equitable. However, in the open-ended responses, many teachers commented on their perceived lack of equity about unfair award distribution. Teachers' concern about distributive justice in performance pay programs has been reflected in the literature as well (e.g., Mahony, Menter, & Hextall, 2004; Murnane & Cohen, 1986).

In regards to distributive justice, teachers at at-risk campuses who taught in grade levels that were tested as part of the state accountability system were eligible to receive substantially higher awards than other teachers. Yet, the program was designed to reward teacher teams as a means to enhance equity. Proponents have reasoned that team award systems address the concerns of competition among teachers and the uneven distribution of difficult students. Results from this study indicated that this team component enhanced perceptions of equity for teachers who taught state-tested content courses. However, perceptions of equity were diminished for those teachers who did not have the opportunity to receive as large an award because they taught subjects that were not state-tested.

Conclusion

One of the strengths of this particular study about teacher team performance pay was that quantitative and qualitative data were analyzed. As Tashakkori and Teddlie (2009) point out, mixed methods can be more useful in determining if evaluation criteria are met, because stronger inferences can be made from the breadth of information provided in numbers and the depth of information given in narrative responses. In this research, the sampled teachers were able to express their overall perceptions of the program in response to the closed-response items on the surveys as well as describe their feelings and opinions about specific aspects of the program. Therefore, the analysis of both the quantitative and qualitative data provided a clearer picture of teachers' perceptions of the performance pay program in a way that can inform future research, implementation of teacher performance pay programs, and district and state policies related to performance pay in education.

Although we were able to examine data related to a team performance pay system with a large sample of teachers, limitations remain. A possible limitation was that the findings from the study might not be generalized to other settings. Therefore, to minimize that possibility, we utilized strategies to enhance the rigor of the research including triangulation of qualitative and quantitative research. Another limitation was that some schools did not respond in one of the two survey years. In addition, because the data were archival, the instrument was already designed, and this limitation did not allow any control over the variables or themes included in the survey. As a result, the survey did not take into account other aspects of team performance pay systems.

Several recommendations for implementing teacher performance pay systems became

apparent. Teachers' understood the program and were motivated to improve student performance; therefore, administrators might need to provide clearer and more consistent information about program structures and the necessary criteria to achieve awards. As one teacher expressed, "teachers are not able to meet goals they don't know about." We suggest that practitioners plan for multiple methods of communication so that teachers understand the program rules and remain motivated to achieve the awards.

Another practical recommendation relates to the notion of teacher team motivation. Although teachers in this study reported enhanced cooperation within their respective teams, some teachers who taught in subjects or grades that were not tested believed that the performance system was unfair, inequitable, and not motivating. Consequently, educational leaders should be aware that even though team performance pay might reinforce cooperation within teacher teams, the criteria also could cause division among teachers in the school. District and campus leaders should consider ways to measure the contributions of teachers who do not teach subjects tested in state assessments. Additionally, policymakers might consider whether performance pay programs should allow teachers at all grade levels in all academic subject areas to have the opportunity to earn monetary awards of equal values.

Finally, further study about teacher performance pay is needed, particularly as more U.S. school districts implement such programs. One question that remains is if money is the motivator for teachers to improve their instructional strategies and to collaborate to improve student achievement. Policymakers and district leaders should consider how these limited funds are best used and distributed. Furthermore, more

research is needed on the potentially negative impact that performance pay could have on the motivation of teachers who teach subject areas that are not eligible for performance awards.

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