

## **Teacher Compensation and the Promotion of Highly-Effective Teaching**

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### **Introduction**

Teachers have sizable effects on students' achievement gains and later life outcomes and widely differ in their effectiveness. For example, students taught by a highly-effective teacher learn the equivalent of 1.5 years of material in an academic year, whereas students taught by an ineffective teacher learn only 0.50 years of material. Given the importance of teachers to a high-quality education system and a state's economic and civil well-being, state and local officials face strong incentives to enact policies that improve the recruitment, distribution, and retention of highly-effective teachers. Towards this end, teacher compensation policies represent a key mechanism to shape the quality of the state's teacher workforce.

### **Background on Teacher Compensation**

Estimates indicate that over 95 percent of school districts in the United States currently pay teachers using a single salary structure. This compensation system emerged in the mid-twentieth century to uniformly pay teachers according to their level of teaching experience and educational attainment—two criteria thought to be strongly related to teacher performance. With the single salary structure, teachers receive additional pay for each year of experience accumulated and earn permanent salary increases for holding graduate degrees or National Board Certification.

North Carolina uses a state-wide salary structure to compensate teachers according to their level of experience and provides 10 and 12 percent pay increases, respectively, for teachers holding a graduate degree or National Board Certification. Additionally, North Carolina school districts can provide teachers annual salary supplements that represent a fixed dollar amount or fixed percentage of teachers' base salary. Since the start of the Great Recession, North Carolina has provided teachers only one cost-of-living raise and has not provided salary increases to early-career teachers for each year of experience accumulated. As a result, average teacher salaries in North Carolina now rank 46<sup>th</sup> and average beginning teacher salaries rank 45<sup>th</sup> out of 50 states. These statistics may be particularly concerning since teacher salaries are related to turnover rates.

### **Critiques of the Single Salary Structure**

There are two main critiques of the single salary structure: (1) it does not align teacher pay with teacher performance and (2) it does not pay higher salaries or provide bonuses to encourage teachers to enter or remain in hard-to-staff schools or subject areas.

Regarding the alignment of teacher pay, evidence indicates that teacher experience and graduate degree status explain only a small portion of the variation in teacher effectiveness. Essentially,



teachers with these credentials earn more money but are not necessarily more effective.<sup>1</sup> This compensation system differs from many of those used in the private sector where employee pay is often comprised of base pay—guaranteed salary or hourly rate—and variable pay—non-guaranteed compensation determined by individual or group performance. By separating teacher pay from their performance, the single salary structure may make the teaching profession less attractive to enter or persist in for highly-capable job candidates.

Regarding additional compensation to teach in certain schools or subject areas, studies consistently demonstrate that teachers prefer to work in schools with fewer poor, minority, and low-achieving students. Further, many states, including North Carolina, face a shortage of qualified teachers in special education and secondary grades math and science classes. As a result of these preferences, teachers are more likely to leave hard-to-staff schools and students attending these schools or enrolled in hard-to-staff subjects are less likely to be taught by highly-effective teachers.

### Types of Teacher Compensation Reform

Recruitment Pay: To encourage individuals to enter the teaching profession, states or school districts may offer recruitment incentives, such as signing bonuses, college scholarship/loan forgiveness programs, housing assistance, or higher salaries for beginning teachers. States/districts may provide such incentives broadly or target these incentives at a select group—e.g. academically-competitive individuals—in order to address teacher shortages or improve the quality of their teacher workforce. For instance, 27 states provide college scholarships or loan forgiveness to those who earn a teaching certification and teach in-state; 11 of these programs specifically target high-achieving teacher candidates.

Evidence from North Carolina shows the promise of these scholarship initiatives. North Carolina Teaching Fellows—academically-competitive individuals who receive a four-year college scholarship to earn an education degree and teach in-state—have higher academic qualifications (e.g. SAT scores, GPA), are more effective, and persist longer in the state’s public schools.<sup>2</sup> More broadly, research on selective recruitment suggests that many recipients would have entered teaching without the financial incentive; recruits without prior teacher preparation may need additional supports to succeed as teachers. So are the scholarship initiatives good or not? May need additional verbage (however, on the other hand, etc.)

Merit Pay: To link teachers’ compensation to their knowledge, skills and performance, states or school districts can provide merit pay. Overall, there are two types of merit pay: (1) knowledge and skills pay, which rewards teachers for completing activities—portfolios, standards-based evaluations, National Board Certification—related to improved student outcomes and (2) pay for

<sup>1</sup> Evidence indicates that in teachers’ first three to five years they become much more effective. Beyond this point, however, there are no discernable differences in teacher performance.

<sup>2</sup> North Carolina created the Teaching Fellows program in 1986 to attract the state’s best and brightest into the teaching profession. In 2011, the North Carolina General Assembly restricted funding for the program and no new scholarships have been offered since that time.

performance, which rewards teachers based on their students' outcomes (typically test score gains). Pay for performance systems are similar to those in the private sector—ensuring a level of base pay for teachers and providing opportunities to earn more (variable pay) based on effectiveness—and can be designed to allot awards according to the performance of an individual teacher or a group of teachers. Critics of knowledge and skills pay assert that it rewards teachers for completing activities or acquiring credentials that are not directly linked to student performance. Critics of pay for performance charge that the teaching profession is not well-suited for such a system since teaching is a cooperative endeavor in which it is difficult to accurately gauge teacher effectiveness. Further, an exclusive focus on student test score gains is impractical, since many teachers do not teach a grade/subject in which students are assessed, encourages teachers to ignore non-tested material, and may cause effective teachers to move to high-performing schools where they believe it is more likely that they will earn a performance bonus. On the other hand, there are two ways in which pay for performance systems may improve academic outcomes: (1) the opportunity to earn more based on effectiveness motivates teachers to try harder or seek out additional resources to improve their teaching and/or (2) the existence of a performance pay system encourages higher-caliber individuals to enter or remain in teaching.

Evidence on the effects of merit pay programs is currently mixed. Teachers participating in Denver's "ProComp," which provides pay for both knowledge and skills and individual and group performance, are 39 percent less likely to leave the district. However, this finding is much weaker for teachers in high-poverty schools and is driven by those earning annual incentives of more than \$5,000. In Washington D.C., high-performing teachers eligible for a permanent pay raise increased their IMPACT evaluation ratings (based on classroom observations and student test scores) more than high-performing teachers ineligible for the pay raise, suggesting that monetary incentives may increase teachers' effort. Conversely, evidence from several recent random assignment studies shows that teachers and/or schools eligible for sizable performance payments did not significantly increase student achievement. This suggests that a financial incentive alone, without additional supports (e.g. instructional coaching, professional development), may be insufficient to increase teacher performance. Further research is required to determine whether, long-term, performance pay systems increase teacher effectiveness or encourage higher-caliber teachers to enter or remain in teaching.

*Hazard Pay:* To encourage teachers to accept positions in high-need schools or subjects, states or school districts may provide financial incentives. Commonly known as "hazard pay", these awards can be one-time or ongoing, can focus on recruiting and/or retaining teachers in these schools and subject areas, and can be provided to all teachers or targeted at high-quality teachers.

Evidence from the North Carolina Bonus Program, which from 2001-02 through 2003-04 awarded an annual bonus of \$1800 (approximately three to seven percent of eligible teachers' base pay) for certified math, science, and special education teachers to remain in their high-poverty or low-achieving schools, indicates that hazard pay can change teachers' behavior. Overall, teachers eligible for the program increased their in-school retention rates by 17 percent,

with the largest effects observed for experienced teachers. For states/districts considering hazard pay programs, it is important to design systems that avoid unintended consequences, such as incentives for teachers to keep their school low-performing so that they remain eligible for hazard pay. Further, research suggests that it may be more challenging and costly to entice highly-effective teachers (relative to average teachers) to move to or remain in high-need schools.

*Career Ladders:* To provide highly-effective teachers with opportunities for career advancement, states and school districts can create career ladders. These systems may encourage teacher retention and improvements in school-level achievement by allowing master teachers to modify their teaching load and take on more responsibilities within the school or district, such as mentoring novice teachers or serving as a curriculum specialist, in exchange for higher salaries and professional status. This non-monetary incentive may be particularly valuable since teaching is the rare profession in which an individual can retire with the same job title after decades of employment.

Outside the United States, several high-performing countries, such as Finland and Singapore, incorporate career advancement opportunities into their systems for developing and managing highly-effective teachers. In the United States, career ladders were a popular reform initiative in the 1980s and 1990s, however, evidence on their effects is limited. Today, the Teacher Advancement Program (TAP), which provides teachers with multiple career paths, ongoing professional development, instructionally focused accountability, and performance pay is the most widespread initiative (approximately 350 schools and 80 districts across the country) incorporating career ladders. While this program has been linked to increased achievement and teacher retention, the unique contribution of career ladders to these results is unknown.

## Summary

The effects of compensation reform on teacher performance and the retention of highly-effective teachers are mixed. Financial incentives can increase individuals' entry into and retention in the profession, both overall and in high-need schools, but there is much to learn about the optimal size of monetary awards and whether performance pay can encourage teachers to improve their effectiveness or result in higher-caliber individuals selecting and staying in the profession. Moving forward, continued experimentation and research is necessary to determine the most promising compensation practices. To improve teacher performance and retention, however, North Carolina policymakers must also address the quality of teacher preparation programs; the supports, resources, and working conditions available to teachers; standards to measure quality teaching; and the status of the teaching profession.

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