There is strong consensus around the country that talented and capable teachers will be needed in all classrooms in order to accomplish the nation’s goals of teaching all students to high standards, and closing the achievement gap. Although there are many policy and practice issues that have to be addressed in order for the nation’s education systems to recruit and retain the quality of individuals that are required, including schools and classrooms in many of the country’s large urban and poverty impacted districts, the teacher compensation system itself must be changed. Teacher salary levels will have to be hiked in many places to enable school systems to compete for the quality of talent required to be successful, and the salary structures themselves need to be changed in order to pay teachers for the knowledge, skills and responsibilities to be successful, including bonuses for improved student performance.

With support from the College Board, the Consortium for Policy Research in Education (CPRE) Group at the University of Wisconsin-Madison is producing a series of papers that addresses the compensation aspect of the strategic management of human capital in public education:

2. **Do Teacher Pay Levels Matter?**, by Anthony Milanowski
3. **How to Design New Teacher Salary Structures**, by Herbert G. Heneman, III and Steve Kimball
4. **How to Pay Teachers for Student Performance Outcomes**, by Anthony Milanowski
5. **How to Fund Teacher Compensation Changes**, by Allan Odden
6. **Exploring a Federal Government Role in Funding Increased Teacher Compensation**, by Andrew Reschovsky

This paper is available in the Resources section of [http://www.smhc-cpre.org](http://www.smhc-cpre.org).

**September 2008**

The research reported in this paper was supported by a grant from the College Board, New York, NY (Grant No. 2007-1035) to the Consortium for Policy Research in Education (CPRE) and the Wisconsin Center for Education Research, School of Education, University of Wisconsin-Madison. The opinions expressed are those of the authors and do not necessarily reflect the view of the institutional partners of CPRE, the College Board or the Wisconsin Center for Education Research.
HOW TO FUND TEACHER COMPENSATION CHANGES

By
Allan Odden

In this series of papers on teacher compensation, the authors have argued that to meet the nation’s goal to dramatically improve student achievement, including the achievement of students of color and from poverty backgrounds, the country also needs to raise the overall level of teacher quality. As the papers argue, one policy lever that exists for increasing teacher quality is to change the way that teachers are paid, rewarding teachers for what they know and do and rewarding faculties and individual teachers for meeting student performance benchmark goals. In Paper 1 of this series, Odden (2008) argues that teacher salaries should be increased substantially, but not through the current single salary schedule. Instead, he suggests that new factors that directly measure instructional performance should be added to the pay schedule, ensuring that such salary increases would be tied to improved instruction and higher levels of student achievement. He suggests incentives of approximately $5000 for teachers in subject-area shortages such as mathematics and science, or for highly qualified teachers willing to work in high-needs schools. Finally, he recommends bonuses of at least $4000 per teacher for performance improvements in core subjects. The result would be a salary structure that paid teachers for the kinds of new instructional practices needed to boost student learning as well as bonuses for actually increasing student performance.

Paper 2 by Milanowski (2008a) suggests that these pay increase ranges are what it would take to make teacher salaries more competitive, and in Paper 3 Heneman and Kimball (2008) indicate a variety of ways to design new teacher pay structures, with Milanowski (2008b) showing in Paper 4 how to create bonus programs linked to improved student achievement.
These papers augment a previous handbook on creating new forms of teacher compensation our group prepared (Odden & Wallace, 2007b).

Implementing any of the above changes to teacher pay systems requires information about their costs. This paper draws on the cost chapter in a 2007 book by Allan Odden and Marc Wallace (2007a), *How to Create World Class Teacher Compensation*, and a few other documents, and helps fill the gap by providing information about the costs of new elements of teacher pay.

The paper is divided into five sections. Following this introductory section, section one articulates the importance of making changes to teacher compensation as part of an overall strategic plan for improvement, rather than merely because it is the “reform of the moment.” Section two estimates the costs of various teacher compensation changes, and then identifies various sources of funding for the new pay systems. Section three discusses options for implementing a new pay system, and describes some of the potential challenges to making such changes. Finally, section four offers a summary and conclusions.

1. A NEW PAY SYSTEM AS PART OF AN OVERALL IMPROVEMENT STRATEGY

The need to be strategic with changes in pay systems is important for any organization, including school systems. One of the issues in education is that numerous merit pay systems and bonus programs tried in the past failed to deliver on their promises, many times because of lack of funding. The result of these failures, many of which have been quite public, has been suspicion among teachers about whether changes to teacher compensation 1) are needed, 2) could help improve the overall system, and 3) would actually be funded. For example, when the Consortium for Policy Research in Education (CPRE) studied the implementation of the performance bonus system in Kentucky in the mid-1990s, many teachers did not believe they
would actually receive the bonus even if their schools qualified for it even though the 1990s bonuses were forward funded and had been paid out in the previous 4 years. The teachers were more aware of a failed bonus system 15 years earlier than the full funding of the then extant bonus program (Kelley, 1998).

Thus, changes to teacher pay must be done carefully and responsibly and funded in order to avoid the development of more teacher skepticism about the programs. Changes in pay need to motivate teachers both to enhance their instructional expertise and to focus their energies on increasing student academic performance; increased skepticism of a new system deriving from either poor implementation or lack of funding erodes motivation and does more harm than good.

A second and related reason why it is important to be strategic about changes to teacher pay is that educators are often the victim of the reform “du jour,” whereby they are subject to the latest popular education reform, only to have it replaced in a year or two by the reform of the moment at that time. Having established that, for today’s education context, the single salary schedule no longer matches the goals of the educational system (Odden & Wallace, 2007b; Odden, 2008), we need to implement lasting changes to teacher compensation that do match the goals of today’s system. As Section 2 explains, one way to ensure that the change is strategic and enduring is to use a permanent funding stream and consider new pay structures as core to the system rather than as simply interesting add-ons that get dropped when the budget gets tight.

A third reason that changes to teacher pay need to be strategic is tied to one of the goals of such reform (as was stated in the introduction) which is to help raise the overall level of teacher quality. This means that popular and important teacher compensation changes that are used to address the distribution of teacher quality, such as incentives for teachers to work in high-needs schools, cannot be expected simultaneously to address problems with the overall
level of teacher quality. Therefore, to affect changes in both the distribution and level of teacher quality, multiple elements must be built into new pay systems (tying compensation to instructional expertise, working in a subject shortage area or in a high need school, and impacts on student learning gains). The details of the changes were addressed by the previous four papers in this series (Heneman & Kimball, 2008; Milanowski, 2008a; Milanowski, 2008b; Odden, 2008).

Before proceeding, we summarize our “theory of action” of why changes in teacher compensation can be an important element of the strategic management of teachers in public education. Our basic premise is that powerful instruction connected to a content rich, rigorous curriculum is the prime way to dramatically boost student learning. Put differently, what teachers teach and how they teach that curriculum are the key routes to higher levels of student achievement. This means that all classrooms must be staffed by teachers who know their content well, have the battery of instructional expertise needed to successfully teach a content rich curriculum so that their students learn it to high standards, and relentlessly work to ensure that their students learn and can use the material taught. This may require many teachers to improve their instructional expertise. It will require that top teacher talent be acquired and retained in all classrooms, including classrooms such as mathematics and science that have experienced teacher shortages, and that high poverty schools must have an equal share of quality teachers. Lastly, it requires that the system be clear that the prime overall goal is high levels of student achievement; at least in such core subjects as mathematics, science, reading and writing, and history.

Thus, as argued in the first four papers in this series, new compensation structures that supported these goals would be those that provide pay incentives for: better and better instructional performance, teaching in content areas that have experienced teacher shortages,
teaching in schools in high poverty communities, and producing gains in student achievement year after year. The previous papers have discussed various ways of designing compensation structures that address these strategic goals. The big remaining questions are:

- How much do such initiatives cost?
- Where does the money come from to pay for these strategic changes in teacher compensation systems?

The next section gives some examples of states and districts that have implemented teacher compensation changes, discusses the costs of these programs, and identifies various options for funding them.


Changes to teacher compensation can take a variety of forms, ranging from add-ons to the current salary schedule to the adoption of a new salary schedule. Estimating the costs of a one-time performance-based bonus is significantly easier than estimating the costs of a new salary schedule, but both types of changes are addressed in this section.

This section is divided into two parts. The first part explains how to estimate the costs of new pay systems with examples ranging from the cost of a one-time school-based bonus program to the costs of Denver’s Procomp system. The second part gives some options for funding these new costs. These options include using money from the old system, passing a tax levy, securing foundation or grant money, and a possible federal role in funding new teacher compensation.

**Estimating the Costs of Teacher Compensation Changes**

This subsection provides cost estimates of a wide variety of teacher compensation changes beginning with the costs of a performance bonus program.
A performance-based bonus program. Estimating costs for bonus programs is perhaps the most straightforward. Assume an education system wants to provide an average bonus of $4,000 a teacher. The cost would be the estimated number of teachers who would qualify for the bonus times the average bonus size. This simple cost estimate would work for a school-based performance award or for a program focused on individual teachers. For the former, it would be assumed that when the school qualified, all teachers in the school would earn the bonus. To calculate costs, the estimated number of teachers who would receive the bonus times the size of the bonus determines the cost.

In terms of some specific numbers, take a state or education system with 100,000 teachers (people paid on the teacher salary schedule). This is about the number of teachers for a school system with about 1 million students. If the system assumed that half the teachers would qualify (a figure that would be estimated from the difficulty of the improvement targets set), then the estimated total costs would equal 50,000 teachers (1/2 of 100,000) times $5,000 for each teacher ($4,000 plus about 25 percent for fringe benefits), or a total of $250 million. If the estimated number of teachers increased, the cost also would rise (and similarly if the estimated number of teachers were less).

To be sure, the first figure, $250 million, is a significant amount of money. So performance bonus programs, while initially attractive, are not cheap to implement. On the other hand, for a system spending close to the national average of about $9,000 a child, the total budget would be $9 billion. That makes the percent increase for the bonus just 2.8 percent of the total budget ($250 million divided by $9 billion), not a large percentage and clearly within normal annual revenue and budget increases.
The funding issue, then, would be whether any normal increase allocated to the system as well as to the salary budget would go first for the performance bonus or to market adjustments for the overall salary structure. One could argue this issue both ways. But if the system needed a performance orientation and if leaders believed that a performance bonus program could help create that orientation, then it could be argued that the first draw on any new dollars for salary would be for a new performance bonus program. And as the numbers above suggest, the funding target for such a program would be well within the reach of school systems in 1-3 years of normal budget times.

As noted, the 50 percent estimate of teachers qualifying could work with either a school-based bonus program or an individual teacher focused bonus program. The cost would rise if a larger percentage was used to estimate the number of teachers who would qualify, and just the reverse if a lower number was used. Since performance bonus programs are created to improve student achievement, they usually include “stretch goals” (i.e., goals for improvements that exceed past levels), so it makes sense that not all schools or teachers would be able to meet them. However, stretch goals still need to be reasonable. If they are too difficult, they will lose their motivating power as too many schools/teachers would see them as not possible. Thus an estimated 50 percent qualifying rate seems reasonable, though a more precise estimate could be developed as the program was implemented over time.

If the bonus program had three different levels of awards, as some do today (say $2000 for a threshold improvement bonus, $4000 for the target bonus, and $6000 for substantially beating the improvement target), the estimated cost would depend on the percentage distribution of teachers eligible for each size bonus. But the costs could be calculated once those percentage assumptions were made. If the assumption was that teachers would be equally distributed across
the three different bonus levels, the costs would be the same as if there was just one target ($4000 bonus level). If it was assumed that there would be proportionately more teachers at the threshold bonus level, then the overall costs would be somewhat less. Simulations could be run to determine the range of estimated costs.

Assuming that sufficient funding were made for the estimated costs, the tough issue is what would happen if the actual number of eligible teachers who qualified was greater than the estimated number to qualify, thus creating a funding gap. The plan should stipulate up front how that circumstance would be addressed. There are three basic options. The first would be for the system to increase the funding so that every teacher who qualified received the full bonus (which happened during the 1990s when North Carolina rolled out its teacher bonus program). But that is unusual; most education systems would be hard pressed to enhance funding after the appropriation cycle had passed. The second option would be to simply reduce the amount of the bonus to ensure that everyone who qualified received a bonus. This approach ensures that all teachers who qualified for the bonus would get one, though at a reduced rate. The third option would be to retain the size of the bonus but change the qualifying targets so that fewer teachers qualified. This approach, however, has the nasty and unpopular characteristic of changing the rules after the fact and we would recommend that it not be used.

But the major point here would be to state before the program starts what happens if the funding pool is not large enough. Then everyone knows the rules from the start of the program.

If fewer teachers qualify for the bonus (so it becomes over funded), the excess funds could help finance the funding pool for the next year, or go back into the general fund. But in this case, every teacher who qualified would receive the full bonus.
A balanced scorecard approach. Another form of bonus is called a balanced scorecard. Figure 1 shows a “balanced scorecard” as an alternate way to construct a school-based performance award program. It entails a more complex way to calculate the size of the bonus, which then can be used to calculate the overall costs.

The scorecard shows that a small number of performance objectives and measures are included in the program. The general rule is to have three to six objectives. This scorecard has five different performance measures: three focusing on student achievement in core subjects – mathematics, reading/writing and science, one on making Adequate Yearly Progress (AYP) under the federal No Child Left Behind (NCLB) requirements, and one for reducing grade level retention in third grade (a key grade for having all students be proficient readers). The scorecard shows how AYP can be included in but not be the sole determinant of a locally designed school-based incentive program. AYP also is a proxy for closing the achievement gap because meeting AYP requires improvement for all key subgroups of students – ELL students, those from poverty backgrounds, each minority group, and females as well as males.

Column 3 shows that the balanced scorecard does not value all performance goals at the same level. The balanced scorecard allows the organization to assign a specific weight to each performance measure; the weights need to sum to a total of 100%. In Figure 1, the achievement scores in the three core subjects are each weighted equally at 20 percent each. AYP, the proxy for closing the achievement gap, is valued higher and given a 30 percent weight. And the third grade retention rate is valued at 10 percent. These weights are value and policy judgments; different districts could decide on weights that are different from these figures.

1 Adapted from Odden & Wallace (2007a), Chapter 6.
### Figure 1
A Balanced Scorecard

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>Measure</td>
<td>Weight</td>
<td>Prior Year Actual</td>
<td>Below Threshold</td>
<td>Threshold</td>
<td>50% of Target</td>
<td>100% of Target</td>
<td>125% of Target</td>
<td>Percent Accomplishment</td>
</tr>
<tr>
<td>Achievement</td>
<td>Mathematics</td>
<td>20%</td>
<td>60</td>
<td>60</td>
<td><strong>62.5</strong></td>
<td>65</td>
<td>66.25</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>Reading/Writing</td>
<td>20%</td>
<td>70</td>
<td>70</td>
<td><strong>74</strong></td>
<td>75</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>Science</td>
<td>20%</td>
<td>50</td>
<td>50</td>
<td><strong>53</strong></td>
<td>56</td>
<td>57.5</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Achievement Gap</td>
<td>Meets AYP</td>
<td>30%</td>
<td><strong>No</strong></td>
<td>--</td>
<td>Yes</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retention Rate</td>
<td>Third Grade Retention</td>
<td>10%</td>
<td>20</td>
<td>20</td>
<td><strong>18</strong></td>
<td>16</td>
<td>15</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>45%</strong></td>
</tr>
</tbody>
</table>

**ONE APPROACH:**

Target Incentive: $2500  
Percent Accomplished: 45%  
Award: 45% x $2,500 = $1125

**A DIFFERENT APPROACH:**

Target incentive: 6% of base salary  
Percent accomplished: 45%  
Award: 45% x 6% x base salary
The scorecard identifies a target performance improvement goal for each measure in column 8, but then, as will be shown, provides partial rewards for partial progress in a school’s hitting the target (columns 5-7), as well as “extra credit” for beating the target (column 9).

Indeed, column 6 indicates a minimum threshold that will qualify the school for at least some reward for each particular objective. Note that the way this scorecard is designed, maintaining one’s level of performance is defined as the threshold amount. That might or might not be appropriate in all schools. But as this scorecard shows, meeting the threshold would earn the school 25% of the award, producing 50% of the target improvement would earn the school 50% of the target, and producing the targeted improvement would earn the full award. Column 9 indicates that beating the target by 25% or more would produce an incentive amount that is 125% of the target award.

To calculate the amount of the award, the percent of target improvement attained (0, 25, 50, 100 or 125%) is determined by the actual score for each objective; this is the column heading for each bolded and double-outlined cell in the example. This percent, then, is multiplied by the weight for that objective, and the result is included in column 10, Percent Accomplishment. So for the example in Figure 1, this school scored at 50% of target in mathematics (62.5) which, given the 20% weight for this objective, produced a Percent Accomplishment for this row of 10%. Likewise, the school scored: at 100% of target in reading/writing (74), producing a 20% accomplishment; at 50% of target in science(53), producing a 10% accomplishment; did not make AYP so earned 0% for this row; and scored at 50% of target for third grade retention (18) so earned 5% of accomplishment (50% times 10%). The total earned accomplishment is the sum of each row of column 10, which in this case is 45 percent. In other words, for this scorecard, the school earned 45 percent of the target award.
The target award could be set at a percentage of salary or a fixed amount. Figure 1 shows both. For the approach that sets the target award at a fixed dollar amount of $2500 per certified staff member in the school, the award earned is $1125, which is 45% of $2500. Given this way of setting the award, all certified staff in the school would be provided the same award. This award could also be given to all administrative staff as well, including the principal. In this way, all professionals in the school are focused on the same set of core objectives and rewarded in the same way if the objectives are attained.

Alternately, if the target award were a percentage of base salary, say 6% of salary, then the award earned would be 2.7% of salary, which is 45% times 6%. If a teacher’s salary were $45,000, then the award amount would be $1215, which is 2.7% of $45,000. A teacher with a salary of $30,000 would receive the same percentage award, 2.7%, but this would be just $810 for this teacher. The award for a principal with a salary of $80,000 would be $2160.

Simulating various scenarios of accomplishing different goals at different levels could easily produce an estimate of the average bonus under each approach. The average bonus times the estimated number of individuals in schools earning the bonus would equal the estimated cost, again similar to the approach for the simpler school-based performance award program.

The balanced scorecard approach, however, succinctly shows everyone in the school:

- The performance objectives in the award program
- The weights given to each objective, showing which ones are weighted the highest
- The improvement targets, and
- The way the school, and all teachers within it, will earn its percentage of the target award
The balanced scorecard is a powerful but simple way both to communicate the most valued objectives of the school, and the major features of how the incentive program will work. And once designed, its costs are relatively straightforward to estimate.

A full-blown knowledge and skills-based salary structure. In Paper 1, Odden described a new salary structure based largely on a teacher’s knowledge and skills or instructional expertise (see Figure 2). Movement up to higher levels in the salary structure depends on teachers’ meeting a higher level of instructional performance; if their instructional performance does not improve, the teacher is capped at the highest step in a performance category (except for periodic market adjustments to all the numbers in the pay schedule). Note also that the schedule has three “lanes” associated with degree status: Bachelors degree only, Masters degree and Doctorate/Specialist/Masters plus 60 units; though with the stipulation that the additional degree must be in the area of licensure, so would exclude a Masters degree in administration.

The increased costs for such a structure are also fairly straightforward to estimate. The model provided for a 10 percent increase for moving into a higher performance category, a 1.5 percent increase for any step within a performance category, a 4 percent increase for moving across a lane and a 10 percent increase for Certification from the National Board for Professional Teaching Standards. Most districts already have historical figures for estimating the number of teachers moving across lanes, the average cost of a step increase, and by now have some estimate of the annual increase in Board Certified teachers. Districts would also know where current staff were on the salary schedule so could estimate the number eligible for a step increase (knowing that those at the top of the schedule could not receive a step increase). So initially, the major prediction would be to estimate number of teachers moving across performance categories and
thus eligible for 10 percent salary increases. Thus, simulations could be run with different assumptions to determine the range of costs.

Figure 2

A Knowledge and Skills Based Pay Plan

<table>
<thead>
<tr>
<th>Performance Category</th>
<th>Step Within Level</th>
<th>BA</th>
<th>MA</th>
<th>MA 60/Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>$40,000</td>
<td>$41,600</td>
<td>$43,264</td>
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</tr>
<tr>
<td>2</td>
<td>$40,600</td>
<td>$42,224</td>
<td>$43,913</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>$41,209</td>
<td>$42,857</td>
<td>$44,572</td>
<td></td>
</tr>
<tr>
<td><strong>Emerging Professional</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>$45,330</td>
<td>$47,143</td>
<td>$49,029</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>$46,010</td>
<td>$47,850</td>
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</tr>
<tr>
<td>3</td>
<td>$46,700</td>
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<tr>
<td><strong>Professional</strong></td>
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<tr>
<td>1</td>
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<tr>
<td>6</td>
<td>$68,574</td>
<td>$71,317</td>
<td>$74,170</td>
<td></td>
</tr>
</tbody>
</table>

Percent Increase for Step: 1.5%
Percent Increase for Performance Level: 10.0%
MA, MA60/Doctorate: 4.0%
National Board Certification: 10.0%

2 The numbers in the schedule are just suggestive; each state or district would need to decide the appropriate starting salary for Entry Level, Step 1, and that would generate the rest of the numbers for this salary schedule according to the increases given for Step and Performance level.
Pay structures like the above schedule could also allow teachers to jump from a middle step in one performance category to the first step in the next highest performance category, providing a fast track to higher salaries for top performers. Thus, an estimate would need to be made for such jumps and simulations could be run with alternative estimates of jumping.

Odden and Wallace (2007a) made several assumptions for such a system and found that a full knowledge and skills pay structure would cost within a range of a few percentage points of the traditional salary schedule, at least in the short to medium term. When our UW-CPRE group initially estimated the cost of a Cincinnati proposed knowledge and skills-based pay plan, which was quite similar to that in Figure 2, its cost was also only about 2 percent more than the previous single salary schedule (Odden & Kellor, 2000). Long term the costs would depend on the degree to which teachers enhanced their instructional performance and thus moved performance categories or were capped within a category. Without good professional development, it could turn out that not as many teachers would improve their instructional performance. In which case the cost over time would be less than initially estimated, but expected increases in student performance may also be less than first estimated.

The total costs also would depend on any market adjustments to the numbers in the structure. The above costs are just those associated with the new salary structure itself.

It should be noted that a full blown knowledge and skills system uses all the funds in the current salary structure for the new and more strategic salary structure. It is not an add-on that can be dropped in tight budget times; it is the salary structure. As such its overall funding is more stable as the funding already is in the system, though the rules for individual teacher salary increases become more linked to factors strategically linked to the system – powerful instruction and an advanced degree but only in the area of licensure.
Denver’s ProComp system. Denver’s ProComp system, the result of 4 years of planning, was a groundbreaker in the United States. This new pay system, discussed in Heneman and Kimball (2008), while not required for veteran teachers, was designed to incorporate classroom performance of teachers as one of ten elements that could earn either bonuses or permanent base pay increases. Because veteran teachers were not required to switch, the district now runs two pay systems, which makes salary administration a bit complicated.

In developing this new system, Denver wanted to ensure that the new pay system was always fully funded. As described in Paper 3, the new system had three knowledge and skill elements, two evaluation elements, two market incentive elements, and three student growth elements; each one of which triggers either a percentage bonus payment related to what the system called the “base salary index” or a percentage increase in the pay level of teachers that was permanent. To determine costs, the design team asked a consultant to run multiple simulations of various scenarios of teachers opting to earn various salary components, over a 50 year time period. The resultant analysis concluded that the system needed a $25 million fund, in addition to the funds already in teacher salaries, to fully fund the program. That equaled a substantial overall salary increase of about $7,800 for the 3,200 teachers in the Denver teacher union. It should be noted that the proposed new structure had no top salary amount; as long as teachers earned pay increments according to the rules, their pay could rise each year.

However, the simulations showed that not all the $25 million was needed in the initial years but that more than that was needed in future years. However, the initial $25 million was sufficient to fund the system over time, with assumptions made about the yield from the special tax in each subsequent year, the earnings of the surplus funds and demands on the fund for pay
increases that would differ as the demographics of the Denver teacher workforce varied over 50 years. In 2004, Denver passed a tax increase to provide that $25 million salary fund.

As predicted, the fund was over funded in the first several years as it did indeed take time for teachers to earn the various salary increments that were possible in the new system. As you might guess, moreover, fund balances are hard to retain in the public sector. So in 2008, when Denver was scheduled to negotiate market adjustments to the system, negotiations became contentious. The administration wanted to spend some of the “excess” funds on several factors including raising the base salary index to make the district more attractive to new teachers as well as to increase the market bonuses for teachers in subjects experiencing shortages, from about $1000 to closer to $3,000 (still modest compared to the levels recommended by the papers in this series). The union wanted to retain the basic structure of the system and not change it until evaluation results were in. The union also knew that part of the surplus would be needed in future years to fund the larger number of salary increments that were expected to be earned under the new salary structure as time progressed.

The result was a compromise, but the tension surrounding the negotiations, with a strike that was possible at the time the Democratic nominating convention met in Denver in 2008, shows how even a separate funding pool does not eliminate different views of how teacher salary dollars should be spent. Nevertheless, the Denver experience shows that a community might well vote in a special tax increase for teacher salaries, if linked to a new performance–based salary structure.

Costing knowledge and skills add-on elements. Douglas County (CO) was one of the first districts in the country to develop new forms of compensation. It identified several new features including a variety of knowledge and skills blocks, a master teacher program and responsibility
pay. Odden and Kelley (2002) showed that the costs of those add-on compensation elements rarely rose above 1 percent of the total teacher salary budget. And the program has continued for several years.

Costing add-on programs. Most add-on programs are relatively easy to cost out. If there is an incentive for teachers in subject areas experiencing shortages, the cost is the size of the incentive times the estimated number of teachers to qualify for the incentive, times the number of years the incentive will be provided. The “difficult” number would be estimating the number of teachers eligible for the incentive, and that would depend on the rules of the program.

Cost estimates of incentives for National Board Certification are the size of the incentive times the number of National Board Certified Teachers. Experience across the country has shown that the higher the incentive, the more teachers try for Board certification and the more earn certification over time, which supposedly is the way the program should work. Unfortunately, several states have reduced large incentive figures as the number of National Board Certified Teachers increased over the years, showing both that an add-on program, no matter how strongly supported politically, is always vulnerable to a reduction in project funding.

Finding the Money to Pay for New Teacher Compensation Systems

As noted in the section on the need to be strategic with regard to changes in teacher pay, the best case scenario for funding a teacher compensation change is to have a permanent funding stream; unfortunately, that is not always possible.

However, many of the preceding cost estimates were written in the context of leaving the current salary schedule as is (including its funding), and designing new compensation add-ons: performance bonus programs (whether targeted to schools or individual teachers), incentives for areas experiencing subject area shortages, knowledge and skills-based bonuses, etc.
Even if the assumption is that new compensation elements are being “piloted” before added permanently to a new salary structure, add-on compensation elements always run the risk of being cut in tight budget times. California cut its sizeable school-based bonus program (an arguably ambitious program designed to provide teachers with bonuses up to $25,000), 1 year after it was implemented when the state experienced a budget shortfall, thus eroding any motivational power of the program. North Carolina reduced the funding for its long running bonus program in 2008 because of a shortage of state revenues. And it will be very hard for districts funding new compensation systems with the federal Teacher Incentive Fund (TIF) to transition to local funding during the current times of fiscal shortages and budget cuts cropping up at the state and local levels all over the country.

Financing new salary systems with the current salary budget. Surprisingly, the current budget for teacher salaries is actually the most stable funding pool for teacher salaries, including new teacher salary structures. This funding pool is already in the system and will not be dropped; it might not be increased in tight budget times but it will not be dropped, like add-on programs can be dropped.

Thus this author suggests that the best way to fund a new teacher salary structure is to use the current teacher salary budget. It provides a stable funding source which is absolutely critical to experiencing the strategic and motivational power of a new salary structure. Teachers know that the money is there, so they will be paid more for acting according to the incentives of the new salary structure; such as increasing their instructional expertise, teaching in an area with subject shortages, working in a high poverty school or improving student performance.
This approach to funding new teacher salaries also carries a strong system signal about the importance of the incentives in the new salary system; the incentives lay out the new rules for earning salary increases in the future.

This way of funding also means that transition rules to the new salary structure are critical. As argued in the first paper in this series, all teachers should be transferred from the old salary structure to the new salary structure on the basis of their old pay levels, not performance, not subject taught, etc. Thus, no one loses salary in the transition. This principle is crucial for acceptance of the new system. The new rules govern future salary increases, and those rules will need to be hammered out through formal as well as informal negotiation, but they are rules for future increases and no teacher loses pay during the transition from the old to the new structure.

We further suggest that any new dollars for teacher pay be placed in the overall teacher salary budget (as they are in most cases today), and not separated out by pay element: base pay, base pay progression, performance bonus, incentive for math and science teaching or working in a high poverty school, etc. Separation merely provides targets for cuts in tight fiscal times, which is the bane of moving to a new salary structure; the “force” of the new structure will not be realized if pieces of it are cut when revenues are scarce.

By using the current salary budget to fund a new salary structure, the system essentially is reallocating all current salary dollars to the new pay system. Though there might be possibilities for reallocating other district expenditures to the salary budget, that strategy is much more complicated. The latter reallocation strategy is most often used to fund a different and more powerful overall improvement strategy. Not many districts or states have excess program funds that can be reallocated to the teacher salary budget.
New sources of funding for new teacher salary structures. There are about six different new sources of dollars for new teacher compensation elements that are being tried across the country. They could either be used to increase the overall salary budget or targeted to specific salary add-ons:

1. A state grant program, such as the QComp program in Minnesota (Heneman & Kimball, 2008), or a state program for all districts, like the bonus programs in North Carolina (Johnson, et. al., 1999) and Kentucky (Kelley, 1998). The advantage of such a funding source is that it puts the state behind the program which provides some funding stability. The QComp program provides about $261 per pupil for districts to design new pay systems according to a series of specific state guidelines. The North Carolina and Kentucky programs provided bonuses between $1,000 and $3,000 a teacher. The state paid the bonuses.

However, although North Carolina kept its funding commitment to its bonus program for over a decade, it had to make modest cuts in 2008 when state revenues fell. The QComp program in Minnesota provides about $261 a pupil for pay innovations at the local level, but its funding depends on continued gubernatorial and legislative support. When the governor and legislature turned over in Iowa, for example, the new folks dropped that state’s new teacher salary initiative that began in 2000. Nevertheless, the state is a clear target as a funding source for new salary structures.

One could argue that a different state approach could be to roll a “per pupil” figure into the base school finance formula, with a stipulation that so much per pupil would need to be spent on new compensation elements or some such requirement. No state has yet tried this approach.

2. A local tax increase, such as that enacted by Denver, is another way to pay for teacher compensation changes that include higher pay levels. One reason the Denver program moved
forward is because it was funded not only by the entire prior year’s salary budget but also by a $25 million fund that evolved from a referendum in 2004 that increased local taxes for the program. All proceeds from the new levy were placed into a protected fund to pay for all the additional costs of the ProComp program over an estimated 50 year time period.

This approach clearly should provide stable funding, but since the costs of the program rise over time, the fiscal plan required using less than the full $25 million in the first year of the program. As a result, the protected salary fund is projected to rise to a surplus of $86 million by the end of the 2008-09 school year, the idea being that there will be sufficient funding as program costs rise in the future. Controversies over that unspent pot of money unfolded in 2008. The administration wanted to spend more of it and to redesign critical elements of the program in the process. An agreement was finally reached that included spending more but not the entire surplus. The take home message is that excess public funds designed for future uses are always hard to keep off the table for current uses.

Nevertheless, a local tax increase contingent on new forms of teacher compensation is a valid and strong way to provide a stable funding source. Further, voters might be more swayed to vote for a tax increase for “performance pay” for teachers, however performance is defined, than for a tax increase just for the current salary structure.

3. Foundation grants. A third source of funding would be a foundation grant or grant from some eleemosynary source. Such a strategy clearly can provide discretionary funds in the very short term (i.e., for the first 1-2 years of the program). But a salary structure is meant to operate for all years into the future as well. The issue with a foundation grant is whether it will or could be renewed in the future. Even if it was renewed once, however, it is unlikely that a foundation would support a teacher salary initiative forever. The challenge for this approach
would be for the school system to make a credible case for how it could incorporate the costs of the new salary system into the regular budget in the medium term; without that credible case, teachers might wonder about the permanence of the program and be reluctant to participate in it or to behave according to the incentives built into it.

The performance bonus programs being piloted in Nashville (TN) and the proposed new salary structure for the Washington, D.C. district are both funded or will be funded by foundation grants. Only time will tell whether they will endure once the grant funding runs out.

4. Private contributions. A fourth possible funding source is a grant from a wealthy individual. In the late 1990s, Memphis was approached by a wealthy individual who offered $1 million for a pilot teacher performance pay plan. Though the district responded, it was not able to fund the program once the grant funds were spent.

Both foundation grants and private donor monies might possibly be better spent in helping districts design programs and develop the tools to operate them, rather than finance their operational costs. This was the approach taken by the Rose Foundation in supporting the design of new Denver program. For most districts, designing the data and measurement systems to operate any kind of new teacher compensation structure requires one-time data system development and an appropriate cost target for foundation and individual grants.

5. Federal grants such as the Teacher Incentive Fund (TIF). A fifth fiscal option today would be a grant from the federal TIF program, assuming it is reauthorized by the current Congress. The TIF program was developed, with an annual appropriation of about $100 million, to encourage local districts, as well as states and charter school organizations, to create new teacher performance pay systems. These systems were specifically for urban districts; for math teachers, science teachers and for teachers in high poverty schools.
Several districts received grants approved for the program, but all face the challenge of how to fund the program when the federal dollars dry up, which could be after only 2 years given the politics surrounding the current federal budget. Though the funding was “promised” for 5 years, federal funding promises turn on annual appropriation cycles; therefore they are only as sound as the budget process each year. Time will tell the lasting impact of the federal TIF program, but by allowing the funds to be used to fund the operational costs of the pay innovations and restricting the funds from much data system or instrument development, the impact could be problematic.

6. State stipulations for pay costs. A final but politically difficult approach to pay for teacher pay innovations would be for the state to require a certain percentage of the local teacher salary budget to be spent on different pay elements: pay increases for knowledge and skills or instructional expertise, bonuses based on student performance gains, or teaching in an area experiencing a subject shortage or teaching in a high poverty school. Designing such a strategy is not easy.

Florida tried such a strategy and one year demanded that in the next year districts spend 10 percent of the teacher salary budget on performance pay elements. The problem was that to respond, districts would have had to cut the dollars for the base teacher salary structure to put the 10 percent into performance elements. Most districts did not comply and then lobbied the legislature to postpone implementation. A better approach would have been for the state to require over a 3-5 year period that a portion of new dollars for the schools be used only for performance pay elements for teachers. That would have allowed for local design and for incremental funding increases over the medium term to reach 10 percent of the salary budget for the performance elements.
Another problem with the original Florida approach was lack of a clear definition of what performance pay meant. This was also an issue with the Minnesota QComp program, which ultimately required a court to determine what was meant by a new pay system.

A variation of this approach was tried in Arizona. Via referendum, that state passed a sales tax increase for education; a portion of which was to be used for locally designed performance pay elements for teachers. Unfortunately, there were no guidelines for designing such pay elements. It would be fair to say that many of the performance pay elements that subsequently were designed disappointed the framers of that referendum, which included not only business groups but also the state teachers’ association.

The lesson is this: if states want local districts to implement performance pay elements for teachers, they need to be very clear either about the characteristics of those elements or offer specific performance pay elements or performance pay structures which they support and from which local districts can choose for the funds they receive.

Funding for two salary structures. One of the most popular approaches to implementing new teacher pay systems is to have only volunteers opt into the program, in addition to requiring all new teachers to be paid on the basis of the new system. This reduces short term costs. This approach seems also to positively facilitate change from the previous to a new system.

But during the time period when teachers can choose to be paid on the basis of the old or the new system, the district will be operating two pay structures. The private sector has learned over the years that operating two pay systems for the same employees creates problems that are basically irresolvable.

The Denver program has an opt-in provision, so some teachers are paid according to ProComp and others according to the previous “steps and lanes” salary schedule. In negotiating
the numbers for the future schedules, one debate that emerged was whether the market
adjustments for the new schedule would be greater than those for the old schedule. Since the
managers of the district believed that the new structure was more strategic and more aligned with
district goals, they naturally wanted to market adjust the new structure at a higher level than the
old structure, which led to difficult contract negotiations. This problem was exacerbated by the
“surplus” funds in the protected salary fund enacted by the voters, which allegedly provided the
dollars to bolster the dollar figures of many elements in the new system. Time will tell how long
Denver can run two different ways to pay teachers. If experience in the private sector is relevant,
it will not be for long.

Concluding comments. Although there are potentially many sources of funding for new
approaches to teacher compensation, this paper takes the position that the most stable funding
source is the current, total teacher salary budget and that all pay elements should be financed
from one central salary budget. Over time, this budget would need to be enhanced to provide
sufficient dollars for new pay elements or new pay structures. Though some would argue that
market adjustments would take precedence over funding for new pay elements, it also could be
argued that if a new pay structure was strategically aligned with the directions, strategies and
goals of the education system, then the elements of the new pay system reinforcing those
directions should take precedence over market adjustments. Resolving those points of view
would need to be settled either by state law or local negotiations in most instances. In this
resolution process, both parties would need to understand the new paradigm for pay represented
by the new salary structure.

In the sixth paper in this series, Professor Andrew Reschovsky outlines how the federal
government could fund the kinds of teacher pay increases that the combined papers suggest. He
identifies how two different national figures for hiking teacher salaries – $15 billion and $30 billion – could be funded from the federal budget.

3. IMPLEMENTING A NEW PAY SYSTEM

At various points throughout the cost and funding discussions, this paper has alluded to elements of implementing new pay plans. This section explicitly addresses this tough, complex and controversial issue.

The dominant approach today, especially for those districts creating overall new teacher pay structures, is to allow all current teachers to opt-into the new system (while requiring that all new teachers be automatically placed on the new schedule). On the one hand, this approach has some appeal and garners initial political support from teachers. Changing the pay system, even if under girded by a strategic rationale, is unsettling for most individuals in any organization, not just teachers in education. So ameliorating the concern by having only volunteers, as well as all new teachers, enter the new system makes some sense. It represents a gradual phase-in of the new system.

But as discussed above for Denver, at some point this means that the education organization is operating two different pay systems. Over time most organizations have found this too complicated to sustain. Further, as Denver also showed, when it was time to negotiate market adjustments to the pay structures, there were strong differences about whether to market adjust each schedule equally or to put more money into what is perceived by management (and some teachers) as the more strategic pay structure. Though resolved for the time being in Denver, these tensions will emerge the next time anyone suggests change in the new structure or the next time a market adjustment needs to be negotiated.
An alternative implementation strategy, being contemplated for the proposed Washington, D.C. system, is to allow volunteers to opt-in to the new system for the first year, but require all teachers participate by the third year. This approach is clearly more difficult politically, particularly for teachers simply not interested in the new system. If implemented, the issue would be whether delayed movement to a new teacher salary structure creates more support for it during the first 2 years or simply delays the hard decision to move everyone to the new system.

The third approach is to say the only reason to design a new teacher salary structure is to make it more supportive of the strategic directions of the organization and that everybody needs to be moved to the new structure so that the signals and incentives built into the new system can begin to impact teacher behavior in ways that help the system implement its strategic goals. The goals are to improve both student academic performance and teacher instructional effectiveness. But the third approach will work best, this paper argues, if in the transition process no teacher experiences a pay decrease, so that all teachers are transitioned onto the new pay structure according to their current salary level and not their performance level. Every teacher is kept fiscally whole, but the new pay system is immediately authorized to send messages including: how pay is now allowed to reinforce the district’s strategic goals with incentives for improving instructional expertise to teach in areas experiencing shortages of people, to teach in schools experiencing shortages of quality teachers, and to focus energies first on improving student academic achievement in the core subjects of mathematics, science, reading, writing and history.

Odden and Wallace (2007a) also explain how the new structure could be used to move teachers across steps as well as lanes, while also allowing teachers to opt into the performance elements of the new structure over a multiple year time period. Such a strategy phases-in
implementation of the full new system, but enables teachers to become comfortable with and knowledgeable about the new structure as their pay moves according to the steps and lanes of that structure (see Figure 2).

This paper suggests moving everybody onto a new salary structure at current pay levels, which makes the current teacher salary budget the major and, thus, stable funding source for new approaches to teacher compensation. In this way, the system message to teachers is that all salary dollars are spent on the new system, and the rules of the new system are the rules for receiving any future pay increases. None of the old rules apply any longer. This might be a tough love message, but it is a clear message; and it does not confuse teachers as to whether if they work hard enough their pay could be determined by the rules of the old system. Except for the transition to the new system the old rules for pay no longer apply.

The country does not yet have enough experience for this paper to argue that we know what the one best policy is for costing, funding and implementing new pay systems. Experience from the private sector does very strongly suggest that operating two pay structures for the same employees cannot be sustained for very many years. If that reality also holds true for education, it means that if the education system wants a new pay structure for teachers, the educational organization will need move all teachers to that new pay system quickly, if not immediately (at least within a very short time period).

Finally, it is the implementation process that matters the most to the success of any new teacher compensation system. Yes, there could be design flaws as well as insufficient funding. Further, all key operational elements (a performance-based teacher evaluation system, the data system for calculating change for performance bonuses, etc.) for the programs should be piloted before full implementation. But, what kills most programs are implementation lapses; too often
organizations rush the implementation process and make gaffes that poison the program. An implementation plan is a must, and the plan should cover at least 2 years. A mechanism should be put in place to communicate immediately about how any implementation problem will be fixed. The point is that the smoother the implementation for all the operational elements of the new compensation structure success, the more likely the program will be successful, even more so than design and funding.

4. Conclusion

Changing teacher compensation structures is an idea whose time has come. The traditional version of the single salary schedule no longer reinforces the goals and strategies of education reform today, nor supports the initiatives education systems must take to boost teacher quality. New salary schedules that provide incentives for teachers to improve their instructional skills, to teach in subjects or schools that have experienced teacher shortages in the past, as well as to improve student performance either individually or as part of schoolwide faculties are compensation elements that are more linked to the strategic directions of the education system today.

The previous papers in this series have shown the arguments for why teacher salary levels need to be raised, through the above salary elements, as well as multiple ways to design such new salary systems. This paper suggests a full-blown knowledge and skills pay system (Figure 2) that condition future pay increases on a measure of teacher performance to rigorous teacher standards as one of the most strategic ways to redesign teacher pay structures. The structure can be easily enhanced with incentives for both subjects and communities experiencing teacher shortages, as well as for National Board Certification. Further, the series of papers suggests that any base pay teacher salary structure should be augmented with some robust pay element
providing bonuses for improving student performance, which is the ultimate goal of the education system (see Milanowski, 2008b).

This paper has shown that there are many ways to cost out new salary structures. It has shown that bonus programs averaging $4,000 per teacher will only take about 2.8 percent of the operating budget of education systems, a figure that easily can be rolled into most salary budgets over a 2-3 year time period. The cost of knowledge and skill salary structures will vary depending on the specific design of the program and the expertise level of the teachers in the system, though previous analyses have shown that their costs can be within a few percentage points of a single salary structure, before any overall pay level increases are added. Costs of add-on elements will depend on the size of the incentives and the number of teachers who qualify for them.

In terms of funding the new initiatives, the paper argues that separate funds for salary structure add-ons have a hard time remaining in tight budget times; and when the programs are then dropped, teacher skepticism about the commitment of the system to new salary systems rises by quantum levels, which erodes (literally for decades) the motivational power of such new systems. Thus, this paper argues for using the current salary budget to fund the new salary structure, and to put all teachers on a new salary structure as quickly as possible; by transitioning all teachers at current salary levels so no one loses pay in the transition. The new salary structure would set the rules for future salary increases.

If the intent is to hike overall salary levels, as was the case for the Denver ProComp system, the paper recommends a local tax increase, but notes that current surplus funds are hard to protect as a funding source for future salary needs. The paper also suggests state dollars for new salary systems, such as the QComp program in Minnesota.
This paper also suggests that all salary dollars be put into the overall salary pot and that districts decide, usually through the negotiation process, about the design of the salary structures for the use of those funds. The paper also states that if the state wants certain types of overall salary structures, or certain performance pay elements, it should make explicit rules about those systems or provide a limited number of models that can be used, as there has been disappointment with unstructured local designs of performance pay systems that have been tried during the past decade.

Finally, the paper states that the implementation process, more so than the design process for new salary structures, is key to their success: there should be an implementation plan, all key pieces of what are needed to operate the system should be piloted before full implementation, and the implementation process needs to be closely monitored to note and immediately fix any implementation glitches. Obviously, the implementation plan needs to include the funding strategy for the program. If funding is provided and if implementation proceeds smoothly, the plan should experience success, even if flaws need to be fixed along the way. If funding is short and the implementation process is downplayed, the likelihood of success will be diminished.
References


