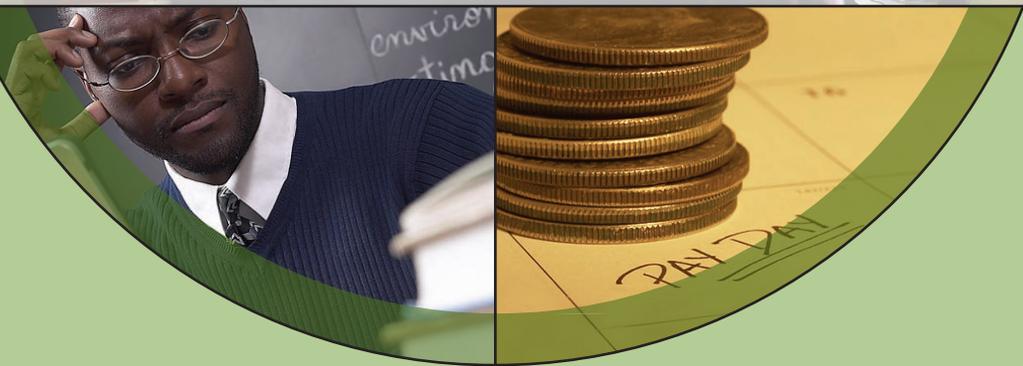




## Denver's ProComp and Teacher Compensation Reform in Colorado



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## Executive Summary

In its first year of full operation, Denver's Professional Compensation System for Teachers (ProComp) has attracted national attention as an innovative model for school districts to change how instructors are paid. The system grew out of a four-year pilot program that tested various elements of compensation reform in select Denver schools. In 2004, both the Denver Public Schools Board of Education and Denver Classroom Teachers Association approved ProComp. In 2005, Denver citizens voted to approve a \$25 million tax increase to implement the full plan.

Teachers hired before 2006 can decide whether or not to join ProComp. Roughly 28 percent of veteran instructors had enrolled through the opt-in window that ended in June 2006. Every Denver teacher hired in 2006 and thereafter automatically is paid according to the new plan. In all, ProComp determines the salaries of nearly half of the district's teaching workforce. Denver's pay system divides rewards among four major components:

- *Market incentives* consist of bonuses to qualified teachers who work in challenging schools or hard-to-fill job specialties.
- *Student growth* includes individual and group incentives to teachers who measurably help students improve their classroom performance.
- The *knowledge and skills* component features pay raises to instructors who complete relevant academic degrees, national certification, or professional development projects.
- The *professional evaluations* component attaches a marginal salary increase to a teacher's satisfactory evaluation from a principal or other building administrator.

By adopting ProComp, Denver Public Schools has acknowledged that the traditional salary schedule is not the best way to achieve its educational goals. The district deserves praise for its genuine reform efforts. Yet Denver can do more to tie teacher compensation to student achievement, while filling important personnel needs. Thus ProComp falls short in several areas:

- The teacher salary increases for meeting student growth objectives (\$342) and for exceeding state assessment expectations (\$1,026) are too small next to other payouts. New research strongly suggests merit pay based on student growth brings significant learning gains, without negative effects to a school's work environment.
- The largest pay increase (\$3,078) rewards National Board certification, but research is mixed at best on what difference the certification makes in measurable student learning.
- The continuing inflexibility of entry-level salary offerings limits the district's ability to attract the highest-quality teaching workforce.
- Poorly-performing instructors remain protected by Colorado statute, which makes dismissal from their jobs a very costly and difficult process.

Even so, ProComp has broken important ground in teacher compensation from which Colorado education leaders can expand and advance reform:

- Denver and other school district leaders should work to adopt merit pay programs that offer the greatest rewards for student results.
- The state should provide financial grants and technical assistance that move local boards of education to implement the best possible performance pay systems.

## ProComp: A Brief History to Date

Denver Public Schools (DPS), in partnership with the Denver Classroom Teachers Association (DCTA), has stepped forward to help redefine how teachers should be paid. Nearly all Colorado school districts pay their teachers according to a defined salary schedule based strictly on years of experience and graduate credit attained. DPS has moved in a different direction.

In 1999, during tense contract negotiations with DCTA, DPS board members proposed a merit pay policy. Though unwilling to make such a radical change, union leaders agreed to join an effort to change the method for paying teachers. The two parties since have worked to develop the Professional Compensation System for Teachers,

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better known as ProComp. Sixteen Denver schools participated in a four-year pilot program to test some of the system's critical elements.

The Community Training and Assistance Center (CTAC) conducted a comprehensive study of the four-year ProComp pilot program. The study included the finding that ProComp successfully overcame the most common teacher objections to "performance for pay" programs:

- That they are governed by the whim of subjective administrators;
- That they are filled with inequities due to different student backgrounds;
- That they promote "teaching to the test;"
- That they foster internal competition at the expense of professional cooperation.<sup>1</sup>

DCTA followed the Board of Education's lead, as 59 percent of union members voted in March 2004 to approve district-wide implementation of the new compensation system. In so doing, local union leaders bucked their national organization. DCTA's parent National Education Association (NEA) remains committed to upholding the current salary model. The Colorado Education Association (CEA) has taken a more nuanced stance. CEA supports locally-initiated "alternative pay plans" with employee input, but rejects "merit

pay plans that pit employee against employee for a limited amount of money that is distributed through subjective criteria."<sup>2</sup>

Philanthropic contributions, both local and national, were essential to developing the pilot program and earning teacher and voter support. Between 1999 and 2005, the Denver-based Rose Community Foundation gave nearly \$4 million in multiple grants to ProComp. The Broad Foundation of Los Angeles and the Daniels Fund of Denver also made substantial financial contributions for program development. Other private donors included the Denver Foundation, the Donnell-Kay Foundation, the Jay and Rose Phillips Family Foundation, the Piton Foundation, and the Sturm Family Foundation.<sup>3</sup>

In November 2005, 58 percent of Denver voters approved an inflation-adjusted, \$25 million-a-year tax increase to fund ProComp. In addition to DPS and DCTA leaders, active support for the ProComp tax increase came from Mayor John Hickenlooper and many Denver state lawmakers.

ProComp's Teacher Compensation Trust has been created to manage and provide "financial stability" for Denver's tax funds dedicated to performance pay. Current projections estimate the fiscal soundness of the Trust for 50 years. The district and union are represented on the board by three trustees each, while the community is represented by two trustees.<sup>4</sup>

Some elements of ProComp were implemented in the 2005-06 school year, while the rest took effect in 2006-07. All teachers hired in 2006 and 2007 are required to join. As of May 2007, nearly half of Denver teachers are paid under the new system.

The alternative pay plan is still in its early stages. An internal evaluation released in April 2007 recommends ways for the large school district to improve technological procedures and capabilities used to oversee ProComp. The data needed for an effective analysis of the plan's impact on Denver students' performance will not be available until at least 2009.

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## The Case for Changing How Teachers Are Paid

### *Quality teaching: an educational priority*

Successful education is a result of many factors, but no factor is more important than the quality of the teacher.<sup>5</sup> Yet most current local and state policy is not structured to attract and retain the highest-quality instructional workforce.

American public schools simply do not employ enough of the nation's brightest and best to meet the growing demand to increase student achievement. Today's students reap the results of a long-term downward trend. High-aptitude high school graduates were much more likely to enter the teaching profession in the mid-1960s than in the mid-1980s. Nor has the trend reversed. From 1964 to 2000, the share of teachers who ranked among the top tenth of their high school peers in aptitude dropped from 20 percent to 11 percent. Furthermore, a 2003 report showed that college graduates

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considering a career in teaching had average SAT scores a full 40 points lower than those not looking to teach.<sup>6</sup>

Widely-accepted academic research shows that quality teaching can make a dramatic difference in learning. Average pupils who move for one year from the classroom of an average teacher to a top-flight teacher improve test scores

by 5 percentile points. More dramatically, students who spend three consecutive years with a good teacher outscore by 50 percentile points their counterparts who spend three consecutive years with a weak teacher.<sup>7</sup>

Less information is available about the relationship of teacher aptitude to students by race or socioeconomic background. Yet research confirms that those instructing poor and minority children are much more likely to have less experience and—in the case of secondary schools—less background in the subject area taught.<sup>8</sup>

The Alliance for Quality Teaching has identified the “teacher gap” problem affecting underprivileged youths in Colorado. The Alliance’s calls for better data have been answered. Senate Bill 140, enacted by the Colorado General Assembly in

2007, has created a commission to develop a useful identifier that will track teacher demographic and licensure information. The purpose is to better understand trends of turnover, shortages, distribution, and qualifications of the professional education workforce.<sup>9</sup>

A key policy priority confronting states is increasing the supply and equitable distribution of quality teachers in our public schools. Reforming how teachers are paid is one of the most promising tools to effect the needed change.

### *The failure of the single salary schedule*

Much of the problem related to the supply and distribution of quality teachers emanates from the single salary schedule, which predominates in American public education today.<sup>10</sup> The schedule provides automatic rewards for seniority (years of service) and credentials (graduate credit and degrees earned).

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Most school districts adopted the industrial pay model between the 1920s and the 1950s, providing a standard that alleviated discrimination based on sex and race. Nevertheless, the single salary schedule does not fit well in a contemporary context where mobility between jobs is more common and more skilled teachers are needed to meet the growing demand for a highly-skilled, technical workforce.<sup>11</sup>

As researcher Bryan Hassel aptly noted of the dominant salary model: “While it ignores *irrelevant* differences between teachers, it also ignores *relevant* ones, like their levels of knowledge and skills, their actual success with students, and the difficulties of the assignments they take on.”<sup>12</sup> The single-salary schedule rewards career-squatting. Moreover, it overvalues the earnings of many underperforming instructors, and undervalues the earnings of many outstanding instructors.

Studies show that, at best, only the first few years in the classroom improve the average teacher’s quality. Subsequent experience demonstrates no discernible effect. Additional educational credentials have even less evidence to show any positive effect on student performance.<sup>13</sup> A 2007 report conservatively estimates that 12 percent of public education budgets finance teacher pay increases based

on seniority and degrees.<sup>14</sup> Maintaining the traditional salary schedule drives up the costs for taxpayers to fund the school system while ignoring classroom results.

### *Overcoming inertia*

No one has played a more active and ongoing role to develop and promote ProComp than Brad Jupp, DPS Senior Academic Policy Advisor and DPS/DCTA ProComp Project Coordinator. Formerly a DPS teacher and DCTA official, he provided a tremendous share of energy and ideas to move ProComp forward throughout the pilot program and continues to oversee its operation.

Jupp described his district's critical decision to abandon the old system of compensation in terms of this broad perspective: "[We] are in an exceptional moment, one where the single salary schedule can no longer support the pressures placed on it by the expectations of a 21<sup>st</sup>-century public education system."<sup>15</sup> Expectations are for greater accountability to provide a thorough and rigorous education to a racially and economically diverse student population.

Nevertheless, most Colorado school districts remain tied to the single salary schedule. Many local union negotiators continue to defend the practice.

While clearly resisting the implementation of "any

*"[We] are in an exceptional moment, one where the single salary schedule can no longer support the pressures placed on it by the expectations of a 21<sup>st</sup>-century public education system."*

quota-based merit pay plan," the Jefferson County Education Association has concluded that the traditional steps-and-lanes model persists "because it is objective, fair, and simple to administer."<sup>16</sup> The Littleton Education Association says it "is the fairest, best understood and most widely used approach to teacher compensation."<sup>17</sup>

Researcher Dan Goldhaber says such objections partly are rooted in "institutional inertia." In other words, the single salary schedule persists because most districts lack the

"institutional capacity" and the "political flexibility" to change how teachers are paid. Administrative personnel find it easier to continue with the same procedures they have always used, and short-term citizen board members often lack the independent will to effect fundamental change.<sup>18</sup>

One of the early pioneers in teacher pay reform showed that modest changes can be made to the traditional salary schedule. Started in the 1993-94 school year, the performance pay program in Colorado's **Douglas County School District** ties salary advancement to satisfactory evaluations. The program adds small rewards for outstanding teacher portfolios and group incentives. As a result, professional employee collegiality and focus on district-wide goals have improved. The new pay system also appears to have improved teacher retention, but no effect has been found in attracting more high-quality teachers to Douglas County.<sup>19</sup>

## **ProComp's Rewards and What They Mean**

### *Measuring teacher quality in credentials and performance*

The question of how to measure teacher quality complicates the discussion surrounding compensation reform. Yet, interestingly, 72 percent of surveyed American teachers say most of their colleagues "could pretty much agree on who the great teachers are" in their building.<sup>20</sup>

Denver's Professional Compensation System provides one of the most comprehensive approaches to reforming teacher pay. ProComp uses a broad range of different measurements, including most of those employed in different programs, to reward instructional quality.

Four major components are built into ProComp as means for the district's teachers to enhance their current earnings (see figure 1):

- Market Incentives
- Student Growth
- Knowledge and Skills
- Professional Evaluations

The first component attracts teachers to challenging work environments or hard-to-fill specialties. The latter three components include different measurements of teacher quality to provide various rewards. The proponents of ProComp carefully have avoided using the term "merit pay" to de-

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Figure 1. Overview of Components and Elements, Denver Professional Compensation System for Teachers (2006-07)

Denver ProComp - Components and Elements (2006-07 Index = \$34,200)										
Components	Market Incentives		Student Growth			Knowledge and Skills			Professional Evaluations	
Element	Hard to Serve School	Hard to Staff Position	Student Growth Objectives	CSAP Expectations	Distinguished Schools	Grad Degree / National Certification	Professional Development Units	Tuition Reimburse	Probationary	Non-Probationary
Incentive Type	Bonus	Bonus	1 objective (Bonus)	Salary Increase	Bonus	Salary Increase	Salary Increase	Lifetime Account	Salary Increase	Salary Increase
			2 objectives (Increase)							
Other Factors	None	None	None	Increase may be lost later if fall below expectations	None	None	None	None	Achieve at least a satisfactory rating	Achieve at least a satisfactory rating
Fixed Value	3% of Index	3% of Index	1% of Index	3% of Index	2% of Index	9% of Index	2% of Index	\$1,000	1% of Index	3% of Index
2006-07 Dollars	\$1,026	\$1,026	\$342	\$1,026	\$684	\$3,078	\$684	\$1,000	\$342	\$1,026
Implemented	2005-06	2005-06	2006-07	2006-07	2005-06	2005-06	2006-07	2005-06	2005-06	2005-06
Pay-Out Begins	2005-06	2005-06	2007-08	2007-08	2006-07	2005-06	2006-07	2005-06	2006-07	2006-07

Source: Denver ProComp Web site, <http://www.denverprocomp.org>

scribe Denver's new compensation plan for teachers, preferring the term "results-based pay."<sup>21</sup>

### **Bottom line for Denver teachers**

The four components encompass a series of defined one-time bonuses and permanent salary increases that are factored from a standard base amount, known as the index. The index is subject to cost-of-living adjustments each year through continued collective bargaining. The index increased from \$33,301 in 2005-06 to \$34,200 in 2006-07.

All teachers hired on or after January 1, 2006, are subject to the new pay system. A teacher hired in 2005 or before has seven annual windows of time in which to join ProComp, should he so choose. (A veteran teacher may choose to stay on the current salary schedule for the rest of his career.) The last chance to enroll in ProComp is November 2010 –

June 2011. Once a teacher has opted in, he cannot opt out.<sup>22</sup>

Newly-hired teachers without experience start earning the negotiated index amount base pay. A new hire's base pay is increased by 2 to 4 percent of the index for each year of relevant experience outside the district.<sup>23</sup> Very little latitude is

left for DPS to differentiate entry-level salaries based on a candidate's special skills or experiences, or a successful classroom record (as such data become more available).

Returning Denver teachers opt in at their current salary. All subsequent ProComp bonuses and increases are added to the base pay as they are earned.

Through the end of the second opt-in window in June 2006, about 28 percent of Denver's 4,228 returning Full-Time Equivalent (FTE) teachers had signed up for ProComp. Denver's most veteran instructors represent the largest segment of those who have joined the new pay system, while many more moderately-experienced teachers opted to stay on the traditional schedule. Nearly half of teachers who already had reached the 13<sup>th</sup> and highest step of the traditional salary schedule opted in, while only about 10 percent of teachers with four to 10 years of experience enrolled.<sup>24</sup>

As of May 2007 roughly 1,830 of more than 4,000 Denver teachers – including many new hires after 2006 – are paid under ProComp. About 30 more had signed up during the November 2006 – June 2007 window to be eligible for performance pay in the 2007-08 school year.<sup>25</sup>

In 2004, then-DCTA president Becky Wissink said that under ProComp, "no teacher will make less than the current structure and many teachers have the opportunity to earn more."<sup>26</sup> The average DPS teacher earned \$44,273 in 2005-06.<sup>27</sup> Under the 2006-07 salary schedule, a veteran instructor with a Ph.D. tops out at \$67,595.<sup>28</sup> These figures do not include the value of fringe benefits, such as the generous retirement package available to DPS teachers.<sup>29</sup>

## **Market Incentives: Symbols of Changing Priorities**

To overcome inequities or shortages, school leaders may offer financial inducements to teachers apart from any measurements of quality. The use of market incentives is one component of ProComp that directly addresses important areas neglected by the uniform salary schedule. Denver's planned incentives are comprised of two different yearly 3 percent of index bonuses: one for filling "hard-to-staff" job specialties, and one for working in "hard-to-serve" schools.

Seven in 10 teachers nationwide in a Public Agenda survey agreed that working in "tough neighborhoods with low performing schools" deserved special financial incentives. But only 42 percent favored similar bonuses for colleagues "who specialize in hard-to-fill subjects."<sup>30</sup>

The national results did not match well with Denver's results. A 2003 survey found 82 percent of DPS teachers supported incentives for "teachers in content areas of short supply," while an overwhelming 89 percent favored incentives for "teaching at schools with the highest percentage of high-needs students."<sup>31</sup> Applications for both "hard-to-staff" positions and "hard-to-serve" schools increased significantly from 2005-06 to 2006-07.<sup>32</sup>

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### *Rewards for working in challenging schools*

Poorer schools in Denver and other urban areas typically serve as the training ground for newer, less effective teachers, who very often take the experience they have gained and transfer to a job in a more stable, affluent setting or leave the profession altogether. Furthermore, most instructors gravitate towards working environments that match their race and socioeconomic status. One policy report suggests that persuading highly-qualified teachers to defy these trends necessitates a “substantial” pay differential.<sup>33</sup>

As a result, the effect of Denver’s “hard-to-serve” school bonus appears to be real, but marginal. Jupp expects future analyses of ProComp to show a decline in teacher turnover at many schools.<sup>34</sup> A 1999 RAND report found that each \$1,000 increase in salary decreased teacher attrition by 6 percent in high-risk Texas schools.<sup>35</sup> Yet a 2003 study found that experienced female teachers would require a massive 43 percent salary increase to leave their instructional jobs in the suburbs for a low-performing, inner-city school.<sup>36</sup>

Teachers at 34 DPS schools during 2006-07 are eligible for the \$1,026 bonus.

Denver’s Transition Team gave equal weight to each of the following criteria to identify “Hard-to-Serve” schools: federal free or reduced lunch program eligibility, enrollments in special education center programs, English language learners, Medicaid eligibility, and home neighborhood crime data.<sup>37</sup> According to Jupp, “Hard-to-Serve” status encompasses the neediest schools that employ 15 percent of the total teaching force in each category (*i.e.*, elementary, middle, high, and alternative).<sup>38</sup> Teachers at 28 DPS schools during 2005-06 received a \$999 bonus. Teachers at 34 DPS schools during 2006-07 are eligible for the \$1,026 bonus.<sup>39</sup>

### *Rewards for filling high-demand specialties*

Most school districts offer the same salary to all new teachers despite vast differences in the availability of qualified candidates for different specialties. Today’s school administrators often encounter great difficulty in finding enough skilled teachers of math, science, and special education to meet their students’ learning needs, while general elementary teachers and English teachers tend to be in great supply.

Some large school districts have broken the mold to address classroom shortages. A 2002 report from the American Association of School Administrators indicated that Houston, New York, and Los Angeles all offer bonuses to attract instructors with high-demand specialties.<sup>40</sup>

To determine the positions eligible for the “hard-to-staff” designation, Denver’s ProComp Transition Team chose to use regional and national data on the supply of licensed professionals produced by degree-granting institutions, as well as data on specific DPS teaching assignments. Jupp said a ProComp work group “used a planning number of approximately 15 [percent] of the work force” to determine who would earn the 3 percent of index bonus.<sup>41</sup>

Licensed employees who specialized in English Language Acquisition, middle school mathematics, Special Education Center assignments, speech pathology, or psychology all earned an extra \$999 in 2005-06.<sup>42</sup> In addition to the previous job assignments, school nurses and Multicultural Assessment Services Team (MAST) employees take home a one-time bonus of \$1,026 in 2006-07.<sup>43</sup>

...Woodward said he believes the real progress yielded by the “hard-to-serve” bonus will be symbolic, but significant.

### *More symbolic than effective*

As part of the Transition Team, the “Market Incentives Work Group” reevaluates the criteria for “hard-to-staff” jobs and “hard-to-serve” schools on a yearly basis. Though they have helped to build the nuts and bolts of the compensation program from scratch, Jupp stated in 2005 that they “will be slow to reinvent the criteria, or even reweigh them.”<sup>44</sup> Thus far the criteria have remained consistent.

How well the market incentives work as enticements to draw skilled instructors to needier schools and specialties remains to be seen. Former DPS Board President Les Woodward said he believes the real progress yielded by the “hard-to-serve” bonus will be symbolic, but significant. “A lot won’t move themselves for the bonus amount, but they will recognize that the district values the challenging assignment,” he said.<sup>45</sup>

## Student Growth: The “Centerpiece” of the Plan

Proposals to link teacher compensation to student assessment results rank among the most controversial reform ideas. Teachers tend to be skeptical of merit pay systems based strictly on measured student test scores, saying that their salaries would be affected significantly by factors beyond their control: student abilities, efforts, and demographics; as well as the work of prior teachers. Less than 40 percent supported such pay systems in a 2003 Public Agenda survey.<sup>46</sup>

...[T]eachers who meet both objectives earn a permanent salary increase worth [\$342 in 2006-07].

Nevertheless, roughly half of teachers favor financial incentives based on a value-added assessment that measures individual student gains from one year to the next. Others still question the effects of non-classroom factors and the limited picture provided by standardized tests.<sup>47</sup>

### Setting and meeting objectives

ProComp’s Student Growth component is broken down into three elements: student growth objectives, CSAP expectations, and distinguished schools. The first element is based on the establishment of “annual student growth objectives,” an innovative and distinct feature of ProComp. Each participating teacher, in conjunction with his supervisor, sets two measurable objectives directly related to job content and “focused on growth in student learning.” The objectives are tied to specific teaching strategies, helping the instructor not only to determine what students should learn but also how to help them master content and skills.<sup>48</sup>

Teachers who meet one of the two annual objectives earn a *one-time bonus* worth 1 percent of index (\$342 in 2006-07); teachers who meet both objectives earn a *permanent salary increase* worth the same amount. Assessment tools used to determine growth should “measure the learning content of the objective and be closely tied to the curriculum.”<sup>49</sup> Examples include the Developmental Reading Assessment and Connected Mathematics Program Assessments. Student growth objectives are not allowed to incorporate results from the

Colorado Student Assessment Program (CSAP), administered annually to 4<sup>th</sup> through 10<sup>th</sup> graders in the state’s public schools.

In 2005, then-Board President Woodward correctly identified the reward for meeting student growth objectives—described in the CTAC study as the “centerpiece” of the plan—as the most promising single facet of ProComp. The CTAC study determined this “centerpiece” of the plan had a measurably positive effect on student learning.<sup>50</sup>

### Student growth and state testing

The second type of student growth incentive enables participating math, literacy, and language arts teachers to earn a 3 percent “sustainable increase” (\$1,026 in 2006-07) for exceeding expectations on their students’ CSAP scores. A statistical model will set a “standard range” for expected performance. The precise methodologies will be determined in the fall of 2007 for the first payout. “To exceed expectations, a teacher’s students must do very, very well,” Jupp said. The cumulative pay raise acts as an ongoing incentive, since it can be lost as quickly as it was earned.<sup>51</sup>

Teachers who simply meet expectations receive neither an increase nor a decrease in salary. Teachers who fall below expectations can lose a 3 percent increase they had previously received for exceeding expectations. A failure to meet expectations cannot cut a teacher’s salary if he has never earned such an increase before. Consideration is given to the characteristics of the students being taught and to the extent of contact secondary students have with different teachers.<sup>52</sup>

Teachers who fall below expectations can lose a 3 percent increase they had previously received for exceeding expectations.

Denver is not the state’s only school district to base a small share of compensation on state assessment performance. **Adams County School District 14** in Commerce City offers group bonuses to teachers based on how students in a school fare in meeting “target growth” on CSAP. In 2005-06, teachers could earn \$500 each for reaching 25 percent of improvement goals, \$1,000 for 50 percent, \$1,500 for 75 percent, or \$2,000 for reaching or exceeding all goals.<sup>53</sup>

### *The “distinguished school” as a group bonus*

The final piece of the Student Growth component is a 2 percent bonus for all teachers who serve in a “distinguished school.” The ProComp Transition Team, comprised of district and union representatives, established criteria for determining which schools qualify as “distinguished.” The team used measures of school-wide achievement and improvement from the School Accountability Report (SAR), student attendance, parental satisfaction, an index to measure individual student improvement, and a Beat the Odds Index for disadvantaged schools.<sup>54</sup>

The method to measure school achievement must include “substantially more information” on student performance than the SAR and Annual Yearly Progress (as directed by the federal government’s *No Child Left Behind Act*).<sup>55</sup> Teachers in a “distinguished” DPS school will earn an additional \$684 in the 2006-07 school year.

Education officials often favor group rewards because they are seen to promote collaboration and sharing of best practices among professional teachers. On the other hand, rewards to individual teachers offer a greater chance of success, since individuals respond best to incentives over which they have the most control.<sup>56</sup>

Frederick Hess, who directs education policy for the American Enterprise Institute, suggests a combination of the two types of rewards may work: “Group bonuses are a healthy way to build cohesion when mounted atop systems that

already recognize and reward individual effort, but are not by themselves effective at motivating individuals.”<sup>57</sup>

### *Group rewards in other states*

Several states have enacted group bonuses, often known as School-Based Performance Awards, to recognize the contributions of individual teachers to school-wide gains in academic performance. In 2001, **Iowa** became the first state to launch a genuine school-based merit pay pilot program. The program failed to be implemented statewide after three years of funding. Even so, the state has taken steps toward reviving a performance pay policy –

this time working to dedicate a significant portion to individual rewards.<sup>58</sup>

In 2006, **Mississippi** enacted its Performance-Based Pay Program for schools that show gains in student test scores. However, the law indicates that money will only be available for the program on a yearly basis once the state’s school finance formula has been fully funded – an increasingly achievable goal based on recent results and the priorities articulated by Mississippi political leaders.<sup>59</sup>

The most comprehensive approach is the **Texas** Educator Excellence Grant Program, created in 2006, which gives rewards to the state’s most disadvantaged schools that demonstrate the greatest performance in math and reading. Local control is preserved within the guideline that 75 percent of funds must be distributed as teacher bonuses.<sup>60</sup>

## **Knowledge and Skills: Minor Changes**

ProComp’s rewards for the knowledge and skills components include salary increases for national certification and relevant graduate degrees, salary increases for completing Professional Development Units, and a career total \$1,000 reimbursement available to each teacher for money “spent on tuition for coursework in their current or proposed area of assignment.”<sup>61</sup>

### *A big payout for small results*

The single largest prize in ProComp is offered to teachers who earn a master’s degree or certification from the National Board for Professional Teaching Standards (NBPTS): 9 percent of index, or \$3,078 in 2006-07. Denver already rewards NBPTS certification with horizontal advancement on the single salary schedule. ProComp offers teachers with fewer than seven years of recognized experience greater pay than the traditional schedule, while teachers with more than seven years of experience would gain slightly less under the new pay plan.<sup>62</sup>

Outside the single salary schedule, pay increases given to teachers who earn National Board certification are the most common type of knowledge-and-skills rewards given to teachers. Created in 1987, NBPTS has well-established standards of

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Stone... discovered that “the achievement gains made by [NBPTS-certified teachers] students are no greater than those made by students who had other teachers.”

“what teachers should know and be able to do” — including content knowledge, instructional methods, and student evaluation tools. More than 55,000 teachers nationwide have earned NBPTS certification, which is valid for a 10-year period. Nearly all states, and many school districts, offer rewards or reimbursements for the credential. Colorado numbered 223 teachers with the National Board credential in 2005.<sup>63</sup>

As many as 48 states, in addition to numerous school districts, offer financial rewards to teachers for receiving certification from the National Board for Professional Teaching Standards (NBPTS). A prominent example is **North Carolina**, which offers NBPTS teachers a 12 percent pay differential increase, worth about \$5,000 a year on average. **Florida’s** Dale Hickam Excellent Teaching Program, implemented in 1998, offers NBPTS teachers a salary increase at 10 percent of the statewide teacher average, an increase currently worth more than \$4,000.<sup>64</sup>

Nonetheless, research has shown that rewards for National Board certification likely will not lead schools and students closer to academic success. Of four NBPTS-launched studies released in 2005, one showed significant connection between National Board certification and improved student learning, one showed a small connection, and two showed none.<sup>65</sup> The trend affirms the results of a 2002 study by Dr. J.E. Stone of East Tennessee State University. Stone compared a small sample of NBPTS-certified instructors with non-

certified counterparts and discovered that “the achievement gains made by [NBPTS-certified teachers’] students are no greater than those made by students who had other teachers.”<sup>66</sup>

### *More money for “lifelong learners”*

A less widely-used element of ProComp’s knowledge-and-skills component is a 2 percent of index salary increase for the completion of a Professional Development Unit (PDU). The PDU process is designed to encourage teachers to enhance their effectiveness on the job by becoming “lifelong learners.” Through a process of study, reflection, and demonstration, teachers are required to complete and document a project that is *ongoing* (takes place over

time), *collaborative* (involves colleagues, parents, and/or community members), and *job-embedded* (directly relevant to the employee’s current or proposed job assignment).<sup>67</sup>

As an example, one sample PDU outlined in an official DPS document is designed for a sixth-grade special education teacher whose students lag in math skills. The plan outlines a detailed course of study and action to learn and incorporate effective team teaching with the regular education math instructor over the course of a school year.<sup>68</sup> Different teachers can adjust the PDU concept to suit their particular specialties, school environments, and student needs.

## **Professional Evaluation: A System in Transition**

Teacher performance may be measured by a supervisor’s judgment, as is common in many non-educational professions. Proponents say a teacher’s administrator has the best information on her performance, unless a bargaining contract prevents unscheduled observations.<sup>69</sup> Scheduled observations, whether the assessment is internal or external, provide a less genuine picture of typical classroom management and instruction. All told, 62 percent of teachers favor giving extra pay to colleagues “who consistently receive outstanding evaluations from their principals.”<sup>70</sup>

Conversely, opponents of tying pay to evaluations cite the largely subjective nature of the process, fearing unjust retribution from school administrators. Many administrators themselves do not want to be accused of playing favorites. Others have suggested a better alternative would be to model the peer-review system used at many universities, where groups of teachers judge the performance of their colleagues to remove some of the individual bias.<sup>71</sup>

### *De-emphasizing the evaluation model*

Although Denver has refined evaluation standards and procedures, ProComp essentially attaches less compensation to the evaluation process than the single salary schedule does. The terms of the collective bargaining agreement state that teachers on the old salary schedule cannot receive a pay raise

*The PDU process is designed to encourage teachers to enhance their effectiveness on the job by becoming “lifelong learners.”*

*...ProComp essentially attaches less compensation to the evaluation process than the single salary schedule does.*

for years of experience if they receive unsatisfactory evaluations. The annual increase on the schedule in most cases would be greater than the annual increase for a satisfactory evaluation under the new pay system. ProComp officials have chosen to rely more heavily on objective indicators. "Frankly, we don't have faith in high-stakes judgments," Jupp said.<sup>72</sup>

Some of the oldest performance-based programs tie salaries more closely to professional evaluations than ProComp does. As an example, **Arizona's** Career Ladder program offers advancement through multiple tiers of salary earnings based on a combination of successful evaluations and

*A teacher conceivably can fall short of "meeting expectations" in all five areas and still receive a "satisfactory" evaluation and the \$1,026 salary increase.*

growing professional responsibilities – including after-school tutoring, team teaching, and curriculum development. Arizona state law grants some flexibility to school districts in designing procedures, but evaluations must include "both announced and unannounced observations of teacher performance."<sup>73</sup>

Several states experimented with the Career Ladder program after the report *A Nation at Risk* was released in 1983, but

today only **Missouri** and **Arizona** have operative programs. Career Ladder teachers worked in 333 of Missouri's 524 school districts in 2005-06, costing the state \$37 million. Roughly 40 percent of Arizona's 43,000 teachers participate in Career Ladder, representing 28 of the state's 227 districts. Arizona touts numerous studies over the past two decades that demonstrate improved student performance from the Career Ladder program.<sup>74</sup>

### *Improving the process*

Denver's new "Professional Teacher Evaluation System" assesses a probationary teacher's performance each of his first three years in the district. A "satisfactory evaluation" will yield a salary increase worth 1 percent of index (\$342 in 2006-07). Non-probationary instructors are evaluated every third year, beginning in their fourth year of employment in DPS, with a 3 percent of index (\$1,026 in 2006-07) salary increase available for those who earn a satisfactory mark. Unsatisfactory evaluations delay teachers' pay raises "until such time as they successfully complete a development plan."<sup>75</sup>

In August 2005 the ProComp Transition Team voted to approve the pilot process for the compensation plan's professional evaluation component.<sup>76</sup> Thirty DPS schools participated in the 2005-06 program to test the new evaluation procedures – including five high schools, five middle schools, and 20 elementary schools. Feedback from principals, teachers, and education specialists refined the standards and procedures for formal observations set forth in the Comprehensive Professional Evaluation Handbook. Unscheduled observations of teacher performance also may be used.<sup>77</sup>

The evaluator determines whether the instructor exceeds, meets, is developing, or fails to meet "a high standard of performance" in five areas of teaching performance: instruction, assessment, curriculum and planning, learning environment, and professional responsibilities. Evaluation tools include formal and informal observations, personal interviews, written communications, and supporting records (including planning books or grading policies). A teacher conceivably can fall short of "meeting expectations" in all five areas and still receive a "satisfactory" evaluation and the \$1,026 salary increase.<sup>78</sup>

*ProComp will change how teachers are paid, but the district in its partnership with the union has not addressed dismissal procedures.*

Teachers who receive an unsatisfactory rating must undertake a remediation plan, jointly developed with an administrator. The plan specifies practices to correct no more than three deficiencies within 30 to 90 days, with assistance available from qualified peers. A subsequent observation determines if the teacher has earned a satisfactory rating, has made enough progress to extend remediation, or "has made insufficient progress and is still being rated unsatisfactory." In the case of the last option, the principal "shall make a recommendation of dismissal."<sup>79</sup>

### *Empowering principals but leaving tenure alone*

In Colorado, a probationary teacher may be let go with or without an unsatisfactory evaluation. However, a non-probationary teacher's property right to a job still is protected by statutory procedures that may cost the school district thousands of dollars in legal fees to terminate successfully. ProComp will change how teachers are paid, but the district in its partnership with the union has not addressed dismissal procedures. Woodward expressed hope that

the frustration of failing to receive regular salary increases will impel poorly-performing teachers to leave.<sup>80</sup>

The compensation plan addresses fears of subjectivity through “well-developed rubrics articulating different levels of teacher performance,” which set a clear measure of the accepted standards.<sup>81</sup> Giving a principal greater accountability for his school’s academic performance also should help to mitigate the temptation. To enhance the stake of managers and evaluators in student performance, DPS has secured a five-year, \$22.6 million federal grant through the **Teacher Incentive Fund**<sup>82</sup> to develop a multiple-measure compensation system for principals. A piloted version of Principal ProComp is scheduled to commence in the 2007-08 school year.<sup>83</sup>

## Toward a Better Teacher Pay System

### *Signs of merit pay success*

The first extensive look at national data suggests that rewards tied to measured student learning contribute to improved learning. Based on a detailed survey of responses from more than 500 schools, two University of Florida economists found that merit pay programs correspond with a small increase in test scores. Individual rewards yielded greater improvements in high-poverty schools with “the least parental oversight,” and when given out only to a relative few teachers. The published study attaches greater success to merit pay than to class size reductions.<sup>84</sup>

A 2007 survey of a teacher pay pilot program in Little Rock, Arkansas, yielded similar results. The University of Arkansas report not only detailed greater learning gains in schools where rewards for test score improvement were offered to teachers, but also showed signs of overcoming common objections. Teachers in the merit pay schools reported a more positive work environment and no more “counterproductive competition” among the faculty. They also were less likely “to agree that low-performing students were a burden in the classroom.”<sup>85</sup>

### *State funds for individual teacher awards*

**Florida** distributes grants to school districts for the purpose of developing performance-based pay. In 2002, the state enacted a law requiring districts to implement merit pay, but the legislature did not appropriate funds until the 2006-07 school year. The Special Teachers Are Rewarded (STAR) Program made \$147.5 million available to districts that had proposals approved by the State Board of Education.<sup>86</sup>

The STAR Program set the parameters for grant approval, as follows:

- Improved student achievement (as measured by the Florida Comprehensive Assessment Test or other approved assessment) must be the “primary” evaluation factor
- Awards are limited to the top 25 percent of instructional personnel in the district
- Average or below average instructional personnel are *not* rewarded the same as outstanding teachers
- High-performing instructional personnel at poorly-rated schools are rewarded
- Low-performing instructional personnel at highly-rated schools are not rewarded
- Teachers of historically poor-performing students are not disadvantaged
- Teachers of historically high-performing students are not advantaged<sup>87</sup>

*Eagle County is the only Colorado school district to eliminate the single salary schedule completely.*

In March 2007, Florida enacted a modification to its performance pay policy by adopting the Merit Award Program (MAP). MAP preserves the state’s grant program but frees districts from the technical requirement to develop merit pay. MAP makes measured student performance at least 60 percent of the determination for teacher awards. As much as 40 percent can be based on “professional practices,” a principal-assessed evaluation of professional competency. Under MAP, the 25 percent cap on the number of teachers eligible to earn rewards was eliminated.<sup>88</sup>

*Teachers in the merit pay schools reported a more positive work environment...*

### **TAP: Another comprehensive approach**

Founded in 1999 by the Milken Family Foundation, the Teacher Advancement Program (TAP) provides a comprehensive approach to the promotion of quality teaching. The program joins both knowledge-and-skills and performance-based compensation to the Career Ladder's multiple career paths. It also has a strong focus on professional mentoring and collaboration. Principals and master teachers gain enhanced training to help them rate their colleagues' work in the classroom. Standard-based evaluations of knowledge and skills and measured student growth each make up roughly half of the available bonuses and pay increases. Teachers who assume responsibilities of mentorship and evaluation also earn more.<sup>89</sup>

### **Nestled in the Rocky Mountains, Eagle County Schools**

began to pilot TAP in 2003. Eagle County is the only Colorado school district to eliminate the single salary schedule completely. In 2006-07, the district's teachers are eligible to earn as much as \$2,600 in bonuses—\$1,300 based on assessed knowledge and skills, \$650 for school-wide gains on the Colorado Student Assessment Program, and \$650 for individual student gains on a national, computer-based achievement test.<sup>90</sup>

The best available research demonstrates that TAP teachers and TAP schools outperform their counterparts in most measurements of student learning gains, especially in the area of reading.<sup>91</sup> A future

comparison of results between ProComp schools and TAP schools would be instructive.

While states like South Carolina have authorized TAP to provide technical assistance to poorly-rated schools, **Minnesota** advanced a step further to adapt the TAP model into an independent, state-funded program. Quality Compensation for Teachers (Q Comp), enacted in 2005, employs all the TAP elements, including multiple career paths, standards-based evaluations, and performance pay. Critics argue that Q Comp gives local agencies too much flexibility in deciding how to reward teachers. Districts can receive state funds for designing new pay systems that have little connection to improved student achievement. As of May 2007, the

Minnesota Department of Education had approved applications from 35 school districts and 14 charter schools.<sup>92</sup>

What sets Q Comp apart from other state programs is the commitment of Minnesota policy makers to make performance-based teacher compensation an enduring fixture of state school funding. The Minnesota Department of Education explains that Q Comp "is structured as a categorical aid program that is part of general education revenue, not as a grant program." The legislature in 2007 approved Gov. Tim Pawlenty's request for \$62 million to fund Q Comp.<sup>93</sup>

### **Practical policy considerations: Implementation and sustainability**

In his 2006 report for the left-liberal Center for American Progress, Goldhaber identifies four key "hurdles to implementing teacher pay reforms." Besides institutional inertia and opposition from the National Education Association, school districts are faced with a series of technical and political obstacles. An innovative system of rating and rewarding teachers may entail the design of new student testing instruments and an upgrade to data collection standards. Such change would stretch the capacity of many human resources departments. Furthermore, parents in more affluent schools may oppose incentives that lure away high-quality teachers to needier schools.<sup>94</sup>

The state government's size and available resources best equip it to overcome the obstacles. Therefore, Goldhaber says the state government should initiate compensation reform. But his confidence in distant bureaucracies to create effective policies is misplaced. Local agencies should take the leading role in developing performance pay. Furthermore, Goldhaber does not address legal concerns that face some states. Colorado's constitution guarantees district school boards "control of instruction." And state statute already gives local boards the latitude to adopt "a salary schedule that may be by job description and job definition, a teacher salary policy based on the level of performance demonstrated by each teacher, or a combination of the salary schedule and salary policy."<sup>95</sup>

...[T]he state could provide grants or other financial incentives to school districts and charter schools that develop and implement effective alternative teacher compensation.

The best available research demonstrates that TAP teachers and TAP schools outperform their counterparts in most measurements of student learning gains, especially in the area of reading.

For practical purposes, ProComp represents the agreement of Denver's board and union representatives to adopt a combination of the old salary schedule and a new salary policy — at least until the last teacher earning on the traditional schedule retires or resigns. State law enables districts to follow Denver's example, to seek DPS leaders' input, or to forge their own system of performance-based pay. As in Florida, the state could provide grants or other financial incentives to school districts and charter schools that develop and implement effective alternative teacher compensation. The Colorado Department of Education also could be charged to provide technical assistance and other intellectual resources to local schools.

## Conclusion

Research is not promising for the effectiveness of group rewards, or for the value of advanced credentials. At the same time, more and more studies highlight the success of teacher compensation systems that offer rewards for yielding measurable

gains in student learning. No measurement or system for distributing pay will be perfect. Yet any change to compensation based on measured student growth ought to be compared to the single salary schedule it replaces, not to an unachievable perfect model.

A chief weakness of ProComp, the system offers individual teachers rewards for measured student growth that are small when compared to the range of other possible bonuses and salary increases. A salary increase worth more

than \$3,000 for National Board certification is an especially inefficient allocation of resources, highly similar to the traditional schedule. In addition, not enough evidence exists to show whether the \$1,000 market incentive bonus amount is sufficient to help the district fill challenging schools and specialties with quality teachers. Meaningful data reflecting

the success of the new pay system will not be available until at least 2009, leaving time to speculate on the lasting effects it will have for Denver's students.

ProComp also falls short by not allowing enough flexibility to differentiate entry-level salaries, which would enable the district to recruit the most highly effective workforce. At the same time, ProComp does not give school leaders any more authority to remove poorly-performing teachers. Should the implementation of a performance pay plan for principals create more effective and competent managers, they will need every reasonable tool of authority to make key personnel decisions. Supporters hope that the system's rewards will discourage and frustrate instructors who are not meeting the mark in the classroom. Yet any career-squatters hired before 2006 can stay on the current salary schedule through retirement.

Even so, Denver has taken a significant step to change how teachers are paid. Gradually leaving the single salary schedule behind, ProComp offers a way to acknowledge and reward outstanding instruction. Colorado's education leaders should expand and advance compensation reform:

- Denver and other school district leaders should work to adopt merit pay programs that offer the greatest rewards for student results.
- The state should provide financial grants and technical assistance that move local boards of education to implement the best possible performance pay systems.

Local and national political forces, as well as existing bureaucratic structures, pose a challenge to implementing successful teacher pay reform. Given these realities, ProComp represents a groundbreaking milestone from which Denver and others can work to build and improve.

*ProComp also falls short by not allowing enough flexibility to differentiate entry-level salaries, which would enable the district to recruit the most highly effective workforce.*

## Notes

<sup>1</sup> Community Training and Assistance Center (CTAC), *Catalyst for Change: Pay for Performance in Denver Final Report* (January 2004), p. 22, <http://www.ctacusa.com/denver-vol3-final.pdf>

<sup>2</sup> CEA Issue Backgrounders and Positions, [http://www.coloradoea.org/media/CEA\\_05\\_Positions.pdf](http://www.coloradoea.org/media/CEA_05_Positions.pdf)

<sup>3</sup> News from Rose Community Foundation, 2 November 2005, "ProComp Approved; Foundation Support Critical to Teacher-Compensation System's Success," [http://www.rcfdenver.org/pr\\_procomp\\_110205.htm](http://www.rcfdenver.org/pr_procomp_110205.htm); Denver Public Schools Press Release, 8 February 2005, "Foundations Announce \$2.12 Million in Grants for ProComp," [http://denverprocomp.org/stories/storyReader\\$196](http://denverprocomp.org/stories/storyReader$196); Denver Public Schools Press Release, 19 March 2004, "Denver Teachers Embrace Professional Compensation System," <http://www.dpsk12.org/news/press/2004/03/19e.shtml>

<sup>4</sup> *Tentative Agreement between School District No. 1 in the City and County of Denver, State of Colorado, and Denver Classroom Teachers Association: Professional Compensation System for Teachers, March 20, 2004 to December 31, 2013*, § 4.1, [http://denverprocomp.org/stories/storyReader\\$88?](http://denverprocomp.org/stories/storyReader$88?) - Hereafter denoted as *ProComp Agreement*; Draft Memo from ProComp Trust Board to DPS and DCTA Bargaining Teams, December 2006.

<sup>5</sup> The Education Trust's 1998 report "Good Teaching Matters: How Well-Qualified Teachers Can Close the Gap" received wide acclaim for synthesizing existing research to make the case for the importance of teacher quality. See [http://www2.edtrust.org/NR/rdonlyres/0279CB4F-B729-4260-AB6E-359FD3C374A7/0/k16\\_summer98.pdf](http://www2.edtrust.org/NR/rdonlyres/0279CB4F-B729-4260-AB6E-359FD3C374A7/0/k16_summer98.pdf)

<sup>6</sup> Marigee P. Bacolod, "The Role of Alternative Opportunities in the Female Labor Market in Teacher Supply and Quality: 1940-1990," UCLA Department of Economics, 2001; Sean Corcoran, William Evans, and Robert Schwab, *Changing Labor Market Opportunities for Women and the Quality of Teachers: 1957-1992*, National Bureau of Economic Research (2004), <http://www.nber.org/papers/w9180.pdf>; Andrew Leigh and Sara Mead, *Lifting Teacher Performance*, Progressive Policy Institute Policy Report (April 2005), p. 6, [http://www.ppionline.org/ppi\\_ci.cfm?knlgAreaID=110&subsecID=135&contentID=253286](http://www.ppionline.org/ppi_ci.cfm?knlgAreaID=110&subsecID=135&contentID=253286); Dan Goldhaber and Albert Liu, "Occupational Choices and the Academic Proficiency of the Teaching Workforce," in W. Fowler (ed.) *Developments in School Finance 2001-02*, National Center for Education Statistics, 53-75; Dan Goldhaber, *Teacher Pay Reforms: The Political Implications of Recent Research*, Center for American Progress, p. 9, [http://www.americanprogress.org/issues/2006/12/pdf/teacher\\_pay\\_report.pdf](http://www.americanprogress.org/issues/2006/12/pdf/teacher_pay_report.pdf)

<sup>7</sup> William L. Sanders and June C. Rivers, *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement*, University of Tennessee Value-Added Research and Assessment Center, November 1996, <http://www.mccsc.edu/~curriculum/cumulative%20and%20residual%20effects%20of%20teachers.pdf>; Eric A. Hanushek, John F. Kain, Daniel M. O'Brien, and Steven G. Rivkin, *The Market for Teacher Quality*, National Bureau of Economic Research, February 2005, <http://www.nber.org/papers/w11154.pdf>; see also Leigh & Mead, *Lifting Teacher Performance*, p. 4.

<sup>8</sup> Leigh & Mead, *Lifting Teacher Performance*, pp. 8-9; Eric A. Hanushek, John F. Kain, and Steven G. Rivkin, "Why Public Schools Lose Teachers," *Journal of Human Resources*, 39(2), Spring 2004, 326-354; Craig D. Jerald, with Richard M. Ingersoll, *All Talk, No Action: Putting an End to Out-of-Field Teaching*, Education Trust (August 2002),

<http://www2.edtrust.org/NR/rdonlyres/8DE64524-592E-4C83-A13A-6B1DF1CF8D3E/0/AllTalk.pdf> - Jerald's findings indicate that students in poorer schools are 77 percent likelier to receive instruction from teachers without formal training in the content area they are teaching.

<sup>9</sup> Robert Reichardt, Jacqueline Paone, and Vincent Badolato, *Shining the Light: The State of Teaching in Colorado* (Fall 2006), <http://aqt.civicore.com/Modules/Resources/Resources/65.pdf> - The problem also is documented in Marguerite Roza and Paul T. Hill, "How Within-District Spending Inequities Help Some Schools to Fail," in *Brookings Papers on Education Policy: 2004* (Washington, DC: Brookings Institution Press, 2004), 201-228.

<sup>10</sup> The U.S. Department of Education's *Schools and Staffing Surveys* (1999-2000) showed that 96.3 percent of the nation's public school districts use the traditional salary schedule to determine teacher base pay, as do 62.2 percent of public charter schools. The modest pace of reform since 2000 assures that the 96.3 percent figure is likely lower today but not by any significant amount.

<sup>11</sup> Bryan C. Hassel, *Better Pay for Better Teaching: Making Teacher Compensation Pay Off in the Age of Accountability*, Progressive Policy Institute 21st Century Schools Project (May 2002), p. 5, [http://www.ppionline.org/ppi\\_ci.cfm?contentid=250543&knlgAreaID=110&subsecid=135](http://www.ppionline.org/ppi_ci.cfm?contentid=250543&knlgAreaID=110&subsecid=135)

<sup>12</sup> *Ibid*, p. 7.

<sup>13</sup> National Council on Teacher Quality, *Increasing the Odds: How Good Policies Can Yield Better Teachers*, pp. 2-3, [http://www.nctq.org/nctq/images/nctq\\_io.pdf](http://www.nctq.org/nctq/images/nctq_io.pdf); Jonah Rockoff, "The impact of individual teachers on student achievement: Evidence from panel data," *American Economic Review* 94(2), May 2004: 247-252. Eric A. Hanushek, John F. Kain, and Steven G. Rivkin, "Teachers, Schools, and Academic Achievement," *Econometrica*, 73(2), March 2005: 417ff. Michael Podgursky, "Reforming the Single Teacher Salary Schedule in Public Schools," *Texas Education Review*, Winter 2004, <http://www.educationreview.homestead.com/2003ReformingTeacherPay.html>; Hassel, *Better Pay for Better Teaching*, p. 6.

<sup>14</sup> Marguerite Roza, *Frozen Assets: Rethinking Teacher Contracts Could Free Billions for School Reform*, Education Sector Report, January 2007, p. 3, [http://www.educationsector.org/research/research\\_show.htm?doc\\_id=436576](http://www.educationsector.org/research/research_show.htm?doc_id=436576) - According to Roza, 10.01% of school budgets fund "salary increments based on years of experience," and 2.10% of school budgets fund "salary increases for master's degrees." The author points out that the latter estimate "likely understates the true cost" because it does not factor rewards for doctoral degrees or for increments based on educational credits short of degrees.

<sup>15</sup> Brad Jupp, "The Uniform Salary Schedule: A Progressive Leader Proposes Differential Pay," *Education Next* 5(1), 12.

<sup>16</sup> Jefferson County Education Association Backgrounder, "Alternative compensation plans," <http://www.jcea-cea.org/Documents/Alternativecompensation.pdf>

<sup>17</sup> *Littleton Education Advocate* (Volume 1, Issue 4, December 2006), p. 1.

<sup>18</sup> Goldhaber, *Teacher Pay Reforms*, p. 24.

<sup>19</sup> Carolyn Kelley, Consortium for Policy Research in Education, *Douglas County Colorado Performance Pay Plan* (May 2000), <http://www.wcer.wisc.edu/cpre>; Robert Reichardt and Rebecca Van Buhler, Mid-Continent Research for Education and Learning, *Recruiting and Retaining Teachers with Alternative Pay* (November 2002, Revised February 2003), [http://www.mcrel.org/PDF/TeacherPrepRetention/5021RR\\_RcruitingRetainingTeachers.pdf](http://www.mcrel.org/PDF/TeacherPrepRetention/5021RR_RcruitingRetainingTeachers.pdf)

<sup>20</sup> Public Agenda, *Stand by Me: What Teachers Really Think about Unions, Merit Pay, and Other Professional Matters* (2003), <http://www.publicagenda.org/specials/standby/standby.htm>

<sup>21</sup> The official Denver Professional Compensation System for Teachers 2005 campaign brochure distinguishes the terms: <http://www.dpsk12.org/manila/programs/denverprocomp/2ProCompBrochure705.pdf>

<sup>22</sup> *ProComp Agreement*, § 6.1; Denver ProComp Handbook, § 3, pp. 13-14, <http://www.dpsk12.org/manila/programs/denverprocomp/ProCompHandbook.pdf>

<sup>23</sup> *ProComp Agreement*, § 6.2 and § 7.10.

<sup>24</sup> Data provided by Brad Jupp, DPS Senior Academic Advisor; Caley Miller, DPS Budget Analyst, 19 July 2006.

<sup>25</sup> Electronic mail to the author from Jeff Buck, DPS ProComp Liaison to Human Resources, 11 May 2007.

<sup>26</sup> Education Week on the Web, Talkback Live Transcript, 24 March 2004.

<sup>27</sup> Colorado Department of Education (CDE), "Full-Time Equivalence (F.T.E.), Average Salary, and Average Experience of Classroom Teachers (Fall 2005),"

<http://www.cde.state.co.us/cdereval/download/PDF/2005Staff/hdpmct.pdf>

<sup>28</sup> *Agreement and Partnership between School District No. 1 in the City and County of Denver, State of Colorado, and Denver Classroom Teachers Association, September 1, 2005 – August 31, 2008*, "Article 31 – Salary," 71, <http://www.dpsk12.org/manila/partners/dcta/200508Agreement.pdf> - Hereafter denoted as *DPS-DCTA Agreement*.

<sup>29</sup> Denver Public School employee pensions are financed separately from the state's Public Employees' Retirement Association (PERA), in which most other Colorado school employees are invested. Generally speaking, a DPS retiree's annual pension is determined by multiplying the average of his three highest annual earning rates by 2.5 percent per year of earned service. For example, a 30-year employee whose three highest salaries were \$62,000, \$64,000, and \$66,000 would have a yearly pension of \$48,000 [ $30 \times 2.5\% = 75\%$  of \$64,000 3-year average = \$48,000]. See Denver Public Schools Retirement System, *Retirement and You*, [http://dpsrs.org/ACTUALPAGES/PDF\\_FILES/RETandYOU2005.PDF](http://dpsrs.org/ACTUALPAGES/PDF_FILES/RETandYOU2005.PDF)

<sup>30</sup> Public Agenda, *Stand by Me*, p. 25.

<sup>31</sup> Jupp, "The Uniform Salary Schedule," 11.

<sup>32</sup> Allison Sherry, "Salary system luring faculty," *Denver Post*, 18 June 2007, [http://www.denverpost.com/education/ci\\_6165854](http://www.denverpost.com/education/ci_6165854)

<sup>33</sup> Leigh and Mead, *Lifting Teacher Performance*, pp. 9, 12.

<sup>34</sup> Telephone conversation of the author with Jupp, 13 March 2007.

<sup>35</sup> Sheila Kirby, Mark Berends, and Scott Haftel, "Supply and Demand of Minority Teachers in Texas: Problems and prospects." *Educational Evaluations and Policy Analysis* 21(1), 47-66. In Goldhaber, *Teacher Pay Reforms*, 11.

<sup>36</sup> Eric A. Hanushek, John F. Kain, and Steven G. Rivkin, "The Revolving Door," *Education Next* 4(1), 81-82. Research indicated that female teachers with 2 years or fewer experience would require a 25 percent salary increase for "combat pay." Among males, who represent a far smaller number in the sample and overall, a 12 percent pay increase for experienced teachers and a 9 percent pay increase for inexperienced teachers would be needed to move them into high-poverty, low-performing schools.

<sup>37</sup> ProComp Handbook, § 7.B, p. 37. "Workshops Explain Market Incentives," Denver ProComp Web site,

<http://denverprocomp.org/workgroups/marketincentives/whats happening>

<sup>38</sup> Electronic mail to the author from Jupp, 7 September 2005.

<sup>39</sup> ProComp Handbook, § 7.B, pp. 37-38. The 2005-06 "Hard-to-Serve" designation included 14 elementary schools, 4 middle schools, 4 high schools, and 6 alternative schools. The 2006-07 "Hard-to-Serve" designation includes 18 elementary schools, 6 middle schools, 3 high schools, and 6 alternative schools.

<sup>40</sup> Cynthia D. Prince, *Higher Pay in Hard to Staff Schools: The Case for Financial Incentives*, (American Association of School Administrators, 2002), p. 20, [http://www.aasa.org/files/PDFs/Publications/higher\\_pay.pdf](http://www.aasa.org/files/PDFs/Publications/higher_pay.pdf)

<sup>41</sup> ProComp Handbook, § 7.A, p. 35. Electronic mail from Jupp, 7 September 2005. DPS personnel data used as criteria include: 1) Ratio of teachers with less than one year of experience to the total number of teachers in that subject area; 2) Ratio of teachers who are not highly qualified according to No Child Left Behind standards to total teachers in that subject area; 3) Data on special education and student services assignments.

<sup>42</sup> "Workshops Explain Market Incentives," Denver ProComp Web site. Electronic mail from Jupp, 7 Sept 2005.

<sup>43</sup> ProComp Handbook, § 7.A, p. 35.

<sup>44</sup> "Workshops Explain Market Incentives," Denver ProComp Web site. Electronic mail from Jupp, 7 Sept 2005.

<sup>45</sup> Author's interview of Les Woodward.

<sup>46</sup> Public Agenda, *Stand by Me*.

<sup>47</sup> Ibid.

<sup>48</sup> An element of flexibility also is included, allowing for changes in "instructional circumstances" and giving teachers a chance to revise strategies and expectations. A series of handbooks outline guidelines for setting objectives for many different subjective areas. An interactive Web site has been designed to facilitate the process of writing objectives. See also ProComp Handbook, § 4.A, p. 17.

<sup>49</sup> Ibid.

<sup>50</sup> CTAC, *Catalyst for Change*, Chapter IV, "Objectives: The Nexus," pp. 42-63. The three major findings in the pilot schools were as follows: 1) Significantly more teachers devised high-quality objectives the longer they participated in eligibility for financial incentives; 2) By most testing measures, student achievement improved in correlation with the quality of objectives set by their instructors; and 3) The students of teachers who met two annual objectives tended to outpace their peers whose teachers met only one annual objective. Assessments used to measure progress in student achievement were the Colorado Student Assessment Program and the Iowa Tests of Basic Skills.

<sup>51</sup> ProComp Handbook, § 4.C, pp. 21-22; Electronic mail to the author from Brad Jupp, DPS/DCTA ProComp Project Coordinator, 21 May 2007; Electronic mail to the author from Brad Jupp, DPS/DCTA ProComp Project Coordinator, 12 September 2005.

<sup>52</sup> *ProComp Agreement*, § 7.6.2. Electronic mail to the author from Dr. Joyce McLarty, Executive Director of Planning, Assessment, and Research, Denver Public Schools, 12 September 2005. Recognizing the challenge of effectively matching standardized test scores to the value of teacher input, members of the Transition Team have worked to shape the criteria and methodology. Adjustments are built into the calculation for the number of pupils taught with "at-risk factors" – those receiving Free and Reduced Lunch, those who don't speak English as a primary language, and special education students with individual education plans. The work group also has built a formula to determine the effects

of middle and high school teachers on students who they oversee for only part of the day.

<sup>53</sup> *Agreement between Adams County School District 14 and School District 14 Classroom Teachers Association, "Memorandum of Understanding B: Incentive Pay,"* pp.45-46, <http://www.acsd14.k12.co.us/documents/CertifiedHandbook.pdf>

<sup>54</sup> "Criteria Developed for Distinguished Schools," Denver ProComp Web site, [http://denverprocomp.org/workgroups/CSAP\\_DistinguishedSchools/whats happening](http://denverprocomp.org/workgroups/CSAP_DistinguishedSchools/whats happening); ProComp Handbook, § 4.B.

<sup>55</sup> *ProComp Agreement*, § 7.6.3.

<sup>56</sup> Hassel, *Better Pay for Better Teaching*, p. 25.

<sup>57</sup> Frederick M. Hess, "Teacher Quality, Teacher Pay," *Policy Review* No. 124, April/May 2004, <http://www.hoover.org/publications/policyreview/3438676.html>

<sup>58</sup> The Education Wonks, "Merit Pay the Iowa Way," 5 September 2006, <http://educationwonk.blogspot.com/2006/09/merit-pay-iowa-way.html>

<sup>59</sup> Mississippi Code § 37-19-7; Education Commission of the States, "State Notes: Mississippi Performance Based Pay (MPBP) Plan," <http://mb2.ecs.org/reports/Report.aspx?id=1273>; Bobby Harrison, "Adequate education isn't a runaway train," *Northeast Mississippi Daily Journal*, 30 January 2007, <http://www.djournal.com/pages/story.asp?ID=236048&pub=1>

<sup>60</sup> Texas Education Agency, "Governor's Educator Excellence Award Program: Texas Educator Excellence Grant," [http://www.tea.state.tx.us/opge/disc/EducatorExcellenceAward/TEEG\\_overview.pdf](http://www.tea.state.tx.us/opge/disc/EducatorExcellenceAward/TEEG_overview.pdf)

<sup>61</sup> *ProComp Agreement*, § 7.3.3.

<sup>62</sup> *DPS-DCTA Agreement*, § 31-7-2. The 2006-07 salary schedule is available online at <http://hr.dpsk12.org/dpsEmployees/salary/DCTA.shtml>

<sup>63</sup> Information available at the National Board for Professional Teaching Standards Web site, <http://www.nbpts.org>

<sup>64</sup> The North Carolina Center for Recruitment, Retention, Recognition and Professional Advancement, <http://www.ncpublicschools.org/recruitment/nationalboardcertification>; Florida Department of Education, Dale Hickam Excellent Teacher Program, <http://www.fldoe.org/etp/Default.asp>

<sup>65</sup> Tracy W. Smith, Belita Gordon *et al.*, *An Examination of the Relationship Between Depth of Student Learning and National Board Certification Status* (Appalachian State University: June 2005); Wendy McColskey, James H. Stronge *et al.*, *Teacher Effectiveness, Student Achievement, and National Board Certified Teachers* (College of William and Mary: June 2005); Rita O'Sullivan, Martha Hudson *et al.*, *Investigating the Classroom Assessment Literacy of NBPTS Board Certified Teachers* (University of North Carolina: May 2005); William L. Sanders, James J. Ashton, S. Paul Wright, *Comparison of the Effects of NBPTS Certified Teachers with Other Teachers on the Rate of Student Academic Progress* (SAS Institute: March 2005). All studies available online at [http://www.nbpts.org/resources/research/browse\\_studies](http://www.nbpts.org/resources/research/browse_studies)

<sup>66</sup> Dr. J.E. Stone, East Tennessee State University College of Education (2002), *The Value-Added Achievement Gains of NBPTS-Certified Teachers in Tennessee: A Brief Report*, <http://www.education-consumers.com/briefs/stoneNBPTS.shtml>

<sup>67</sup> Denver Public Schools Curriculum and Instruction Department, *Earning Professional Development Units through Ongoing, Collaborative, and Job-Embedded Learning* (DRAFT), July 2005, pp. 3-5, [http://curriculum.dpsk12.org/PDU/PDU\\_Handbook.pdf](http://curriculum.dpsk12.org/PDU/PDU_Handbook.pdf)

<sup>68</sup> *Ibid.*, pp. 11-12.

<sup>69</sup> Dale Ballou and Michael Podgursky, "Let the Market Decide," *Education Next* 1(1), Spring 2001.

<sup>70</sup> Public Agenda, *Stand by Me*.

<sup>71</sup> Marty Solomon, "Teacher Compensation: The Real Problem in Education," September 2004, <http://www.educationnews.org/teach-compensation-the-real-pr.htm>

<sup>72</sup> Telephone conversation of the author with Jupp, 13 March 2007. *DPS-DCTA Agreement*, Article 31-9.

<sup>73</sup> Arizona Revised Statutes § 15-918.02.

<sup>74</sup> More information is available online for both the Missouri Career Ladder (<http://dese.mo.gov/divteachqual/careerladder/>) and the Arizona Career Ladder (<http://www.ade.state.az.us/asd/CareerLadder/>).

<sup>75</sup> *ProComp Agreement*, § 7.4.3-4. *DPS-DCTA Agreement*, Article 10-3. The different categories of evaluations – probationary, non-probationary, and special – are established in the collective bargaining contract.

<sup>76</sup> Minutes, "Denver Public Schools Professional Compensation System for Teachers Transition Team Meeting," 17 August 2005.

<sup>77</sup> "Denver Schools Conducting Professional Evaluation Field Test," Denver ProComp Web site, [http://denverprocomp.org/stories/storyReader\\$170](http://denverprocomp.org/stories/storyReader$170); Electronic mail to the author from Shirley Scott, Principal on Special Assignment, Human Resources, 23 March 2007.

<sup>78</sup> ProComp Handbook, Section 6, p. 34.

<sup>79</sup> *DPS-DCTA Agreement*, Article 10-7.

<sup>80</sup> Author's interview of Les Woodward.

<sup>81</sup> *ProComp Agreement*, § 7.4.2.2. *Evaluation Handbook*, p. 32.

<sup>82</sup> The Teacher Incentive Fund (TIF), authorized by a Congressional appropriations package in 2006, is a federal discretionary grant program designed to fund sustainable and effective performance-based pay programs in high-needs schools. State and local educational agencies, including charter schools, are eligible to apply for federal funds. To meet the conditions for receiving a TIF grant, a program must: 1) offer rewards both to teachers and principals; 2) include student achievement gains and professional evaluations as performance measurements; and 3) serve a school population of at least 30 percent Free or Reduced Lunch eligibility. In 2006, the first 16 TIF grants were given out, totaling \$42 million in first-year awards. More than \$8 million funded awards to three Colorado school districts: Denver, Eagle County, and Fort Lupton. See <http://www.ed.gov/programs/teacherincentive/index.html>

<sup>83</sup> Ben DeGrow, "Denver Expands Merit Pay to Include Principals," *School Reform News* 11(1) (January 2007), 5.

<sup>84</sup> David Figlio and Lawrence Kenny, "Individual Teacher Incentives and Student Performance," National Bureau of Economic Research (NBER) Working Paper No. W12627. See also press release "UF Study: Teacher merit pay boosts student standardized test scores," <http://news.ufl.edu/2007/01/04/teacher-merit-pay/>

<sup>85</sup> Joshua H. Barnett, Gary W. Ritter, Marcus A. Winters, Jay P. Greene, "Evaluation of Year One of the Achievement Challenge Pilot Project in the Little Rock Public School District," University of Arkansas Dept. of Education Reform (January 2007). See also Daniel Henninger, "Give Top Teachers a Bonus," *The Wall Street Journal*, 19 January 2007.

<sup>86</sup> Florida Department of Education Web site, Special Teachers Are Rewarded (STAR) Program, <http://www.fldoe.org/STAR>

<sup>87</sup> Florida Department of Education, Special Teachers Are Rewarded (STAR) Legislative Budget Item 2006-07 Technical Assistance Document (June 2006),

[http://www.fldoe.org/STAR/pdfs/STAR\\_TAP.pdf](http://www.fldoe.org/STAR/pdfs/STAR_TAP.pdf)

<sup>88</sup> Vaishali Honawar, "Legislature votes to replace merit-pay system in Florida," *Education Week*, 28 March 2007, [http://www.edweek.org/ew/articles/2007/03/28/29\\_florida.h26.html](http://www.edweek.org/ew/articles/2007/03/28/29_florida.h26.html); Florida House of Representatives, The Office of the Majority Whip, WHIP's Policy Brief, "CS/HB 7021 - Merit Award Program for District School Board Employees," 20 March 2007; Telephone conversation of the author with Michael Kooi, Staff Director, Florida House of Representatives Committee on 21<sup>st</sup> Century Competitiveness, 28 March 2007.

<sup>89</sup> More information is available online at <http://www.talentedteachers.org/tap.taf>

<sup>90</sup> Eagle County Schools Web site, "Systemic School Reform: The Teacher Advancement Program," <http://eagleschools.net/teachers/teacheradvancementprogram/systemic-school-reform-the-teacher-advancement-program>

<sup>91</sup> Lewis C. Solmon, J. Todd White, Donna Cohen, and Deborah Woo, *The Effectiveness of the Teacher Advancement Program*, (National Institute for Excellence in Teaching: 2007). States evaluated include Arkansas, Colorado, Florida, Louisiana, Minnesota, and South Carolina.

<sup>92</sup> *Understanding the Teacher Advancement Program*, (National Institute for Excellence in Teaching: 2005), p. 20; Minnesota Department of Education, Quality Compensation for Teachers Web page, [http://children.state.mn.us/MDE/Teacher\\_Support/QComp/index.html](http://children.state.mn.us/MDE/Teacher_Support/QComp/index.html); National Council on Teacher Quality (NCTQ), *Teacher Quality Bulletin*, Vol. 8, No. 5 (May 31, 2007).

<sup>93</sup> Minnesota Department of Education, Quality Compensation for Teachers Program, "Frequently Asked Questions (FAQ)," [http://children.state.mn.us/MDE/Teacher\\_Support/QComp/Frequently\\_Asked\\_Questions/007313](http://children.state.mn.us/MDE/Teacher_Support/QComp/Frequently_Asked_Questions/007313); NCTQ Bulletin, May 31, 2007.

<sup>94</sup> Goldhaber, *Teacher Pay Reforms*, pp. 18-24.

<sup>95</sup> *Ibid.*, p. 25; Colorado Constitution, Article IX, § 15; Colorado Revised Statutes § 22-63-401.

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