National Society for the Study of Education

The National Society for the Study of Education was founded in 1901 as successor to the National Herbart Society. It publishes a two-volume Yearbook, each volume dealing with a separate topic of concern to educators. The Society's Yearbook series, now in its one hundred-third year, presents articles by scholars and practitioners noted for their significant work in critical areas of education.

The Society welcomes as members all individuals who wish to receive its publications. Current membership includes educators in the United States, Canada, and elsewhere throughout the world—professors, researchers, administrators, and graduate students in colleges and universities and teachers, administrators, supervisors, and curriculum specialists in elementary and secondary schools, as well as policymakers at all levels.

Members of the Society elect a Board of Directors. The Board's responsibilities include reviewing proposals for Yearbooks, authorizing the preparation of Yearbooks based on accepted proposals, and appointing an editor or editors to oversee the preparation of manuscripts.

Current dues (for 2004) are a modest $40 ($35 for retired members and for students in their first year of membership). Members whose dues are paid for the current calendar year receive the Society's Yearbook, are eligible for election to the Board of Directors, and are entitled to a 33 percent discount when purchasing past Yearbooks from the Society's distributor, the University of Chicago Press.

Each year the Society arranges for meetings to be held in conjunction with the annual conferences of one or more of the national educational organizations. All members are urged to attend these meetings, at which the current Yearbook is presented and critiqued. Members are encouraged to submit proposals for future Yearbooks.

Developing the Teacher Workforce is Part I of the 103rd Yearbook. Part II, published simultaneously, is titled Towards Coherence Between Classroom Assessment and Accountability.

For further information, write to the Secretary, NSSE, College of Education m/c 147, University of Illinois at Chicago, 1040 W. Harrison St., Chicago, Illinois 60607-7133 or see www.uic.edu/educ/nsse

ISSN: 0077-5762

Published 2004 by the
NATIONAL SOCIETY FOR THE STUDY OF EDUCATION
1040 W. Harrison St., Chicago, Illinois 60607-7133
© 2004 by the National Society for the Study of Education

No part of this Yearbook may be reproduced in any form without written permission from the Secretary of the Society.

First Printing

Printed in the United States of America
Board of Directors of the
National Society for the Study of Education
(Term of office expires in the year indicated.)

ARNETHA F. BALL, Stanford University (2006)
ROBERT CALFEE, University of California, Riverside (2004)
WALTER FEINBERG, University of Illinois, Urbana-Champaign (2004)
GARY FENSTERMACHER, University of Michigan, Ann Arbor (2005)
MARY HATWOOD FUTRELL, George Washington University (2006)
PAUL KELLEHER, Trinity University (2005)
JUDITH SHULMAN, WestEd (2005)
JOHN R. WIENS, University of Manitoba (2006)

MARK A. SMYLIE, University of Illinois at Chicago, Interim Secretary-Treasurer
KENNETH REHAGE, Secretary-Treasurer Emeritus

Contributors to the Yearbook

MARK A. SMYLIE, Editor, University of Illinois at Chicago
DEBRA MIRETZKY, Editor, University of Illinois at Chicago

ANGELIQUE ARRINGTON, Johns Hopkins University
NINA BASCIA, University of Toronto
COURTNEY BELL, Michigan State University
KARA FINNIGAN, University of Rochester
MARY HATWOOD FUTRELL, George Washington University
JODIE A. GALOSY, Michigan State University
PAUL GOREN, Spence Foundation
JANET CRAIG HEDDESHEIMER, George Washington University
RICHARD M. INGERSOLL, University of Pennsylvania
CAROLYN KELLEY, University of Wisconsin–Madison
M. BRUCE KING, University of Wisconsin–Madison
PAMELA KONKOL, University of Illinois at Chicago
HILARY LOEB, University of Washington, Seattle
TAMARA F. LUCAS, Montclair State University
DEBORAH LYNCH, Chicago Teachers Union
DAVID MAYROWETZ, University of Illinois at Chicago
EDWARD PAJAK, Johns Hopkins University
THOMAS W. PAIZANT, Boston Public Schools
MARGARET PLECKI, University of Washington, Seattle
JUDI RANDI, University of New Haven
VIRGINIA RICHARDSON, University of Michigan
DIRCK ROOSEVELT, University of Michigan
ANDREW W. SHOUSE, Michigan State University
ANTHONY G. VANDARAKIS, Chicago Public Schools
ANA MARFA VILLEGAS, Montclair State University
SUZANNE M. WILSON, Michigan State University
KENNETH M. ZEICHNER, University of Wisconsin–Madison
CHAPTER 8

Teacher Compensation and Teacher Workforce Development

CAROLYN KELLEY AND KARA FINNIGAN

The federal No Child Left Behind Act of 2001 highlights the importance of teacher quality by calling for a "highly qualified" teacher in every classroom by the end of the 2005-06 school year (for more details, see U.S. Department of Education, 2002). Teacher quality has been found to be an important predictor of student success in school (Rice, 2003; Rockoff, 2003; Sanders & Horn, 1996; Wright, Horn, & Sanders, 1997), yet nearly half of the nation's middle and high school teachers fail to meet the definition of "highly qualified" (U.S. Department of Education, 2003a). Calls for high-quality teachers emerge periodically, but prior to No Child Left Behind, the federal government had never mandated a system-level change of this magnitude.

Through No Child Left Behind, states receive funds that can be used to address "challenges to teacher quality, whether they concern teacher preparation and qualifications of new teachers, recruitment and hiring, induction, professional development, teacher retention, or the need for more capable principals and assistant principals to serve as effective school leaders" (U.S. Department of Education, 2003b, p. 7). These factors provide examples of some of the barriers that policymakers have identified as impeding the improvement of both the quality of the teaching force and the distribution of high-quality teachers.

In this chapter, we focus on the role that one policy area—teacher compensation—can play in inhibiting or advancing teacher quality through its impact on attracting, retaining, and developing a high-quality teaching force. Because compensation reform is at a nascent stage of development, we rely on a variety of information sources for our review, including empirical research studies examining the role that

Carolyn Kelley is Chair and Associate Professor in the Department of Educational Leadership and Policy Analysis at the University of Wisconsin-Madison. Kara S. Finnigan is Assistant Professor of Educational Leadership at the Warner Graduate School of Education and Human Development, University of Rochester.
compensation plays in influencing teacher behaviors, theoretical studies, and case studies of innovative uses of compensation to affect teacher behavior. In some cases, the empirical research is based on small sample sizes, reflecting the difficulty of obtaining good data sources for the study of compensation systems and the lack of good examples to study. Although the chapter focuses solely on compensation, we find significant evidence to suggest that changes in compensation must be part of a larger, systemic reform strategy to strengthen the teacher workforce that focuses on modifying or enhancing a variety of components of teachers' work.

In our examination of compensation for teacher workforce development, we also focus on the unique situation high-poverty, low-performing urban schools face because of the particular challenges to attracting and retaining high-quality teachers in these schools. The demographics of the student population in public schools have shifted dramatically over the past few decades, following the patterns of the larger U.S. population. Both minority and low-income populations have grown but are not equally distributed—urban areas have larger proportions of both types of student. In fact, although minority students make up approximately 39% of the total population of students in U.S. public schools, they represent 62% of students in large or mid-size cities, 35% in urban fringe areas, and 20% in small town or rural areas (Hoffman, 2002). Cities are also more likely than rural, small town, or urban fringe areas to have children living in poverty (NCES, 2003). Students and teachers in the highest poverty schools face other, related challenges, including high rates of absenteeism and low rates of parent involvement (NCES, 2003).

Furthermore, high-poverty schools are more likely than other schools to be staffed by unqualified or underqualified teachers. The 1993-94 Schools and Staffing Survey data showed that students in low-income and high-minority schools were far less likely than other students to have highly qualified teachers, as measured by educational attainment, percentage of staff certified in their field, years of teaching experience, prior education related to subject matter, and teachers' self-assessments of their ability to teach in their assigned field (Jerald, 2002; NCES, 1997). Policies aimed at reducing inequities in the distribution of education dollars across schools and districts within states have failed to alleviate inequitable distributions of highly qualified teachers. The concentration of poor and minority students makes teacher quality particularly a problem facing urban educational settings (Lankford, Loeb, & Wyckoff, 2002).
Public schools are also facing new and higher-stakes accountability policies at the state and federal levels. The idea of accountability in education is not new, but recent policies represent a shift toward primarily holding schools accountable for outcomes rather than inputs (Fuhrman, 1999). These policies typically have two types of consequences: 1) public reporting and 2) rewards or sanctions. Those that incorporate rewards or sanctions are considered the more high-stakes approaches (O’Reilly, 1996). Urban schools are particularly vulnerable to being sanctioned under these accountability policies, as they tend to have more minority and low-income students, are larger in size, have higher rates of teacher absenteeism and student behavior problems, and have fewer resources for teachers (NCES, 1996).

In the next section, we describe teacher compensation in the United States as a background for an examination of the role that compensation plays and could play in teacher workforce development.

**Teacher Pay**

The average teacher salary in the United States in 2002 was $44,367 (not taking into account pay for additional job responsibilities), with significant variation across states. California paid the highest average salary, at $54,348, whereas the lowest average was $31,383, in South Dakota (American Federation of Teachers, 2003). Significant regional differences also exist within states.

Currently, nearly all public school teachers are paid according to the single salary schedule, in which pay is based on years of experience and the accumulation of educational credits and degrees. The single salary schedule has the advantage of being objective, predictable, and relatively easy to administer, even in large urban systems. By decoupling pay from evaluation, the single salary schedule succeeded in reducing the subjectivity of merit pay systems, in which administrators provided pay increases for teacher “merit,” often based on limited objective evidence of teacher performance. With the single salary schedule, teachers rely less on administrator approval, and over time the culture of the education system has begun to shift to a more egalitarian work environment, giving teachers greater autonomy in the classroom (Odden & Kelley, 2002).

In many districts, the single salary schedule has become increasingly elaborated, such that teachers need to commit many years to teaching and obtain a Ph.D. in order to achieve the highest levels on the salary scale. One clear disadvantage of the single salary schedule is that it provides no recognition for knowledge, skill, or effort; the most
gifted teacher is paid according to the same years-on-the-job and education-level scale as the least gifted teacher. In addition, many districts set a maximum limit on the number of years of experience they will recognize when teachers transfer from other districts, so a teacher with 20 years of experience, for example, may only receive credit for 5 years of experience if he or she moves to a different school district. Thus, teachers have a strong incentive to move early in their careers and to move into districts with higher levels of compensation and better working conditions. Gifted experienced teachers who would face significant financial loss if they were to move to another school district may choose to move to other schools within the district that have better working conditions or to leave the teaching ranks in favor of promotion to administrative positions (although in many districts, principals are paid less on an hourly basis than experienced teachers in the same district) (Odden & Kelley, 2002).

In the last few decades, there have been some attempts to alter the single salary schedule. In 1983, *A Nation at Risk* recommended that teacher salaries be “professionally competitive, market-sensitive, and performance-based” (National Commission on Excellence in Education, 1983, p. 30). Districts and states responded to the report with a flurry of activity, establishing merit pay, career ladder, and other incentive pay programs for teachers, most of which were short-lived.

Merit pay programs are typically defined as providing rewards to *individual* teachers for outstanding performance. Several studies have sought to understand why merit pay programs are rarely institutionalized (Educational Research Service, 1978; Hatry, Greiner, & Ashford, 1994; Jacobson, 1987; Johnson, 1986; Murnane & Cohen, 1986). Nearly all have reached the same conclusions:

1. By identifying a small percentage of the best and brightest teachers, merit pay runs counter to efforts to create cultures of collegiality, cooperation, and trust that characterize effective schools (Bryk & Schneider, 2002; Rosenholtz, 1989).
2. Excellence is rarely defined clearly.
3. The procedures for identifying excellence are typically flawed in fundamental ways.
4. Districts and states rarely provide consistent funding for these programs, significantly reducing their motivational value.

Career ladder programs attempt to reform compensation by providing strong teachers with an opportunity to advance to new roles and
responsibilities in the profession yet remain connected to the classroom. Most career ladder programs engage teachers outside the classroom for some portion of their day, during which they spend time on other tasks such as curriculum development and teacher training. Cornett (1994) found that in Arizona, among students taught by teachers in the career ladder program, achievement increased, dropout rates declined, and graduation rates increased. Despite these successes, career ladder programs tend to be short-lived, and most of the programs established in the 1980s were phased out by the mid-1990s (Hatry, Greiner, & Ashford, 1994). One explanation for the lack of long-term commitment to career ladder programs is that the programs tend to be costly. As teachers move up the career ladder, their duties are shifted toward mentoring and other administrative support. This increases the overall cost of instruction as additional teachers are needed to replace the instructional time no longer provided by the promoted teachers.

Beginning in the 1990s, a number of states and districts began to pay bonus awards to groups of teachers within a school, or to entire school staffs, for the achievement of specific educational goals. These school-based performance award programs arose as part of the movement toward greater accountability in public education. With the passage of No Child Left Behind, compensation and accountability have become further intertwined. The act requires that schools either meet state standards or face sanctions and provides funding to states for professional development, recruitment, tenure reform, and performance pay (U.S. Department of Education, 2002).

Also in the 1990s, a number of states and districts instituted incremental pay increases or bonuses for National Board Certified teachers in an effort to compensate teachers for advanced knowledge and skills. The pay increases or bonuses typically ranged from $2,500 to $10,000 per year for the 10-year life of the certificate (Kelley & Gardner, 2002; Kelley & Kimball, 2001). State-to-state comparisons of the number of National Board Certified teachers show that states with pay incentives for National Board Certification have much larger numbers of Board Certified teachers than states without these incentives, suggesting that the incentives were successful (Kelley & Kimball).

Beyond providing pay increases for the development and demonstration of specific teaching competencies, knowledge and skills-based pay systems have been designed to completely replace the single salary schedule. A theoretical advantage to this type of system is that it can provide formative as well as summative feedback to teachers, thereby helping to shape their ongoing professional growth and development.
In this type of system, teachers advance through the salary schedule as they demonstrate successive levels of mastery of teacher knowledge and skills (Odden & Kelley, 2002). This differs from traditional merit pay systems in that 1) it is standards based; 2) every teacher has an opportunity to achieve mastery; and 3) the system is designed to support teacher growth and development. The goal is to align pay with teacher professional development to provide consistent feedback, support, and growth opportunities for teachers to develop their teaching skills. Although such systems have been conceptualized and piloted in Cincinnati (Ohio) and in the state of Iowa, and this type of system is currently in place in the Vaughn New Century Charter School in Los Angeles, knowledge and skills-based pay systems are rare.

Teacher Compensation as a Tool for Attracting, Retaining, and Developing High-Quality Teachers

In this section, we consider teacher compensation in light of the research on teacher attraction, teacher retention and mobility, and the professional growth and development of the teaching workforce.

Attraction

A large body of literature suggests that teacher supply is enhanced when salaries for teachers are made more competitive relative to pay in other professions (Brewer, 1996; Lankford et al., 2002; Manski, 1987; Murnane, Singer, & Willett, 1989). Calls to raise teacher salaries are premised on the idea that higher pay will attract a larger pool of teacher candidates, thereby increasing the pool of more capable teachers. But the supply of teachers depends not only on teacher pay levels but also on the pay levels of other jobs that potential teachers are qualified to pursue. For example, the average beginning teacher salary in the United States in 2002 was $30,719 (with significant regional variation). Even accounting for the shorter work year for teachers, this compares unfavorably to average beginning salaries in engineering ($49,702), math/statistics ($46,744), computer science ($46,495), accounting ($41,162), economics/finance ($41,102), and business administration ($40,242) (American Federation of Teachers, 2003). Several studies have found that teachers in particular fields, such as science and math, have particularly high rates of attrition (Hanushek, Kain, & Rivkin, 1999; Kirby & Grissmer, 1993; Murnane, 1987). Thus, some teacher shortages, such as in science, could be explained by
the competitive labor market for individuals with these skill sets (Mila­
nowski, 2003).

Although there is little doubt that pay level influences career deci­
sions, the relationship between compensation and occupational choice is complex and involves consideration of a number of factors related to the match between the career and individual interests, personality, and values. Thus, even a small increase in beginning pay for teachers might attract an additional set of candidates from the employment pool, specifically those whose personalities and career interests are most closely aligned with the characteristics of a career in teaching (Mila­
nowski, 2003). Furthermore, not only beginning teacher salaries but also the earnings potential for teachers across the entire span of the teaching career may influence teacher employment decisions. Teaching, a highly unionized profession, is characterized by elaborate pay struc­
tures that reward seniority and education. Recent increases in pay have been largely invested in increasing pay for senior teachers, rather than boosting starting pay (Ballou & Podgursky, 1997).

Increased compensation for teachers could boost the quality of the candidate pool if the higher pay results in more highly qualified indi­
viduals seeking teaching careers. Some researchers speculate that, with increased compensation, the quality of teachers hired could increase even if the group of individuals seeking teaching careers remained at the current distribution of talent. This is because the increased pay could lower the attrition rate for existing teachers, thereby enabling administrators to be more selective in filling the resulting smaller num­
ber of vacancies (Ballou & Podgursky, 1997; Murnane et al., 1989).

Because teachers face very different career path choices depending on their field of study, general increases in pay are considered somewhat inefficient mechanisms for raising the quality of the teacher can­
didate pool. In other words, raising teacher pay generally raises pay the same amount for teachers in every field of study, even though history and science teachers (for example) face very different salary trade-offs when comparing their earning power in teaching to other types of positions that they may be qualified to pursue. Furthermore, an overall increase in pay raises compensation levels for teachers regardless of the quality of their contribution. This has led some researchers to theorize that increasing teacher pay will have more impact on teacher quality if pay increases are provided as rewards for high-quality teacher perfor­
mance (Ballou & Podgursky, 1997).

Even so, pay incentives may be inadequate to attract teachers to the highest need schools. In a study of compensation and teacher quality in
the State of New York, Loeb (2000) found that the largest variation in pay occurred across, rather than within, regional labor markets in the state. Further, an examination of teacher qualifications suggested that teacher sorting occurred primarily within districts. That is, the more highly qualified teachers self-sorted away from the high-need schools within their districts.

Policies intended to address these problems include the provision of signing bonuses or housing allowances to lure teachers to less-desirable areas or to higher cost urban and suburban districts. Scant research exists on these recruitment strategies, but one study of Massachusetts is worth noting. In 1998, Massachusetts began a program awarding $20,000 signing bonuses over a four-year period. Teachers were attracted to the program, but retention became a problem: after three years, 47% of the teachers recruited under this program had left their positions (Archer, 2002). Liu, Johnson, and Peske (2003) studied 13 of the 59 individuals who received these bonuses during the first year of implementation and found that the bonuses were too weak an inducement to retain teachers. These researchers found that many teachers had left because of inadequate working conditions, including a lack of support at their schools. The following paragraphs describe the literature on teacher retention in more detail.

Retention and Mobility

The teaching profession is characterized by relatively high rates of teacher turnover, with as much as half of that turnover representing movement between schools and districts. Using data from the Schools and Staffing Survey, Ingersoll (2001) found that 14% of teachers left their schools in 1993-94. Turnover is higher for new teachers. A 1997 NCES study found that 9% of public school teachers left teaching before they had completed their first year in the classroom. In addition, 25% to 30% of teachers leave within their first five years, with low-performing schools losing teachers at even higher rates (Certo & Fox, 2002; NCREL, 2001).

Teacher mobility appears to have a detrimental effect on urban schools. A study in New York State found that New York City experienced a higher-than-average rate of teacher transfer to other school districts. This higher transfer rate had an adverse effect on teacher quality in New York City schools because teachers who transferred out of the district were found to have higher qualifications on average than those who stayed in the same school or transferred within their own districts (Lankford et al., 2002; Murnane et al., 1989).
Those transferring [from New York City] to another district have failed the certification exams half as often as those remaining in the same school. They are twice as likely to have attended a most or highly competitive college, and about half as likely to have attended the least competitive college. (Lankford et al., 2002, p. 50)

Pay clearly influences teachers’ decisions to transfer to another school or leave the profession altogether (Certo & Fox, 2002; Hanushek, Kain, & Rivkin, 2001; Ingersoll, 2001; Shen, 2001). A study of teachers in seven Virginia districts found that salary was the top reason that teachers reported for leaving the profession (Certo & Fox). Other factors identified included a lack of administrative support, student discipline problems, lack of student motivation, lack of influence over decision making, and lack of planning time (Certo & Fox; Ingersoll). The characteristics of the work environment, such as the races and achievement levels of students, have also been identified as important predictors of teacher decisions to move to other schools or districts (Hanushek et al.; Shen). Thus, teacher pay is a contributing factor to teachers’ decisions to stay or leave, but the context of teacher work is also critically important.

Professional Growth and Development of the Teacher Workforce

Teacher compensation can also be in the form of incentives and rewards for teacher performance and for the growth and development of teachers throughout their careers. The single salary schedule, which is currently the dominant structure of teacher compensation, has been criticized because advancement on the schedule is not associated with teacher performance or knowledge and skill development. Although research suggests that experience is related to teacher quality in the first few years of teaching, in subsequent years there is no statistically significant relationship between years of experience and teacher performance (Murnane & Phillips, 1981). Furthermore, although some studies have found that having a degree in the subject taught has a small positive effect on teacher performance at the high school level, in general, educational credits and degrees are also a weak indicator of teacher quality (Lankford et al., 2002).

Therefore, here we consider the potential role that compensation might play in shaping the professional growth and development of the teaching force. We consider two new types of pay—school-based performance pay and knowledge and skills-based pay—as alternative approaches to compensating teachers that could be used to shape teacher workforce development.
Pay for Performance. School-based performance award policies attempt to motivate changes in individual teacher behavior that will lead to improved school-level performance. In most cases, these policies provide individual bonuses to all teachers when a school meets a particular standard or growth target. The underlying theory of these policies is that school performance will improve when the level, focus, and quality of teacher effort is improved.

Past research has found that performance for some students does appear to improve when school-based performance award programs are in place. For example, the performance of Hispanic and White students (see Ladd, 1999), as well as elementary students (see Poggio, 2000), improved under these programs. Schools that improve under such plans are characterized by high teacher expectancy (Kelley, Heman, & Milanowski, 2000). That is, student performance improves in schools where teachers have a strong belief in their own abilities and in their collective ability to achieve the accountability goals set for them. Teacher expectancy, in turn, is affected by certain organizational conditions such as a belief among the teachers that the reward program is fair, opportunities for teachers to receive and understand student performance feedback, no conflicts with other school goals, and strong and committed principal leadership and support (Kelley & Finnigan, 2003).

Although some benefits of school-based performance award programs have been identified, concerns remain about the implementation of these policies. First, without systematic realignment and investment in teacher knowledge and skills and improvements in organizational performance, performance pay plans can work only to the extent that teachers already have the capacity to change their practices to improve student performance. Thus, empirical studies on group-based performance pay systems have shown that, typically, short-term gains in student performance reflect stepped-up efforts to align instructional content with state standards and to prepare students for the test by familiarizing them with its approach and emphasizing its importance. Longer-term gains reflect improvements in teacher capacity produced by intensive and focused professional development; opportunities for increased problem solving among teachers; more sophisticated efforts at curriculum alignment and refinement, both within and across grade levels; and systematic evaluation of student performance data with feedback into curriculum and program design (Kannapel, Coe, Aagaard, Moore, & Reeves, 2000; Kelley, 1998; Kelley & Protsik, 1997; Stecher & Barron, 1999).
Second, whether the program motivates changes in teacher behavior is only one measure of its effectiveness. An equally important question is whether the accountability incentives produce desirable behaviors. Some researchers and practitioners have expressed concern that school-based performance award programs may overly narrow the curriculum; divert it from important instructional goals that are not assessed; and negatively influence educator behaviors, including encouraging administrator and teacher flight from low-performing schools (Kannapel et al., 2000; King & Mathers, 1997; Ladd & Walsh, 2002; McNeil, 2000; Poggio, 2000; Stecher & Barron, 1999). However, it is also the case that accountability systems with a school-based performance award component have focused teacher efforts in some desirable ways, providing focus and attention to data to inform instructional decisions, promoting collaboration among teachers, enhancing and focusing professional development for teachers, and promoting improvements in student achievement (Kelley et al., 2002).

The research shows that the measure of student performance chosen and the overall incentive design shape behavioral outcomes. The research suggests that pay can clearly provide an incentive that motivates changes in teacher and administrator behaviors. However, we note that it is relatively easy to get the incentives “wrong,” and much more difficult to get them “right.”

Pay for Knowledge and Skills. Pay for the development and demonstration of teacher knowledge and skills, such as National Board Certification, is another form of compensation for teachers designed to enhance the quality of the teaching workforce. Because teachers with National Board Certification are overrepresented in states with incentive policies, pay appears to motivate teachers to undergo this process. Teachers participating in the process say that Board Certification is a powerful professional development activity (Belden, 2002; Buday, 2001; Kelley & Gardner, 2002; Kelley & Kimball, 2001; NBPTS, 2002); therefore, pay for National Board Certification could be viewed as pay for knowledge and skill development as teachers hone their skills in preparation for, and during their participation in, the certification process. An issue of concern in state-level pay incentives for National Board Certification is that, due to the unequal distribution of qualified teachers, there may be few teachers in the lowest performing schools who even qualify to apply for Board Certification. Furthermore, research has shown that minority candidates are less likely than others to achieve National Board Certification (Bond, 1998). Some states have
tried to use Board Certification as a mechanism for identifying excellent teachers and encouraging them to move to low-performing schools (Belden). Additional research is needed to understand the impact of these targeted policies.

Another use of knowledge and skills-based pay has been to replace the single salary schedule with an elaborated set of rewards for the demonstration of teacher knowledge and skills. The only known example of this approach is the Vaughn New Century Charter School. Vaughn is a PK-6 school with a history of low performance located in an extremely impoverished neighborhood of South Central Los Angeles. It became a charter school in 1993 and adopted an alternative pay plan in 1997-98 (Kellor, 2003a). Although this is a unique case in that the school is led by a particularly strong and charismatic principal, it provides one of the few examples of a fully implemented knowledge and skills-based pay program. Vaughn adopted its pay strategy to improve recruitment to a highly challenged school in a very tight teacher employment market (California).

The principal has used the pay plan to reward teachers for the development and demonstration of knowledge and skills. Evaluation data suggest that the school has become more competitive in attracting new teachers and has retained them by providing opportunities to achieve much higher initial salaries and salary advancement that outpaces other schools in the Los Angeles Unified School District. In 2002-03, Vaughn paid $33,150 as a base salary, with an additional $2,000 for a California Teaching Credential, $2,000 for a master’s degree, and up to $4,500 for knowledge and skills in English as a Second Language, Mathematics, Special Education Inclusion, Classroom Management, or Lesson Planning. The additional pay may be particularly attractive to teachers in the Los Angeles market, where the cost of living is prohibitively expensive for many new teachers. A validation study of the program showed that teacher evaluation ratings were significantly related to student performance gains in reading, but not in math (Gallagher, 2002).

Although this type of compensation system can focus attention on the goals and expectations for teachers, knowledge and skills–based pay systems are difficult to implement. A key challenge is developing the institutional capacity required to assess teacher knowledge and skills accurately across all skill levels, with sufficient reliability and defensibility to assign pay based on the judgments of evaluators (Gallagher, 2002). In this case, capacity includes having highly skilled evaluators who can assess teaching practice accurately from the lowest to
the highest skill levels and investing the resources needed to collect sufficient teaching evidence (typically through multiple observations and review of curricular materials and lesson plans) to make an informed and accurate assessment of teaching practice. Principals are the primary evaluators in most schools but they may lack the knowledge, skills, and time necessary to effectively implement such a pay system. Furthermore, when the stakes on evaluation are high, the process can quickly become politicized, to the detriment of the formative goals of the evaluation system (Halverson, Kelley, & Kimball, 2003).

Thus, the limited research on knowledge and skills-based pay suggests that compensation can provide incentives for knowledge and skill development and can contribute to focusing and motivating teachers to work toward specific goals, but more research is needed to determine how well these systems work in practice. Furthermore, pay plays an important role in attracting and retaining teachers, but it will be most effective when disparities in school resources and working conditions are also addressed.

Teacher Compensation and Low-Performing Schools

Compensation has the potential to be an important policy lever for improving teacher quality by enhancing the ability of schools and districts to attract, retain, and encourage the development of the teacher workforce. However, measures of the success of these incentives should consider whether they have achieved the equitable distribution of high-quality teachers across districts and states to ensure that even the highest poverty, lowest performing schools benefit from these policies.

Attracting and Retaining Teachers in Low-Performing Schools

Attracting and retaining high-quality teachers in low-performing schools is a critical issue given the No Child Left Behind requirement that schools either meet standards or face sanctions. Currently, most districts use the same pay scale for all teachers within the district, regardless of school assignment. Policies that increase teacher pay district-wide would not provide an incentive for teachers within a district to select the highest need schools. Instead, district or state policies would have to provide additional funds to teachers in the lowest performing schools.

Furthermore, teacher retention is a critical problem for urban schools serving low-income and minority populations. Turnover is much
higher in teaching than in other professions (Ingersoll, 2001), and low-performing schools frequently lose their best teachers to higher paying school districts with higher performing student populations, typically those with fewer minority students (Lankford et al., 2002). The evidence suggests that teachers who stay in teaching migrate from lower to higher paying districts, and from lower to higher performing schools, particularly in high-stakes accountability environments (Hanushek et al., 2001; Ladd, 2001; Lankford et al.). Lankford, Loeb, and Wyckoff found that highly qualified teachers were likely to move to schools with higher wages and better working conditions, including schools with significantly lower proportions of poor and non-White students, smaller class sizes, and salaries that were between 12% and 22% higher than their original districts. Teachers who leave indicate that pay is the most important factor for their leaving, followed by a number of other issues related to working conditions, including the challenges characteristic of teaching at-risk populations of students in low-performing schools (Certo & Fox, 2002; Ingersoll).

Similar results were found in a study of teacher transfer and exit in Wisconsin public schools. In a quantitative analysis of teacher transfer behaviors in Milwaukee and surrounding districts, Imazeki (2000) found that high-need districts had higher teacher transfer rates. The regression models suggested that increasing the wages of teachers in high-need districts relative to other districts could reduce both exit and transfer attrition, but a 25% to 33% salary differential would be needed to equalize transfer rates for Milwaukee teachers (for example) with those for teachers in surrounding districts.

Juxtaposed with consideration of the structure of compensation, it is not surprising that the best and brightest teachers choose to leave low-performing urban schools for higher pay and less-challenging working conditions in the suburbs. Urban settings are often more expensive than suburban settings, and the structure of teacher pay is such that it takes years to work one's way up the pay scale. As gifted and talented individuals see their friends in other professions moving ahead, they face a 30-year climb to the top of the pay scale, complete with the promise of evenings and weekends committed to additional graduate study to get ahead.

Because some districts limit the number of years of experience that transferring employees can claim on the pay scale (see, e.g., Ballou, 2000), the imperative to move early is reinforced, and teachers are encouraged to select a district they know they can live with for a long time. There is plenty of research to show that teachers are sensitive to
pay levels in their decisions to transfer (Ingersoll, 2001; Lankford et al., 2002) and that higher pay would encourage them to stay in the more challenging learning environments (Imazeki, 2000). But the size of the pay increase required to entice teachers to stay would likely be prohibitive if it were applied according to the current lock-step pay scale.

Compensation Strategies Focused on Low-Performing Schools

The challenge for urban districts is to develop attractive, competitive, and cutting-edge compensation strategies that enable them to retain an advantage over their suburban competitors. The desire to attract qualified teachers is high, and the resources available to many suburban districts enable them to quickly match and better alternative pay strategies currently offered by urban districts in an attempt to attract and retain a high-quality teaching force.

State-level efforts to reduce district practices of limiting the number of years of experience credited to transferring teachers and to encourage district experimentation with pay approaches that reward the development and demonstration of teacher knowledge and skills can also enhance teacher willingness to commit some portion of their careers to working in challenging school settings. These efforts need to be combined with purposive strategies to reward teachers for their experiences in challenging educational settings, including creating expectations that excellent leaders will commit at least a portion of their careers to working in these settings and will be rewarded for this service with both pay and career advancement.

Increasing entry-level pay could serve as an additional factor in attracting highly qualified teachers to low-performing schools. Even the most dedicated teacher needs to be able to pay the rent, and in many areas, teacher pay is wholly insufficient to provide even a minimum standard of living. Increased pay for beginning teachers could provide an important incentive to attract qualified (certified) teachers to challenged school environments. Opportunities for increased pay combined with other rewards for strong performance may provide an important incentive to attract and retain more highly qualified teachers to challenged schools. These incentives are likely to be more effective than signing bonuses, which provide the initial attraction but do little to encourage teacher retention (see, e.g., Archer, 2003).

It is important to retain a systemic approach to the issue of teacher quality and consider the range of factors that contribute to an unequal distribution of teacher quality within schools and across schools and districts. Most teachers identify compensation and working conditions as
key factors in their decisions to leave their current schools. Policymakers and administrators must consider a variety of approaches to compensate for the additional challenges facing educators in schools with very low-income and highly at-risk populations of students. Along with restructured pay systems, such compensation could include reduced class sizes, reduced teaching loads, more opportunities for mentoring and professional growth and development, increased teaching resources, opportunities to serve under strong and effective school leaders, more opportunities for long-term career advancement, and cultures that encourage service rotations across the district rather than unidirectional migration out of the lowest performing schools. These other non-monetary types of compensation may be as important as competitive salaries and other monetary rewards for attracting teachers to challenged schools, as evidenced by recent strikes over health insurance in four districts (Keller, 2003).

Although knowledge and skills-based pay systems provide a unique opportunity to reward teacher growth and development, the success of these types of systems depends in part on the abilities of the principals (or others who serve as evaluators) to provide meaningful, accurate, developmental feedback to teachers. They also require a significant time investment in order to observe and review evidence for the evaluation. Thus, such systems can be somewhat costly to administer. Very low-performing schools may be the ones least likely to have the capacity to effectively implement them. These schools are likely to need significant investment in evaluator training, teacher professional development, and staffing to implement the evaluation piece of a knowledge and skills-based pay system effectively.

Finally, accountability policies may increase the inequality among schools, as strong teachers seek opportunities in districts that are more likely to be rewarded and less likely to be identified as poor performing. The evidence cited from New York City and Milwaukee suggests that this is true, as it is the more highly qualified teachers who move out of the urban district to seek higher pay and better working conditions. Policymakers must find ways to hold schools accountable without discouraging the most effective teachers. Careful research is needed on the impact of accountability pressure on teacher supply, retention, and mobility to inform policy decisions about the kinds of incentive structures that will improve the performance of these schools without chasing away the very best teachers.
Conclusion

Teacher compensation policies provide powerful incentives and have a significant role to play in attracting and retaining high-quality teachers and developing the teacher workforce. However, the limited research in this area also suggests that a systemic approach involving districts and states that invests in positive changes to organizational cultures and capacities, combined with changes in teacher compensation, has the potential to attract more highly qualified teachers to low-performing schools and to enhance the quality of the teaching force more generally. As the language of No Child Left Behind suggests, no single intervention is likely to significantly enhance the quality and distribution of the teaching force. Instead, attention should be paid to a constellation of factors contributing to persistent school failure, including but not limited to the distribution of resources, leadership, social capital, culture and climate, management, and parent and community support.

In this chapter, we have tried to raise a number of important issues related to the role of compensation reforms in developing the teaching workforce because the research in this area, to date, has paid little attention to either the impact of these reforms on altering the distribution of teacher qualifications across schools and districts or the effect of these policies on low-performing schools. Further attention is needed to understand current disparities and to identify ways that compensation can be used as part of a broader strategy to address them.

Notes

1. No Child Left Behind defines "highly qualified" as those who hold a bachelor's degree from a four-year college, have state certification, and demonstrate competence in the subject they teach.

2. Early innovators in school-based performance awards include Douglas County, Colorado; Dallas, Texas; Boston, Massachusetts; Charlotte-Mecklenburg, North Carolina; Kentucky; Texas; and Florida. Other examples include programs in Denver, Colorado; Atlanta, Georgia; California; Maryland (which paid awards to schools for discretionary school spending); and Ontario, Canada. These programs vary widely in context, design, and implementation, but all represent a movement to link pay in the form of school-wide bonuses to student performance outcomes.

3. In addition, the state of Idaho is exploring the development of a statewide knowledge and skills-based salary schedule; Minnesota has just announced a proposal to create a pilot program to award excellent teachers up to $100,000 in bonuses for working in one of the state's five most difficult schools; in 2004, Florida will begin piloting programs for a 2004-05 requirement that all school districts in that state implement a career ladder program for classroom teachers that includes four salary levels: associate, professional, lead, and mentor teacher (Kellor, 2003b).
References


272 TEACHER COMPENSATION


National Society for the Study of Education

The National Society for the Study of Education was founded in 1901 as successor to the National Herbart Society. It publishes a two-volume Yearbook, each volume dealing with a separate topic of concern to educators. The Society's Yearbook series, now in its one hundred-third year, presents articles by scholars and practitioners noted for their significant work in critical areas of education.

The Society welcomes as members all individuals who wish to receive its publications. Current membership includes educators in the United States, Canada, and elsewhere throughout the world—professors, researchers, administrators, and graduate students in colleges and universities and teachers, administrators, supervisors, and curriculum specialists in elementary and secondary schools, as well as policymakers at all levels.

Members of the Society elect a Board of Directors. The Board's responsibilities include reviewing proposals for Yearbooks, authorizing the preparation of Yearbooks based on accepted proposals, and appointing an editor or editors to oversee the preparation of manuscripts.

Current dues (for 2004) are a modest $40 ($35 for retired members and for students in their first year of membership). Members whose dues are paid for the current calendar year receive the Society's Yearbook; are eligible for election to the Board of Directors, and are entitled to a 33 percent discount when purchasing past Yearbooks from the Society's distributor, the University of Chicago Press.

Each year the Society arranges for meetings to be held in conjunction with the annual conferences of one or more of the national educational organizations. All members are urged to attend these meetings, at which the current Yearbook is presented and critiqued. Members are encouraged to submit proposals for future Yearbooks.

Developing the Teacher Workforce is Part I of the 103rd Yearbook. Part II, published simultaneously, is titled Towards Coherence Between Classroom Assessment and Accountability.

For further information, write to the Secretary, NSSE, College of Education m/c 147, University of Illinois at Chicago, 1040 W. Harrison St., Chicago, Illinois 60607-7133 or see www.uic.edu/educ/nsse

ISSN: 0077-5762

Published 2004 by the
NATIONAL SOCIETY FOR THE STUDY OF EDUCATION
1040 W. Harrison St., Chicago, Illinois 60607-7133
© 2004 by the National Society for the Study of Education

No part of this Yearbook may be reproduced in any form without written permission from the Secretary of the Society.

First Printing
Printed in the United States of America
Board of Directors of the
National Society for the Study of Education
(Term of office expires in the year indicated.)

ARNETHA F. BALL, Stanford University (2006)
ROBERT CALFEE, University of California, Riverside (2004)
WALTER FEINBERG, University of Illinois, Urbana-Champaign (2004)
GARY FENSTERMACHER, University of Michigan, Ann Arbor (2005)
MARY HATWOOD FUTRELL, George Washington University (2006)
PAUL KELLEHER, Trinity University (2005)
JUDITH SHULMAN, WestEd (2005)
JOHN R. WIENS, University of Manitoba (2006)

MARK A. SMYLIE, University of Illinois at Chicago, Interim Secretary-Treasurer
KENNETH REHAGE, Secretary-Treasurer Emeritus

Contributors to the Yearbook

MARK A. SMYLIE, Editor, University of Illinois at Chicago
DEBRA MIRETZKY, Editor, University of Illinois at Chicago

ANGELIQUE ABBINGTON, Johns Hopkins University
NINA BASCIA, University of Toronto
COURTNEY BELL, Michigan State University
KARA FINNIGAN, University of Rochester
MARY HATWOOD FUTRELL, George Washington University
JODIE A. GALOSY, Michigan State University
PAUL GOREN, Spence Foundation
JANET CRAIG HEDDESHIMER, George Washington University
RICHARD M. INGERSOLL, University of Pennsylvania
CAROLYN KELLEY, University of Wisconsin–Madison
M. BRUCE KING, University of Wisconsin–Madison
PAMELA KONKOL, University of Illinois at Chicago
HILARY LOEB, University of Washington, Seattle
TAMARA F. LUCAS, Montclair State University
DEBORAH LYNCH, Chicago Teachers Union
DAVID MAYROWETZ, University of Illinois at Chicago
EDWARD PAJAK, Johns Hopkins University
THOMAS W. PAIZANT, Boston Public Schools
MARGARET PLECKI, University of Washington, Seattle
JUDI RANDI, University of New Haven
VIRGINIA RICHARDSON, University of Michigan
DRICK ROOSEVELT, University of Michigan
ANDREW W. SHOUSE, Michigan State University
ANTHONY G. VANDARAKIS, Chicago Public Schools
ANA MARFA VILLEGAS, Montclair State University
SUZANNE M. WILSON, Michigan State University
KENNETH M. ZEICHNER, University of Wisconsin–Madison