Improving Teacher and School Leader Effectiveness:

Designing a Framework for Colorado

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Colorado Legacy Foundation

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Executive Summary

Paul Teske, School of Public Affairs, University of Colorado Denver

Rarely in public policy discussions does a simple concept, like "teacher effectiveness," rise so suddenly and dramatically to the top of the national and state policy agendas. The importance of the concept is so obvious, much like the idea of evidence-based practice in medicine, that one wonders what else we used to talk about when discussing teacher issues. The idea that teachers should be effective in producing student learning outcomes, and that such teachers should be distributed to all students, not just those in school districts or schools with more resources, hardly seems revolutionary. But, it is now dominating the education policy space.

So, how can Colorado best take advantage of an idea whose time has now come? The Race to the Top competition provides a compelling process within which to address the ways to produce more effective teachers and leaders in Colorado — in fact, the process requires our best thinking and actionable ideas around teacher effectiveness. It also provides an opportunity for actors and institutions that may have had different agendas around broader issues in education policy to find their common ground, and to stake out the implementation mechanisms for producing effective teachers and leaders that are fair, straightforward, and doable.

Mindful of this context, we try to do a couple of things in this report. First, our interviews with the nation's top experts on teacher and leader effectiveness — Barnett Barry, Tim Daly, Rick Hess, Dan Goldhaber, Julia Koppich, and Kate Walsh – provide a national context of best thinking on this issue, from different perspectives. We very much appreciate their time and input, and we hope we have fairly represented their views. As we note below, despite great diversity in their backgrounds and perspectives on teaching effectiveness, we detect at least a general convergence on ideas about what can and should be done.

Second, going beyond what the experts have advised, we use our own knowledge of what is happening in Colorado and what is possible in Colorado, and apply that to the design elements suggested by the national conversation. Pushing this envelope of ideas in Colorado requires some deeper discussion, sometimes controversial, about the context in Colorado, but we hope that this will open and enlighten further conversations among the interested parties about moving the ball further down the field on teacher effectiveness.

Several elements of the Colorado context are relevant here. We address local control right up front. Related to teacher effectiveness, our state's reliance on local control has strengths – experimentation, adaptability, different models already under way in some districts – and weaknesses – lack of uniformity, difficulty in implementing top-down state policies – that must be acknowledged.

And teacher effectiveness is not just about evaluation or related issues of promotion, dismissal, tenure, and compensation. The larger context includes who gets motivated to teach, where the teacher labor force comes from, how they are prepared, how they are introduced into their districts and schools, and the support mechanisms that are or are not in place to move their careers forward. As with our broader labor force, Colorado "imports" about half of its teachers from other states, giving us less direct control over preparation programs of large numbers of teachers. At the same time, in addition to our own university-based preparation programs, we do have some good alternative routes into the profession.

> *The Race to the Top competition requires our best thinking and actionable ideas around teacher effectiveness.*

As we consider design parameters for a new approach to teacher and leader effectiveness, it is clear that we need to be moving from an existing system based almost entirely on inputs (elements carried into the system by teacher and leaders, such as their training, experience and degrees) to much closer attention to system outputs and outcomes. Outputs can be described as the things that teachers do, as they actually teach – the activities that can be observed, at least on a spot or sampling basis, by principals, other teachers, or other actors. Outcomes are the actual impacts teachers have on students, often measured by growth in scores on tests such as CSAP and other summative assessments. While neither outcomes nor outputs can be measured with complete precision, much progress has been made in recent years in developing better assessments, and

the combination of multiple measures can make us more certain of the accuracy of evaluations of teachers and leaders.

In this spirit, the report includes many specific recommendations (some of which may not represent a full consensus of the national experts). These include:

- Building teacher evaluation around the aligned state standards to be developed by the legislatively mandated CAP4K process
- Keeping our focus on defining and advancing systems to improve measureable student achievement growth
- Providing preparation programs and supports for teachers and leaders to be fully equipped to perform the tasks we expect from them, going forward
- Adopting a continuous improvement system that takes seriously the evaluations of teachers and leaders, at both the state and district levels
- Incentivizing and rewarding success, financially and in other ways
- Ensuring that effective teachers are distributed equitably across districts and schools
- Using data and well-designed feedback loops to make learning adjustments to the system

None of this is really rocket science. And, while some of it may require new legislation or new rules, a great deal can be done under the current state framework, by just adopting the notion that teacher effectiveness is a, and perhaps the, critical component of education reform and improvement.

Most of this work does require a serious commitment to evaluating teachers and leaders more rigorously, and ensuring that those evaluations are aligned with the appropriate standards, curricula, incentives, rewards, and resources to promote improvement cycles. As a result, some of these ideas may create institutional or political opposition, or the need for negotiation. The kind of real change that these ideas require is never easy to implement, even if the only barrier is inertia in the system. And, in Colorado, resources are always a concern. But, the climate is ripe for change, and the competitive element of Race to the Top incentivizes all of us to get to this work.

Introduction

In a convergence of opinion that is remarkable for public education, experts, practitioners, and policy makers are all calling for a sea change in how we manage education's human resources. Our conversation has changed from teacher *qualifications*, as emphasized by No Child Left Behind's "highly qualified" teacher requirements, to teacher *effectiveness*, as envisioned in the federal Race to the Top competition.

The conversation has changed for a number of reasons. First, the standards movement, state accountability systems, and the adequate yearly progress requirements of NCLB have focused our attention on striving for equity in student outcomes rather than equity in access to education. Second, we know from years of research that teachers are the number one school-based factor in student achievement, and that school leadership plays a key role in building school cultures that are conducive to good teaching. Third, research is also telling us that the measures we have traditionally looked to for assuming that a teacher is "highly qualified" often do not correlate with student outcomes. Finally, many of our teachers and school leaders are clamoring for the right to be treated as professionals with meaningful incentives and supports in exchange for the high standards to which we hold them.

The Colorado Legacy Foundation initially commissioned this report to hear from national experts on improving teacher effectiveness, and to report these opinions to Colorado. The experts we spoke to hailed from across the spectrum of education reform, and are all widely regarded for their thoughtful approaches to improving education:

- **Barnett Barry**, president and CEO of the Center for Teaching Quality, a research-based advocacy organization in North Carolina that is dedicated to creating a 21st-century teaching profession
- **Tim Daly**, president of The New Teacher Project, a national nonprofit organization dedicated to closing the achievement gap by working with states and school districts to ensure that high-need students get outstanding teachers
- **Dan Goldhaber**, research professor at the Center on Reinventing Public Education at the University of Washington-Bothell, affiliated scholar with the Urban Institute, and senior non-resident fellow at Education Sector
- **Frederick Hess** is a resident scholar and Director of Education Policy Studies at the American Enterprise Institute, and the author of several books on education reform, including *Common Sense School Reform* and *Revolution at the Margins*
- **Julia Koppich** is the president of J. Koppich & Associates, specializing in education policy analysis and public sector labor relations, and the co-author of *A Union of Professionals* and *United Mind Workers: Unions and Teaching in the Knowledge Society*
- **Kate Walsh** is the president of the National Council on Teacher Quality, a national organization that advocates for reforms at the federal, state, and local levels to increase the numbers of effective teachers

We sent each of these experts a background document that summarized the current state of Colorado policies around teacher quality, and asked them to consider a list of questions in the context of Race to the Top's competition. See Appendix A for this information. We then arranged for telephone interviews to follow up on their responses to the questions.

As interviews were conducted, we realized that these prominent people from across the political spectrum were, for the most part, saying very similar things.[1] In addition, these opinions were aligned with the proposed requirements of the federal Race to the Top competition sponsored by the U.S. Department of Education, and with other recent reports suggesting education reforms.[2] In the meantime, some Colorado districts are already moving ahead with practices that align with what the experts are recommending and Race to the Top is requiring.

So, rather than simply reporting the opinions of our expert panel, the Legacy Foundation decided to use all of this information, from both local and national conversations, to help frame a discussion around the design of a new system for improving teacher and principal effectiveness in Colorado. We are bringing our knowledge of what is happening in Colorado and what is possible in Colorado, and applying that to the design elements suggested by the national conversation.

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[1] We also asked the experts for "recommended readings" for policy makers interested in learning more about the subjects. These readings are summarized in Appendix B, and reiterate our conclusion that the reform community's messages are converging.

[2] Appendix C provides a list of additional resources that we consider supportive of recommendations made in this report.

But first, a message about local control.

The first and most important design element, and what is usually the elephant in the room for Colorado, is the rethinking of what "local control" should mean for education policy in our state. Our constitution (specifically, Section 15 of Article IX of the constitution) provides that local school boards shall retain control of instruction for schools in their districts. This language reflects the populist movement of the late 19th century, when our constitution was drafted. It emphasizes the importance of community involvement in the education of our youth, and also serves to require local communities to take an active role in their schools – a symbiotic relationship that benefits both youth and their communities.

Too many times, however, the phrase "local control" has been used in Colorado for the purpose of resisting necessary transformation. Local control has become a shield by which both the state and districts justify inertia, rather than a critical directive about the importance of maintaining and supporting local involvement in education. We cannot maintain this stance any longer if we want a truly excellent education system.

Local control in Colorado should not mean that districts are excused from incorporating new and higher academic standards that meet the requirements of our changing society. Nor should local control mean that the state is able to abdicate its responsibility to ensure that all districts have the resources they need to meet these new challenges. To build a world-class education system, the state and its districts must work together and must understand the affirmative steps that each must take in this partnership.

The education system we need is one in which everyone – students, teachers, communities, and the state – is held to high standards, and one in which everyone must understand and commit to their respective roles. The education system of the future will also be highly personalized, so that students and educators are able to pursue their interests and skills and are challenged in ways that are meaningful to them. This system anticipates great freedom of choice at the local level, in terms of identifying and implementing strategies that work for individuals and the communities in which they live. However, this system also anticipates high common standards and expectations for educational outcomes in Colorado: education that prepares every student for success in the workplace and in postsecondary environments, regardless of geographic location.

To make this work, no one can use local control as an excuse not to do what is required. Instead, local control must be seen as the *instrument of transformation*, as individual schools and communities become laboratories for innovation and personalization, and are supported by the state in terms of funding, technical assistance, and information-sharing. The state provides the "what" in terms of what outcomes must be reached, and supports the "how" work occurring in the districts by creating conditions in which successful practices can be implemented and spread. The districts support the "what," and do the hard work of the "how" tailored to the needs and interests of students and their communities. These are each absolutely critical roles.

However, each of these roles is necessary but not sufficient. Instead, state and district actions must come together to accelerate improvement at the pace that is required. Both the state and its districts are responsible for actively engaging in partnerships and implementing structures and processes that are intentionally designed for organizational learning and continuous improvement of student achievement. Together, we must have aligned incentives, sufficient resources, and meaningful accountability. We must coordinate our research, evaluation, and development of new strategies to solve the problems of practice. Finally, we must have common platforms for building, sharing, and advancing knowledge at all levels. This new understanding of the roles of districts and the state, together with a culture of continuous learning at all levels, is our pathway to reaching our goals.

With that said, the rest of this report focuses on the design of systems for improving teacher and principal effectiveness in Colorado, gleaned from the numerous conversations occurring inside and outside our state. In summary, here are the points on which opinions about effectiveness have converged:

- Design the system so that all component parts are aligned with and support the primary goal: student growth
- Define student growth using multiple objective measures that are tied to rigorous and relevant standards and are based on valid and reliable assessments of learning
- Embed ongoing data use throughout the system, so that teachers and school leaders have timely information about student learning on a day-to-day basis
- Provide intensive preparation, on-the-job training, and real-time support for teachers and school leaders to enable them to use data to improve instruction and to create a culture of continuous improvement within schools
- Make evaluation an integral tool for constant improvement of individual performance and system performance overall, by linking performance objectives to student growth and improved personal and organizational capacity
- Provide clear and meaningful rewards for achieving performance goals, contributing to organizational goals, and for developing innovations that foster organizational capacity
- Create the conditions under which equitable distribution of effective teachers and leaders will occur
- Encourage high performers to take responsibilities that accelerate system improvement
- Provide swift exit ramps for teachers and school leaders whose performance is consistently below expectations

Colorado will of course require additional strategies in other areas to win the Race to the Top competition, and we leave the articulation of those strategies to others. We encourage, however, the incorporation of this redefinition of local control and the emphasis on continual learning and improvement into all efforts to improve education in Colorado.

Designing a System for Improving Teacher and Principal Effectiveness

A system is composed of separate elements that work together to achieve a defined outcome. Too often, the processes and practices in our education system work completely independently and without reference to one another. This lack of coherence results in isolated pockets of excellence at best, and directly conflicting mandates and activities at worst. This state of affairs is not surprising for a system that has grown up in pieces over the decades, and it is no one's "fault," but that does not mean that we should not take advantage of the opportunity presented by Race to the Top to intentionally redesign the system so that it better meets our goals.

These recommendations are intended to be viewed as a whole, as elements that work together to create the outcomes we want. Prior experience should have taught us that implementing single elements of the system in a haphazard way will not improve student learning. For example, Colorado has had model content standards since 1994. But, we did not emphasize the importance of training educators on the new standards, so fifteen years later many of our educators still struggle with how to teach them.

The recommendations are also organized in a way that is intended to be viewed as somewhat chronological, or at least scaffolded upon each other. For example, the first recommendation is that we identify the goal of the system. This comes first because what we want the system to do should drive its construction. In another example, we recommend identifying the ways in which we will define and measure teacher and leader effectiveness, and providing support for individuals in growing their effectiveness, before we apply rigorous performance standards to the determination of individual consequences such as promotion, tenure, and compensation. This does not mean that we are excused from taking steps to transform our system until every preceding step has been perfectly implemented, but rather that we act rationally and plan for the necessary conditions that should be in place for success to occur.

The goals articulated in CAP4K offer us a sound platform for building the system we need.

What we want the system to do should drive its construction.

Start with the End in Mind: Student Growth

With the passage of the Colorado Achievement Plan for Kids (CAP4K) in 2007, it is fair to say that we know what we want from our education system. CAP4K states that an essential goal of our education system is to prepare students for success in postsecondary education and the workplace – in other words, for their lives after high school. This is not to discount the role of our public schools in educating for democracy or providing students with important social skills and character traits. But, students who do not reach the postsecondary and workforce readiness goals spelled out in CAP4K are not likely to succeed in other areas either. We must start somewhere, and the goals articulated in CAP4K offer us a sound platform for building the system we need. As we get better at defining and assessing

student growth in multiple areas, including skills in participatory democracy and other areas we know are important for the lives students will lead, we can continue to add to our system. We will never be "done" with our endlessly evolving education system, but we do need to start the evolution process.

Implications for Colorado policy and practice:

- **The state and districts should use CAP4K as our current vision for Colorado's future system of education, with the understanding that our vision will evolve over time**

Build the Framework: Standards for Student Learning

CAP4K provides the vision; Colorado's content standards provide the map for what students are supposed to know and be able to do in order to achieve the vision. Race to the Top requires states to develop internationally-benchmarked academic standards. This process is well underway in Colorado, as the state Department of Education has been leading the process of revising our standards for over a year. The standards revision process is also fostering the inclusion of 21st century skills, such as teamwork, creativity, and problem-solving, into the content standards.

> ***CAUTION:*** *As the core of our system, the rigor and relevance of the standards must be credible to all.*

As our society changes at a breakneck pace, we will need to carefully monitor these standards and plan for their revisions so that they stay relevant. Since the standards are the core of the education system, their rigor and relevance must be credible to all stakeholders, both inside and outside the system. We must also understand that the mere existence of relevant and rigorous standards does not translate, by itself, to the student learning we want to see, a lesson we have hopefully learned fifteen years after the implementation of the state's first set of content standards in 1994.

Implications for Colorado policy and practice:

- **The state should build the infrastructure and processes for standards revision to be an ongoing and dynamic process**

- **The state and districts should ensure that standards adopted and implemented at the district level are at least as rigorous as state standards**

- **Districts should be aware of their important role in the standards conversation and provide ongoing feedback to the state on the relevance of standards**

Build the Measures: Defining and Assessing Student Growth

The discussion of the Great Teachers and Leaders reform area in the proposed Race to the Top guidelines starts with this requirement: the state must define student growth. This is not a coincidence. Student growth is required to be the predominant measure for evaluating individual performance as well as the performance of the system as a whole. Getting this definition right is not only crucial to aligning the components of the system, but crucial to motivating the changes in human behavior that will need to occur before the education system can radically transform itself in the ways we need it to.

> *Race to the Top requires student growth to be the predominant measure for evaluating individual performance as well as the performance of the system as a whole.*

By suggesting a definition of an "effective" teacher, the Race to the Top guidelines provide us with a starting point for defining student growth. According to these guidelines, an effective teacher is one whose students demonstrate at least "acceptable" rates of growth, "such as at least one grade level in an academic year."

This is notable for its broadness, in that one can imagine multiple ways in which acceptable rates of growth could be objectively measured. The experts we spoke to were virtually uniform in their recommendations that student growth be measured in multiple ways. For example, Kate Walsh suggests that student learning can be gauged through objective student data, such as standardized test scores (where available), the results of formative assessments, evidence of student work, scores on common end-of-course exams, and observed student behavior in the classroom.

Multiple measures of growth allow us to apply these measures appropriately under a variety of situations. For example, CSAP only tests students in the content areas of reading, writing, math, and science, so we wouldn't look to CSAP for measurements of student growth in social studies or art. Nor would we want to use examples of student work as the sole measure of the performance of our state's education system as a whole. Multiple measures also allow us to triangulate data points that may be imprecise if considered alone, and to come to a more complete overall picture of performance.

Implications for Colorado policy and practice:

- **The state should assist districts in developing, locating, and appropriately using measures of student growth**

- A state assessment team should be formed to oversee this work
- The state assessment team should be responsible for developing a bank of common end-of-course assessments and exemplars of student work
    - The state should accelerate this work by incentivizing individual districts, schools, and teachers to contribute items meeting quality standards to this bank

- **The state and its districts should invest in a common data infrastructure that reaches all schools and classrooms and that meets the following design parameters:**
    - Measurements should be aligned closely with content standards and should be valid and reliable
    - Whenever possible, measurements should be based on objective criteria
    - High-stakes decisions, such as decisions affecting individual employment, should be based on multiple measures of student growth that are valid, reliable, and appropriate to the employee's responsibilities and to the data available
    - To foster a culture of continuous improvement, measurements should be available as needed to all stakeholders based on their roles and responsibilities:
        - Teachers should have access to real-time measurements of individual student performance
        - School leaders should have real-time access to measurements of individual teacher and classroom performance
        - Districts should have ready access to measurements of student, teacher, and school performance;
        - Parents should have ready access to measurements that will allow them to make informed decisions about the education of their child
        - Researchers should have ready access to measurements that are relevant to the research being conducted, within the limits of privacy
        - The state should have ready access to measurements of student, teacher, school, and district performance for accountability purposes

CAUTION: *We need multiple measures of growth to address the system's multiple purposes, and to ensure more accurate information.*

Prepare and Support the People Doing the Work

With clear system goals, rigorous and relevant standards, valid and reliable assessments, and ready access to relevant data, we have created the framework in which the work of improving student achievement can occur. However, these necessary conditions are not sufficient to reach our goals. We also need to aggressively develop and support the people who will be doing this work. This means focusing on improving preparation for teaching, supporting teachers in their first years, and providing multiple rich avenues for ongoing professional learning.

We need to aggressively develop and support the people doing the work.

Colorado has long had in place one of Race to the Top's reform "conditions": the provision of alternative preparation routes for teachers and principals. Teachers and principals can be prepared through university-based higher education programs, or through alternative route programs operated in school districts. The state does require each district to have an induction process that provides special training to its newest teachers and principals, but generally does not monitor the quality of induction. Professional development is required to renew teaching licenses, but often is not linked to professional learning needs or school goals.

Our experts reminded us that not all preparation programs are created equal, and suggested using the lessons we will learn about teacher and principal effectiveness to improve our preparation programs as well. Louisiana's Value-Added Teacher Preparation Program Assessment Model was identified as an example to follow. In Colorado, the Denver Public Schools are partnering with their primary teacher preparation providers to collect data about the effectiveness of each program's graduates.

Barnett Barry cautions that our state's success in creating multiple paths to teaching may have resulted in "too many programs serving too many school districts, resulting in diluted resources." He suggests that our higher education-based teacher preparation programs work more closely with districts to develop a continuum of preparation and development that provides focused professional development, ongoing mentorships for new teachers, and anticipates teachers taking on new and additional roles within their schools. In this way, Barry suggests that we look at preparation, induction, and ongoing development as a whole system, rather than breaking these into separate parts and considering each alone. Rather than considering how we might place a qualified teacher in every classroom, we should think about how we prepare teachers to teach in a larger-user network that connects them to each other as resources. The P-20 framework created by CAP4K needs teachers to understand the content standards as well as how to teach the content, and larger networks can assist teachers with ongoing development in these areas.

Home-Grown Excellence

Denver Public Schools is partnering with its primary teacher preparation providers to collect data about the effectiveness of each program's graduates within DPS.

Rick Hess of the American Enterprise Institute recommends that the state continue to explore ways to recruit teachers from different pools of candidates, an approach that is especially relevant for recruitment of teachers of science, technology, engineering, and mathematics (STEM). Tim Daly and Dan Goldhaber suggested that Colorado consider joining other states that might be interested in developing a "national teacher entry level credential." Research shows that many teachers leave the profession when they move to another state because of the inevitable bureaucratic hurdles they face in becoming certified in the new state. This is an especially compelling idea for Colorado, since about one-half of our teachers are prepared out-of-state.

Julia Koppich lists good preparation and induction as two necessary components that create the conditions for effective teaching. Induction is also one of the core recommendations from Kate Walsh, who says that a good induction program can not only help new teachers, but can mitigate the negative effect new teachers often have on student learning. Walsh suggests that Colorado create an induction system that is focused on "reducing the amount of time new teachers are alone and solely responsible in the classroom, achievable in one of two ways: (1) the full-time, or nearly full-time, assignment of a coach in the first weeks of school, and (2) a reduced teaching load during the first semester, if not the first year." [3]

Provide teachers with connections to the larger professional learning community

As teachers mature into the profession, we need to create ways for them to continue learning and to share their learning with others. Too often, professional development for teachers consists of drive-by workshops that have no follow-up or relevance to teachers' immediate needs. Professional development instead should be embedded into the ongoing work of the school. Barnett Barry is a leader in thinking about teacher learning networks, and suggests that teachers should be provided with connections and information that help them understand that they are part of a larger professional learning community.

[3] *Kate Walsh suggested that we use the report she recently prepared for the Piton Foundation as the source of her comments. See "Race to the Top: Colorado may be used to high altitudes, but can it compete in Race to the Top?" Available online at www.piton.org.*

Implications for Colorado policy and practice:

- **The state should identify and report on the effectiveness of teacher preparation programs**
  - The state should provide funding for the implementation of the district- teacher preparation provider partnership model being developed by the Denver Public Schools, and replicate it where appropriate
  - The state and districts should enhance district partnerships with higher education preparation programs by strategies such as
    - Providing state funding to develop new teacher residency programs
    - Incentivizing exemplary teachers to serve as liaisons between districts and CODE (Colorado Deans of Education) and individual higher education programs
    - Providing forums for districts to give feedback to teacher preparation programs on the strengths and weaknesses of teachers from their programs, and hold teacher preparation programs accountable for incorporating this feedback into improving their programs
  - The state should commit to publishing an annual report on its preparation programs, both university-based and alternative route, that identifies inputs (characteristics of students in each program), outputs (how programs train their candidates), and outcomes (how effective graduates are as teachers)
  - The process by which the state accredits/approves teacher and leader preparation programs should be revised to reflect these indicators
- **The state and districts should provide support for teachers and principals to improve instruction**
  - The state should form a curriculum team to develop model curricula for use in each of the content standard areas, and should create a curriculum bank for state-suggested curricula and for additional high-quality curricula contributed by districts and teachers around the state
  - The state and districts should provide real-time data support to teachers and principals for the purpose of improving instruction
    - State and districts should create formative assessment banks that provide a common collection of useful classroom assessments
    - The state should provide trainings in the use of formative assessments, or compensate districts that are willing to train teachers across the state
    - The state should invest in technology that allows teachers to make use of real-time data in the classroom
    - The state should provide funding to develop adaptive learning software on an open source basis or purchase such software

- The state should provide trainings in the use of data to drive decision-making, or compensate districts that are willing to train teachers and principals across the state

- Districts should provide better and more consistent support for new teachers
  - Districts should invest in better induction practices, with state assistance, including using such strategies as
    - Meaningful mentoring
    - Release time for first-year teachers to visit exemplary classrooms
    - Creation of cohort networks, online or face-to-face, within the district or across districts
- Districts should provide better and more consistent support for new principals
  - Districts should invest in better induction practices for principals, including using such strategies as
    - Meaningful mentoring
    - Release time to visit other schools
    - Creation of cohort networks, online or face-to-face, within the district or across districts
- The state and the districts should build infrastructures for ongoing support for all teachers and leaders
  - The state can sponsor statewide "knowledge platforms" for teachers and leaders to use in sharing instructional practices, standards-based classroom activities, curriculum, assessments, etc.
  - The state and districts can create "virtual cohorts" of affinity groups: elementary teachers interested in science; 8th grade math teachers; teachers who want to develop assessments for critical thinking; rural teachers, etc.
  - Districts can require professional development to be based on individual, school, and district needs as indicated by student outcomes, and ensure that professional development meets the standards of quality set out by the National Staff Development Council
  - The state can fund development of customized school-based professional development needs as they arise, to be awarded on a competitive basis based on the quality of applications

"This is something the federal government really wants to see, and if you don't find a way to work on this, you can bet that it is going to happen in another state."

—Tim Daly

Use Performance Evaluation to Support Continuous Improvement

If we have successfully installed the previous components, we have built a system in which we can rigorously enforce high performance expectations from individuals and their schools. Employees in a system like this one will be eager to find ways to improve their performance, and will be demoralized by those whose performance does not benefit the school. We need a meaningful performance evaluation system that is recognized as valuable and credible by all, and that allows us to identify individual effectiveness and act accordingly.

CAUTION: *Remember that effective teaching must be adaptive – don't define skills too narrowly.*

Evaluation, or more particularly poor evaluation processes, was identified by most experts as our biggest barrier to improving teacher effectiveness. Until we are able to identify and act on the relative effectiveness of teachers, the system is unlikely to significantly improve. Tim Daly of The New Teacher Project, consistent with the title of his group's publication "The Widget Effect," urged that we cannot treat teachers as interchangeable parts. Changing our evaluation system to be rigorous and meaningful would be a highly effective way to use the one-time funding represented by Race to the Top to institutionalize the use of decisions about teacher effectiveness across education's human resources systems. As Daly says, "[t]his is something the [federal government] really wants to see, and if you don't find a way to work on this, you can bet that it is going to happen in another state."

However, our experts cautioned against defining effectiveness too narrowly. Dan Goldhaber pointed out that there is not a defined set of teacher practices that lead to effective teaching: "The notion that there is a set of right practices ignores the heterogenous nature of classes, differing achievement levels, what kids bring into the class with them, etc. A good teacher needs to be adaptive, and that precludes having a set of skills defined."

Education consultant Julia Koppich lists meaningful evaluation as one of the core components of a system that delivers effective teaching (the other components being preparation, induction, professional development, and compensation). She suggests that an effective teacher has students that "demonstrably grow" from year to year, but that this measure cannot be based simply on standardized test scores: "Tests are not very good. They tend to test in reading and math, so 70 percent of teachers in untested grades and subjects are left out." In addition to student growth, Koppich suggests that an evaluation system should also look at how teachers are assisting in other purposes of schooling, such as social development and fostering teamwork.

One ideal measure for evaluation purposes is the value added by a teacher to a student over the academic year. Goldhaber describes

value-added measurement as not only a good tool, but "the only tool right now that actually gives us rigorous kinds of ways of assessing teachers." Using value-added measures in conjunction with other measures, such as supervisor and peer reviews, allows the more subjective measures to be "checked" by the value-added measure. He also reminds us that performance in the private sector is typically measured by a combination of objective and subjective measures, including supervisor evaluations.

The Widget Effect

Recommendations from The New Teacher Project

1. *Adopt a comprehensive performance evaluation and development system that fairly, accurately, and credibly differentiates teachers based on their effectiveness in promoting student achievement, and that provides targeted professional development to help them improve.*

Barnett Barry of the Center for Teaching Quality suggests that an evaluation system take into account the extent to which the teacher helps students learn, and how the teacher benefits the school organization by helping to spread his or her expertise to others at the school and beyond. Barry's work focuses on understanding the conditions that must be present at a school both for students to learn and for the sharing of expertise. When we are able to understand these conditions and put them in place, we will be better able to fairly evaluate teachers on their performance.

Ultimately, says Barry, evaluation of teacher performance would have several components: evidence of student performance, such as results on classroom-based assessments like Measures of Academic Performance (MAP) and conclusions from classroom observations; self-analysis and reflection using tools such as videotapes; analysis of student engagement, which could be based on student input; peer reviews; and parent input.

Kate Walsh of the National Center on Teaching Quality suggests that a strong Race to the Top proposal in this area will demonstrate that the evaluation system is part of an overall performance management system, and is "designed to advance the highest performers, develop the middle, and deny tenure/dismiss the lowest, absent improvement." Colorado should require such a system at the state level, and provide ongoing training for all stakeholders: "It is no less daunting than training an army, given the range of personnel involved, including principals, assistant principals, department heads, and teams of peer evaluators."

Several experts believed that a strong evaluation system can and should be designed in partnership with teacher associations. Noting that Race to the Top encourages such collaboration, Walsh says that Colorado should work to have R2T reforms be done with unions rather than to unions. Tim Daly also emphasizes that the federal government "will not be sympathetic with feuding districts and teachers unions," but instead is looking for evidence of consensus.

Colorado's existing statutory evaluation framework clearly encourages local districts to take an active role in building their own evaluation systems. The results show the upsides and challenges of local control as we have understood it in Colorado: a handful of districts have put meaningful performance evaluation systems in place, while most districts have elected to use an evaluation system that is based on only the minimum state requirements. Clearly, Colorado law does not prohibit effective evaluation systems. Now the state needs to give clarity and direction to its districts about what is expected from evaluation systems, and districts then need to take the steps to ensure that their evaluation processes are rigorous and meaningful.

Implications for Colorado policy and practice:

- **The state board of education should reconvene the state evaluation advisory council provided for in the evaluation statute, and charge this board with the following responsibilities:**
  - Developing a handbook for evaluation and toolkits for implementation
  - Ensure that training resources are available statewide for district advisory councils and for evaluators
- **The state should be responsible for monitoring the quality of district evaluation plans and remediation processes and intervening as needed**
- **Responsibility for training evaluators in effective evaluation techniques and processes should be the joint responsibility of the state, principal preparation programs, and districts.** Larger districts should provide ongoing training for their evaluators, and training for evaluators in smaller districts should be provided through BOCES.

Home-Grown Excellence

Several Colorado school districts, including Harrison, Eagle, and Douglas County, have evaluation frameworks that go far beyond the state minimum to provide useful information to teachers and leaders about performance.

Based on expert recommendations as well as the components of evaluation systems in Colorado districts that are ahead of the game, we recommend that the state limit participating LEAs in the Race to the Top application to those who are willing to make the following changes to their evaluation systems:

- **All licensed personnel must be evaluated annually, and it is recommended that teachers in their first three years be evaluated twice a year**

- **Evaluations must use a 4-point scale that rates performance as unsatisfactory, effective, highly effective, and exemplary, using the following criteria for student growth as a minimum:**
  - Unsatisfactory performance: students consistently average less than one year's growth (plus other factors)
  - Effective performance: students consistently average around one year's growth (plus other factors)
  - Highly effective performance: students consistently average more than one year's growth (plus other factors)
  - Exemplary performance: Consistently meets requirements for highly effective and provides other valuable services to school or district community (such as building leadership)
- **Evaluate classroom teachers and instructional coaches using an instructional staff performance index that has the following components:**
  - Rating to be based primarily on student growth, using the following measures:
    - CSAP, where appropriate
    - Approved end-of-course assessments
    - Other valid and reliable assessments, such as the Measures of Academic Performance
    - Evidence of student work meeting approved standards
  - Other evidence of classroom performance from observations, videotaped instruction, etc.
  - Other evidence to include student and parent feedback, input from other teachers
  - Appropriate adjustments for circumstances such as team teaching, high school level subjects, etc.
  - Evidence of contribution to school or district capacity building
- **Evaluate other licensed school support personnel in school using a support staff performance index that includes the following components:**
  - Rating to be based in part on overall student growth at school
  - Performance on other goals as set by district and school relating to building school/district capacity to increase student achievement
  - Other evidence to include teacher input, student and family input where appropriate
- **Evaluate school administrators using a principal performance index that includes the following components:**
  - Rating to be based primarily on overall student growth at school, including consideration of growth in disaggregated student populations
  - Quality of evaluation and development of school staff, using evidence such as the correlations between student performance and growth and teacher ratings
  - Other evidence such as input from building staff, students, families, school advisory council
- **Provide licensed personnel who receive unsatisfactory ratings be provided with resources to improve their performance,** but licensed personnel who do not improve within a reasonable amount of time are to be removed from their positions and, at the discretion of the district, either transferred to a different job category within the district or terminated
- **Clarify the role of the district evaluation advisory council is as follows:**
  - Assist with implementation of a human resources data system that includes evaluation data and is compatible with the state's performance management system
  - Ensure that all evaluators are well-trained
  - Periodically assess views of licensed personnel about quality of evaluation process and make adjustments as needed
  - Ensure that evaluations are fair in that student growth is based on multiple valid and reliable measures and that licensed personnel have access to resources to allow them to be successful
  - Develop resources for remediation process for teachers and principals rated unsatisfactory
  - Recommend licensed personnel to "exceptional teachers and leaders corps" at district level (for larger districts) and at BOCES level (for smaller districts)
  - Report overall evaluation results to the state in terms of percentage of licensed personnel in each ratings category
  - Attend training sessions held by state

In addition, the state should consider revisions to the Teacher Employment, Compensation and Dismissal Act that will align decisions about granting nonprobationary status and dismissal with the evaluation framework described above. For example, the state may provide that it is within the discretion of a district to decide whether and when to promote a teacher to nonprobationary status in the first five years of employment. Dismissals for unsatisfactory performance should be streamlined, while still maintaining a review process. Each district could have a tenure review committee that reviews requests for nonprobationary status and that hears appeals from dismissals for unsatisfactory performance.

Align Rewards to Achievement of Performance Goals

Our current system of teacher compensation typically rewards teachers for years of experience and level of education, rather than performance that advances student growth. This is another area in which expert opinion agrees: teacher compensation should be tied to fair measures of student performance and other measures of contribution to school and district goals and capacity. In addition, our highest-performing teachers and leaders should be compensated in amounts that reflect their importance to our society. Current Colorado law states that districts may either have a salary schedule based on job description, education, and experience overall and within the district, or a salary policy based on performance level, or a combination of the two. Districts are therefore reasonably free to experiment with performance-based pay, and several districts, including Eagle, Douglas County, and Denver Public Schools, are doing so.

> *"There is not a lot of good data on performance pay, but one thing we can say with certainty is that the single salary schedule is working so poorly … it is worth taking risks in that area."*
>
> *—Dan Goldhaber*

After teacher evaluations, alternative compensation plans received the most attention from the experts we interviewed. Differentiated compensation was listed as an essential element in the multi-component systems described by Julia Koppich and Kate Walsh. Dan Goldhaber, an expert in such plans, spent a good deal of his interview describing the necessity to reform teacher compensation systems: "There is not a lot of good data on performance pay, but one thing we can say with certainty is that the single salary schedule is working so poorly…it is worth taking risks in that area." To Goldhaber and others, the role of compensation in quality teaching is two-fold. First, it acts as an incentive for attracting people to the profession (and attracting effective teachers to hard-to-staff positions), and second, it can play a big part in retaining quality teachers.

Goldhaber pointed out that there are different structures of compensation, and that we need to be mindful, based on the limited evidence we have, on how best to spend scarce resources. For example, by reworking the compensation system to move dollars from rewarding advanced degrees (which have not been shown to correlate with increased achievement), Goldhaber believes teachers in hard-to-staff schools and subjects could receive additional pay as an incentive to work in these areas.

Several experts cautioned against relying solely on increased pay as a way to attract teachers to challenging schools, or being formulaic in adopting alternative compensation plans. They suggest that pilot projects might be the best way to explore various options in alternative pay systems, especially those that reward teachers for performance. The fact that we don't yet know what works in differentiating effectiveness should not keep us from learning more. This will be the only way that we can make progress away from a pay system that is not helping us achieve our goals. In addition, we should be mindful that not all rewards need to be monetary: differentiated job responsibilities and prestige appointments are also ways to recognize excellence.

> ***CAUTION:*** *Avoid formulaic approaches to performance pay.*

Implications for Colorado policy and practice:

Districts that wish to participate in Race to the Top should agree to renegotiate their salary schedules so that steps for advanced education degrees are eliminated, except for those advanced degrees directly related to the content area in which the teacher teaches.[4] Salary schedules instead should include steps for consistently high performance evaluations, actions directly tied to school and district goals, and increased job responsibilities that contribute to improved school and district capacity.

The state should also recognize consistently highly-performing teachers and leaders, and should leverage the knowledge and capacity represented by these educators to provide important feedback to the system. We recommend that the state consider the following:

- **Provide incentives for districts to experiment with differentiated compensation systems**
  - Encourage the development of both individual and team-based incentives, to reward both individual initiative and group collaboration
- **Create a fund to ensure that Colorado's top teachers and leaders, through combined state and district funds, earn annual salaries in excess of $100,000**
- **Revitalize the use of the master teacher license** and provide that teachers who are consistently rated highly effective and exemplary are eligible to apply for the license
- **Compensate top teachers and leaders who agree to serve in the following ways:**
  - As members of an advisory council that advises the state on teaching issues
  - As school or classroom demonstration sites for other educators seeking to improve their practice

[4] For purposes of fairness and honoring past agreements, this change must be implemented looking forward rather than retroactively. In other words, those teachers who are already receiving additional pay related to advanced education should continue to receive it.

- As members of the Colorado Education Corps serving in high-needs schools, as described below

- **Encourage districts to create career options for their teachers and leaders that allow for professional growth and new roles within schools and the district**

Create the Conditions for Equitable Distribution of Great Teachers and Leaders

Race to the Top requires states to show how they will ensure the equitable distribution of effective teachers and leaders to high-needs schools. Several of Colorado's teacher preparation programs, both at higher education institutions and in districts, focus on preparing teachers to work in challenging environments such as poverty-impacted urban or rural areas. But the state does not have a formal plan to support teachers at high-needs schools, other than what might be available through federal programs such as Title I and Title II.

Again, this was an area in which there was a great deal of consensus as to its importance.

Julia Koppich agreed that Colorado needs to make sure it attracts good teachers to high-needs schools, and that it also needs to make sure that those teachers stay long enough to make a difference – at least three years.

Kate Walsh agreed with Koppich, stating that "[e]ffective teachers want to work where they can make a difference, and too often high-needs schools are not such places." She believes that increased monetary compensation alone will not be sufficient to attract good teachers to broken schools. Instead, the state will need to build strong leadership for high-needs schools, and could also consider raising the prestige of working in high-needs schools by developing an elite corps of effective teachers who are willing to be "loaned" to these schools.

Tim Daly pointed out that many more teachers and administrators in high-needs schools believe that there are tenured teachers in the school that are delivering poor instruction, when compared to their colleagues working in schools in the top socioeconomic quartile. Revising our evaluation system to facilitate the removal of ineffective teachers might therefore have a larger effect on high-needs schools.

Barnett Barry of the Center for Teaching Quality recommends teacher residency programs as a way to link teacher preparation with the needs of a district. Based in North Carolina, Barry also emphasize that we should not focus solely on high-needs schools that are located in urban areas, but make sure that we have appropriate preparation and supports for teachers who will be working in poor rural areas. Barry points out that many high-needs schools have highly transient student populations, and that teachers need appropriate resources in dealing with high student turnover.

Julia Koppich identifies three essential conditions necessary to attract and retain quality teachers in high-needs schools: Teachers have to want to be there. High-needs schools should not be the de facto dumping grounds for inexperienced teachers.

Implications for Colorado policy and practice:

- **Ensure equitable distribution of effective teachers and leaders in high-needs schools and hard-to-staff subjects**
  - The state should develop and use an Academic Capital Index calculated for each school to report on the distribution of teachers and leaders
  - Districts should implement mutual consent policy ending forced placements without mutual agreement
  - The state and districts should take affirmative steps to create favorable working conditions in high needs schools to attract teachers
    - The state should use information such as the annual Teaching and Learning Conditions survey and school case studies to assist in the identification of specific leadership and support issues in consistently low-performing schools (that are not candidates for immediate turnaround measures)
    - The state should provide toolkits and training to districts to address common issues in low-performing schools
    - The state should establish a State Leadership Academy to train principals to work in high-needs schools
      - Different strands for contexts – urban, rural, ELL, turnaround, etc.
      - Create special license for graduates
- The state and districts should provide incentives for teachers and leaders to work in high-needs schools, which may include:
  - Additional pay within the district
  - Additional pay from the state for exemplary teachers and principals who agree to take temporary assignments in high-needs schools
  - Additional state support for high-needs school and school leaders in resources and technical assistance
  - State funding for teacher candidates who participate in residency programs in high-needs districts and agree to continue to teach there for a period of time

- The state and districts should provide incentives for teaching in hard-to-staff subjects
    - Create state and district capacity for identifying and planning for hard-to-staff subjects
    - Design and launch STEM recruitment initiatives
- The state should consider being part of a multi-state compact recognizing a universal teacher entry credential

Create the Infrastructure at All Levels for a Continuous Learning Organization

The final set of recommendations comes from the experiences of the Systems Transformation Committee of the P-20 Council. The STC has been working with employees of United Launch Alliance, a joint venture formed by Lockheed Martin and Boeing. ULA uses the tools of Lean Manufacturing, a process management approach designed to eliminate inefficiencies and improve customer value through the constant and systematic application of analytic tools throughout all levels of the organization. Lean principles are well-known in the private sector, in both manufacturing and service companies. Most recently, they have been applied with great success to the operation of hospitals, suggesting that Lean could also apply to mission-driven organizations such as schools and districts.

Exploring this idea, the Systems Transformation Committee applied the process of "value-stream mapping" to the state of teacher evaluation in Colorado. Value-stream mapping allows stakeholders to come together and reach a common understanding of a particular process, both in terms of the "ideal" process and the "real-world" operation. The collective knowledge of the group quickly spotlights the value added to the process at each step, and the places where value is not being added and resources are wasted. Using this knowledge , the team can then develop an action plan for improving the process. The value-stream mapping of evaluation led to conclusions quite similar to those identified in The New Teacher Project's recent report, and highlighted some very obvious action steps for Colorado. Participants agreed that this process was useful and could easily be applied to other aspects of education.

If we want to transform education for the next generation, we have to set up structures and processes for identifying wasted effort and harnessing the motivation and brainpower of our teachers and leaders to continuously improve their practice and unleash student achievement.

Another key concept underlying Lean is the value placed on the opinions of the people "on the line": those actually doing the work. In Lean organizations, people throughout the system are empowered to identify and act on opportunities for improvement as they arise, rather than needing to apply to a centralized control system for permission. In other words, every employee is encouraged to find and act on ways that they can improve the operations of the system as a whole, and the organization's structure is designed in such a way so as to encourage and reward this innovation. This type of approach would theoretically fit well with our local control system of education.

People throughout the system are empowered to identify and act on opportunities for improvement as they arise.

Finally, creating these small and large opportunities for continuous improvement also tempers the individual and organizational pressures that are created by focusing solely on results. Management guru W. Edwards Deming argued that while results are important, the best way to attain them is to free employees to practice innovation and creativity on a daily basis. A system that focuses solely on results without also fostering self-motivation, relationships, and forward thinking will not achieve its goals in a sustainable way. Instead, it will create a short-sightedness in employees and managers who "will likely meet the targets – even if they have to destroy the enterprise to do it."

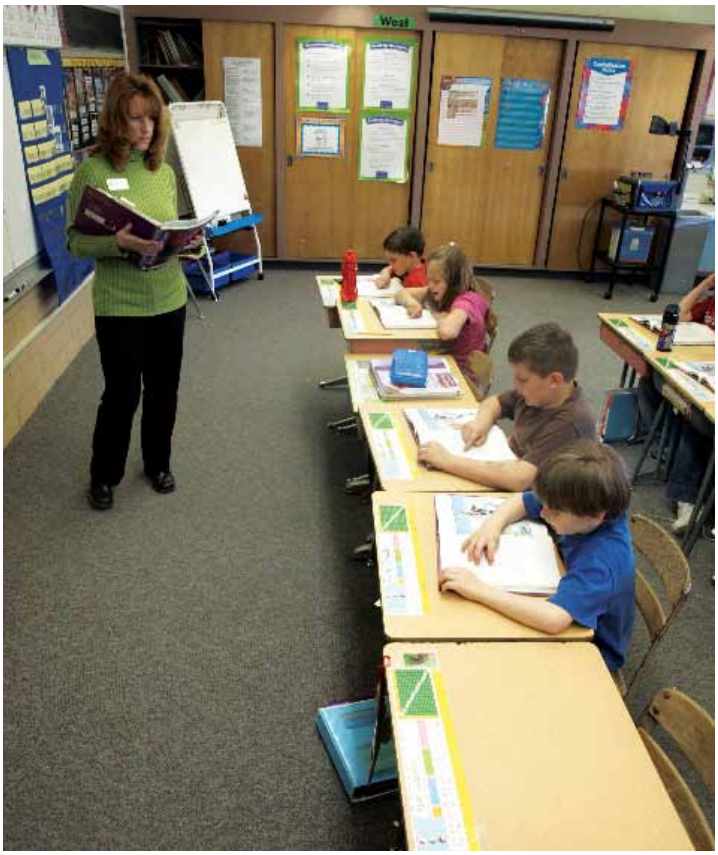
The processes of education are rarely evaluated from a continuous improvement perspective, let alone a Lean or learning organization perspective. If we explore our current system from these perspectives, it is obvious that there are multiple inefficiencies – in fact, the entire system might be said to be comprised of these inefficiencies. The processes of the system discourage communication and coordination that could serve to reduce inefficiencies and foster innovation. If we want to transform education for the next generation, we have to set up structures and processes for identifying wasted effort and harnessing the motivation and brainpower of our teachers and leaders to continuously improve their practice and unleash student achievement.

Implications for Colorado policy and practice:

- **The state should create an Office of Performance Management in the Department of Education that focuses on continual improvement of teacher and school leader effectiveness, and is responsible for the following areas:**
    - Performance management data systems that succinctly capture input, output, and outcome measures in ways that allow for Lean analysis
    - Improving evaluation process quality
    - Anticipating and reporting statewide workforce needs and projections

- The development of continuous improvement structures and processes at the state and district levels, which may include:
  - Training for state and district personnel in Lean and other continuous improvement techniques
  - Training for school and teacher leaders in fostering continuous improvement in their buildings
  - Identifying state and district waivers that may be required for schools looking to implement continuous improvement

- **The state and its districts should partner with institutions of higher education, nonprofit organizations, interested businesses, and private consultants to form a Statewide Education Knowledge Consortium.** This consortium would be responsible for:
  - Developing and executing an R&D agenda to guide major research, strategy development, and evaluation for the purpose of solving problems of practice
  - Identifying and disseminating effective strategies and practices to the field
  - Providing a platform for sharing knowledge



Conclusion

The process required to apply for federal funds under Race to the Top presents the state and its districts with an unprecedented opportunity to come together to find ways to accelerate student learning. These are conversations that we need to have, and solutions we need to find, regardless of the outcome of the Race to the Top competition. We hope that the conversations that are beginning to occur herald a new era for education in Colorado, in which the state, districts, educators, and communities come together to design a new system that is coherent, aligned, and inspires everyone within it to reach for the same important goals.

Appendix A: Letter Sent to Experts

Teacher Effectiveness In Colorado

Thank you for your willingness to help us think through important questions about improving teacher effectiveness in Colorado. We hope this short background will help you understand our context and what policies we currently have in place.

About 820,000 students attend public schools in Colorado, and our school districts employ about 49,000 teachers. Colorado is one of the few states that constitutionally require local control of education. As a result, our state department of education traditionally has been fairly small, and many important decisions about education are made in our very diverse school districts. Our K-12 education system is organized into 178 school districts that range in enrollment from 54 students to over 85,000 students. Half of the state's students are served by the ten largest districts.

According to Education Week, Colorado ranks 40th in per-pupil expenditures adjusted for regional cost differences, and per-pupil revenues are nearly $1,500 below the national average. Due to restrictive tax and spending limitations, Colorado's ability to tap into discretionary funds for statewide programs is quite limited. Although the state tends to perform well on NAEP exams, it struggles with achievement gaps. Low-income and Hispanic students (who represent over one-quarter of the student population) score much lower than higher-income and white students. Urban districts in particular have large populations of students who are low-income, Hispanic, and/or English language learners. Colorado's many isolated rural districts also struggle to serve poor students.

There are multiple avenues into teaching in the state, including traditional higher education-based preparation programs, district-operated alternative preparation programs, and national programs such as Teach for America and The New Teacher Project; however, teachers prepared in other states who then move to Colorado are our largest single source of teachers. All Colorado-based preparation programs are required to align with teacher performance standards established by the state. New teachers must pass state content tests, and there are no state-level tests of pedagogical skills. The state requires new teachers to complete a district-sponsored induction program before receiving their professional licenses, but does not provide funding or oversight for these programs.

Under state statute, teachers in their first three years of employment, known as probationary teachers, operate on one-year contracts which may be non-renewed at the district's discretion. Teachers entering their fourth year of employment are considered nonprobationary teachers, who may be terminated only for specified statutory cause (which may include unsatisfactory performance). Colorado does not have a public sector collective bargaining law, although school districts may recognize unions for the purpose of collective bargaining if they so choose. Most of Colorado's students are in districts that voluntarily engage in collective bargaining, although most districts are not unionized. Professional development is up to districts and teachers, although teachers must complete professional development credits for license renewal. Nonprobationary teachers must receive written evaluations at least every three years, while probationary teachers must be formally evaluated every year.

Decentralized leadership and resources in Colorado can be challenging, but have also led to district and school-level innovations. The charter school movement is strong in the state, and legislators recently passed the Innovation Schools Act, allowing individual schools to petition for waivers from state, district, and collective bargaining agreement requirements. Several districts are experimenting with teacher and principal alternative compensation plans, with Denver's ProComp being the most prominent example. Districts are also free to experiment with reforms such as student-based budgeting, building-based staffing decisions, innovative curricula, and district portfolio management of schools.

1. How would you define effective teaching? What needs to be known about effective teaching in order to better answer this question?

2. What can state-level policies do to improve the preparation, recruitment, and retention of effective teachers?

3. Colorado passed legislation in 2008 (the Colorado Achievement Plan for Kids, or CAP4K) that is intended to align P-20 education and promote individualized progress through a rigorous, standards-based system that prepares students for postsecondary education and the workplace. What are the two or three most important policies around teacher effectiveness that Colorado will need in order to realize the goals of CAP4K?

4. What are the most important qualities of teachers who serve in high-needs schools, and what are the most important policies Colorado needs in order to create and expand the number of effective teachers in its low-performing schools?

5. In a local control state, what policies will be most critical to improving the preparation, recruitment, and retention of effective teachers?

6. How can a state system in a local control state support the continuous improvement of teacher effectiveness?

7. Who should be accountable for teacher effectiveness? What should the state's role in accountability be?

8. What is the biggest barrier to achieving effective teaching in every classroom? What can state policy makers do about that barrier?

9. What three articles do you think a state policy maker needs to read in order to understand the state of teacher effectiveness today?

Appendix B: Recommended Readings from Panel of Experts

Weiberg, D., Sexton, S., Mulhern J., and Keeling, D. (2009). The Widget Effect: Our National Failure to Acknowledge and Act of Differences in Teacher Effectiveness. The New Teacher Project.

Available online at http://widgeteffect.org/downloads/TheWidgetEffect.pdf

Recommended by Tim Daly and Dan Goldhaber

This report offers a convincing critique of teacher evaluation methods in public schools today. Through a careful analysis of twelve school districts in four states (Arkansas, Colorado, Illinois and Ohio), the researchers at *The New Teacher Project* illustrate the gross lack of documented differentiation in teacher effectiveness. Specifically, their research shows on average, at least 94% of tenured teachers earn top evaluation ratings (in many districts this number is closer to 99%). Without a reliable means of differentiating between teacher effectiveness, it is difficult to recognize (and learn from) excellent teachers, to provide support to struggling teachers, and if necessary, to remove habitually ineffective teachers. As a result, teachers are treated as "interchangeable parts" and we have created a system in which it doesn't seem to matter *who* is in front of a classroom, as long as it is a certified teacher.

Since we know teacher effectiveness is the most important factor in a child's education over which education policy has some control, this report provides concrete recommendations on how to revise the evaluation systems with the intention of elevating teacher effectiveness across the board. *The New Teacher Project* recommends developing credible and comprehensive evaluation systems that include regular monitoring and feedback and provide opportunities for relevant professional development and support. To achieve this, administrators need to be trained in evaluation methods and held accountable for using the new system effectively. Once effective performance evaluation systems are developed, *The New Teacher Project* recommends using them to inform key staffing (hiring and assignment), professional development, compensation, retention and dismissal decisions. Finally, the report argues that dismissal policies must be restructured to "provide lower-stakes options for ineffective teachers to exit the district" and to develop a fair but efficient system of due process for removing ineffective teachers who do not leave on their own accord.

Development of a robust and transparent teacher performance evaluation process has the potential to positively impact teacher effectiveness by providing a reliable means of gauging teacher quality, the opportunity to target professional development and support and the ability to make informed and strategic staffing decisions.

Daly, T., Keeling, D., Grainger, R., and Grundies, A. (2008). Mutual Benefits: New York City's Shift to Mutual Consent in Teacher Hiring. The New Teachers Project.

Available online at http://www.tntp.org/files/MutualBenefits.pdf

Recommended by Tim Daly

This report supports adopting "mutual consent" practices in school staffing policy. Data for this report were collected in New York City following contract renegotiations between the city's Department of Education (NYCDOE) and the district's teachers union (United Federation of Teachers). The new contract changed staffing practices in three major ways: 1) the rights of schools to choose who to hire, regardless of seniority, were protected; 2) novice teachers gained protection from being pushed out of their positions by more senior teachers; and 3) a more open hiring process was established for teachers who had been displaces from their positions for reasons outside their control (falling school enrollments, budget cuts, etc. - also referred to as "excessed" teachers). *The New Teacher Project* publication argues that the new contract was a success; resulting in elevated levels of satisfactions among teachers *and* school administrators and significant savings to the district.

In contrast to the pre-existing situation in which schools had little to no control over who might fill a vacant position and an effective teacher could be "bumped" from her spot solely for having fewer years of experience than another teacher interested in her position, the newly adopted staffing contract has been received as a providing a fairer process that allows for invaluable input from both school and teacher. *Mutual Benefits* argues that the previous situation removed all thought from the process of determining who would be the most successful teacher for a given position in a given school. In addition to increasing satisfaction among teachers and schools, the report argues the new contract successfully saved the NYCDOE millions of dollars by efficiently placing more excessed teachers in positions in which they would be more likely to remain and be successful.

Despite the positive impacts of improved staffing policies, *The New Teacher Project* researchers expressed the necessity of also adopting policy to address excessed teachers who do not find new positions after a given time period. As the contract stands now, excessed teachers can remain in the "Absent Teacher Reserve" pool (many of these teachers act as substitute teachers) indefinitely and continue earning full salary, benefits and years of tenure. With research suggesting that in general, excessed teachers who had not secured new positions after a significant amount of time had applied to far few positions and had a higher percentage of unsatisfactory ratings, there is a clear indication that something must be done to alleviate the district the burden of funding teachers who either made little effort to find permanent jobs, or paying those teachers no school is interested in hiring. Of course, it is essential to ensure fair job security to excessed teachers who may have been excessed for no fault of their own. Instead of returning to a system of "compulsory teacher

placement" to address the issue of excessed teachers remaining in the Absent Teacher Reserve indefinitely, *Mutual Benefits* suggests maintaining the principle of mutual consent while establishing the following: 1) increased access to opportunities, flexibility and support to excessed teachers; 2) incentives for excessed teachers to participate fully in searching for a job; 3) financial incentives to principals to hire excessed teachers who are a good fit for their schools; and 4) provide the district with fair protections from open-ended financial commitments to excessed teachers.

Goldhaber, D. The Mystery of Good Teaching. *Education Next*, Spring 2002. The Hoover Institution, Stanford University.

Available online at http://www.hoover.org/publications/ednext/3368021.html

Recommended by Dan Goldhaber.

Good teaching matters. Although a teacher is only one of many factors influencing a student's success and achievement, it is one of the few influences over which schools and policymakers can exert control. Golhaber suggests, then, that we carefully examine what we know about effective teaching and be mindful of what we do not know (even if we think we do). Research conducted by Goldhaber and others show between 7.5% - 8.5% of students performance can be attributed to teacher characteristics. At face value, this appears to be a small percent, but it is much larger share than any other school characteristic. Unfortunately, although we know teacher quality matters a great deal, there is little evidence of what specific qualities make a good teacher. On average, the teacher characteristics we can measure (years of experience, education level, performance on tests) account for only 3% of the variability in student achievement that can be attributable to the teachers' influence.

When taken together, a teacher's degree, experience, subject-matter and pedagogical knowledge might play a role in student learning, emphasis on the word *might*. The impact of these characteristics appears to be contextually based and difficult to generalize. Without better research on what characteristics make for an effective teacher, Goldhaber suggests paying attention to what we do know (teachers with expertise in the subject-area they teach are often more effective, as are teachers with high verbal ability) and accepting what hasn't been proven; years of experience and a master's in education (or even teacher certification) do not necessarily equal an effective teacher.

In response to the tenuous situation of knowing teachers matter, but not know *what* about the teacher matters, Goldhaber recommends policymakers play better attention to how teachers are recruited, hired and compensated. As we look to the characteristics of teachers, we should do so with a constant reminder that the ultimate goal is improved student growth.

Hess, F. How to Get the Teachers We Want. *Education Next*, Summer 2009.

The Hoover Institution, Stanford University.

Available online at http://www.hoover.org/publications/ednext/How_to_Get_the_Teachers_We_Want.html

Recommended by Rick Hess

Hess introduces his readers to the concept of "quality over quantity" as it relates to the teaching profession. As he sees it, the school reform effort to reduce class size, which resulted in the hiring of hundreds of thousands of new teachers, effectively diluted the expertise of the profession and placed an undue burden on districts to fund the unsustainable influx of teachers. Further, this effort has done little to improve student learning, and has arguably done the opposite. Instead of getting *more* individuals to join the profession, Hess uses this article to argue that policy should be directed at getting the *right* individuals to become teachers. To do this, Hess offers three recommendations: 1) consider an expanded hiring pool, professionals from other fields should be recruited, not just recent college graduates; 2) reform school staffing practices to allow talented teachers the opportunity to teach to their strengths and the ability to serve in leadership positions without sacrificing teaching altogether; and 3) strategically implement appropriate technologies.

Using his "quality over quantity" philosophy, he challenges policymakers to purposefully redirect recruiting resources at individuals with "real-life" experience who are arguably more likely to remain in the profession than entering teachers in their 20s and 30s. To defend his second recommendation, Hess describes how a teacher, who may be highly effective at teaching reading to 4th-graders, will spend too little of her time doing what she is best at. Instead, the majority of her day (on average, 68%) is spent on non-direct teaching duties. Essentially, Hess places collective bargaining at fault for this situation and argues in support of re-thinking how schools spend teachers' instructional time. *How to get the Teachers We Want* advocates for schools taking a cue from the medical and legal arenas: hire (and employ strategically) support staff who can perform functions which are currently left to the teacher, but that require less expertise. Hess also believes technology is a key component of increasing teacher effectiveness. In addition to being used to streamline cumbersome but necessary processes, it has the potential to transform outmoded classrooms (four walls with a teacher at the front of the room) into 21st-century learning environments. Technology can make geographic barriers meaningless and offers boundless opportunities for innovation, but Hess argues that meaningful adoption of new technology will require buy-in and collaboration between policymakers, school organizations and within the teaching profession.

Finally, in order for the abovementioned reforms to succeed, the profession must adopt a radically new compensation system. Again citing the medical and legal professions, the article offers a compensation model that would provide incentives to attract career-changers to the profession (comparable salaries and 401(k)-type retirement plans), and most importantly, a model that would allow "pay to reflect perceived value." In this way, the most excellent teachers could be compensated accordingly, without being forced out of the classroom into an administrative position. Although Hess recognizes the challenges of reform, he argues only a radical reform of the profession as a whole will lead to meaningful advances in student achievement and learning.

Hess, F. Teacher Quality, Teacher Pay. Policy Review no. 124, April-May 2004.

The Hoover Institution, Stanford University.

Available online at http://www.hoover.org/publications/policyreview/3438676.html

Recommended by Rick Hess

Teachers are not underpaid, argues Hess, in fact, many teachers are *overpaid*. To make his argument (an admittedly controversial one at first glance), Hess explains the problem with teacher's salaries is not that they are too low, but that there is no differentiation between salaries of exceptional teachers and the salaries of mediocre teachers. As Hess states "The problem is not the total amount paid to teachers but the fact that basing teacher pay on experience and credentials rather than performance means that pay isn't necessarily going to those teachers who deserve it.

Hess calls for "common sense reform" in which teachers are paid based on student achievement (carefully measured and validated by data), but also compensated for other factors such as "the relative challenges an educator faces, desirability of the work environment, and the relative scarcity of the teacher's skills." Hess believes that offering competitive pay in these areas, as well as for student achievement, will help even the playing field for those teachers who decide to work in low achievement schools with habitually low student achievement gains.

To effectively restructure teacher compensation in a way that will directly impact student growth, Hess urges fundamental change; small bonuses and one-time incentives are not going to do the trick. The elimination of reflexive compensation plans will provide the opportunity to redirect salary dollars to effective teachers. Hess goes further than salary; he argues that pension plans should also be restructured to reflect the current social trends in which individuals are likely to repeatedly change jobs and even fields. Swapping out "defined benefit" plans for 401(k) or 403 (b) type plans would make it easier to enter and exit the profession. The benefits of this are twofold: veteran teachers ready for a change would feel less obligated to remain in the profession to collect a full pension, and school districts would gain an advantage in attracting mid-career job-changers. Finally, Hess makes the case for a adoption of a revamped tenure process; one that rewards excellence in teaching, not just years of experience. Currently, the difficulty of and expense involved in removing a chronically poor performing tenured teacher is nearly insurmountable and happens rarely. With greater accountability of teachers *and* principals, Hess believes the teaching profession could become more effective, professionalized, and responsive to high quality teachers and well as provide the methods of nimbly but fairly removing ineffective teachers from the classroom.

McCaffrey, D., Lockwood, J.R., Koretz, D.M., and Hamilton, L.S. (2003). Evaluating Value-Added Models for Teacher Accountability.

RAND Corporation, prepared for the Carnegie Corporation. 2003.

Available online at http://www.rand.org/pubs/monographs/MG158/

Recommended by Julia Koppich

In response to increasing interest in accountability, particularly accountability based on or supported by data, researchers at RAND Corporation examined literature suggesting Value-Added Models (VAM) are the key to measuring teacher effectiveness. The intentions of the authors are to: clarify the issues surrounding VAM (i.e. using achievement tests as outcome measures); evaluate their impact; and encourage additional research on VAM. In turn, there is meant to inform the debate among researchers and policymakers on using VAM for measuring teacher effectiveness.

According to the RAND researchers, a review of the VAM literature indicates certain claims of its ability are overstated. They go on to examine the various statistical models used by a number of VAM studies, and highlight a number of the implications of using these models. Of particular concern to the researchers is that "incompleteness frequently arises in two areas: data for individual students over time and information on the linking of students to teachers."

To researchers developing VAMs and analyzing their effects, McCaffrey et. al. provide a set of recommendations aimed at addressing sources of error and bias in the reviewed VAM studies. And until there is further research and a greater base of evidence, it is suggested that policy makers resist using VAM for high-stakes decisions. As we strive to develop meaningful ways of evaluating students and hold teachers and principals accountable, it is particularly important for policymakers, practitioners and VAM researchers to work together.

Murnane, R. and Cohen, C. (1986). Merit Pay and the Evaluation Problem: Understanding Why Most Merit Plans Fail and Few Survive. *Harvard Educational Review*, 56, 1, 1-17. Available online at http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/2f/4e/ca.pdf

Recommended by Julia Koppich

Published over two decades ago, this article explores reasons for the historic scarcity of merit pay practices in public schools and examines characteristics of the few districts in which it does exist. Using a microeconomics framework, Murnane and Cohen argue that the conditions necessary for merit pay to be successful do not exist in public schools. For example, the difficulty of measuring teacher effectiveness elicits resistance from educators. In addition, the nature of the profession, one in which priorities and goals are not always uniform (do we only care about getting a student to understand algebra? what about discouraging drug use?), leads the authors to believe merit pay is not appropriate for the highly variable jobs of a teacher.

By analyzing the cost (and difficulty) of measuring the impact of an individual teacher on her students' learning, and with evidence suggesting merit pay rarely results in higher rates of student learning, the authors conclude merit pay plans for teachers are generally ineffective. In the few districts and schools in which merit pay is used, Murnane and Cohen suggest that it is done so in a way that does not reflect a goal of increased student learning, but instead serves as "extra pay for extra work" (i.e. advising a club or

coaching) a "gimmick" that makes all teachers feel they have little room to improve, or as a reflection of substantial credentials or experience of the teacher.

Ultimately, this article is useful in shedding light on the historical context of merit pay, and reminding teachers, administrators and policymakers that it is nothing new. When considering compensation reform today, it would be wise to examine the results of merit pay plans from the past.

Roza, M. and Miller, R. (2009). Separation of Degrees: State-by-State Analysis of Teacher Compensation for Master's Degrees. Center for American Progress and Center for Reinventing Public Education. Available online at

http://www.crpe.org/cs/crpe/download/csr_files/rr_crpe_masters_jul09.pdf

Recommended by Dan Goldhaber

As part of the Center for Reinventing Public Education's (CRPE) "Rapid Response" series, this policy brief provides recommendations for thinking critically about teacher compensation challenges, particularly in light of the current economic crisis. Citing numerous studies that show master's degrees in education are not proven to positively impact student achievement, Roza and Miller argue that current teacher compensation practices that provide significantly higher salaries to teachers with a master's degree in education should be reconsidered.

The brief provides a state-by-state comparison of estimated expenses and percent of expenditures for funding teachers' with master's degrees. For example, in Colorado, the average increase to salary for a teacher with a master's degree is $5,341. With approximately 54% of teachers in the state holding a master's degree, over $137 million dollars are currently devoted to funding something researchers have demonstrated repeatedly does not improve student achievement. (Research does indicate advanced degrees in math and science are linked to student achievement, but 90% of master's degrees earned by teachers are not linked to student achievement.) Colorado is among the largest group of states (15 in total) that directs between 1.5% and 2% of its education expenditures on funding the so-called "master's bump."

With many school districts facing stagnant and declining revenues as a result of the struggling economy, this compensation arrangement is clearly unsustainable Roza and Miller argue in support or restructured compensation policies and the elimination of graduate degree requirements for state licensure. The idea here isn't that teachers will cease to continue in higher education, but that coursework and degrees will be linked with student growth: "if teachers anticipated higher pay based instead on enhanced ability to boost student achievement, their interests would be better aligned with those of their students."

Additional Sources of Interest:

Speeches by U.S. Secretary of Education Arne Duncan (recommended by Tim Daly)

http://www.ed.gov/news/speeches/latest/index.html?src=gu

Strategic Management of Human Capital (recommended by Julia Koppich)

http://www.smhc-cpre.org/

Appendix C: Other Resources

Alliance for Excellent Education (2008). "Improving the Distribution of Teachers in Low-Performing Schools." Policy Brief. Washington, DC: Author. Available online at http://www.all4ed.org/files/TeachDist_PolicyBrief.pdf.

Baratz-Snowden, J. (2009). "Fixing Tenure: A Proposal for Assuring Teacher Effectiveness and Due Process." Washington, DC: Center for American Progress. Available online at http://www.americanprogress.org/issues/2009/06/pdf/teacher_tenure.pdf.

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Carey, K. (2004). "The Real Value of Teachers: If Teachers Matter, Why Don't We Act Like It?" *Thinking K-16* 8:1. Washington, DC: Education Trust. Available online at http://www2.edtrust.org/NR/rdonlyres/5704CBA6-CE12-46D0-A852-D2E2B4638885/0/Spring04.pdf.

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Gordon, R., Kane, T., and Staiger, D. (2006). "Identifying Effective Teachers Using Performance on the Job." Hamilton Project Discussion Paper 2006-01. Washington, DC: Brookings Institute. Available online at http://www.brookings.edu/views/papers/200604hamilton_1.pdf.

Institute for Educational Leadership (2004). "Preparing and Supporting School Leaders: The Importance of Assessment and Evaluation." Washington, DC: Author. Available online at http://www.iel.org/pubs/schoolleaders.pdf.

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Rotherham, A. (2008). *Achieving Teacher and Principal Excellence: A Guidebook for Donors.* New York: Philanthropy Roundtable. Available online at http://www.philanthropyroundtable.org/files/TeacherExcellence.pdf.

Roza, M. and Miller, R. (2009). "Separation of Degrees: State-by-State Analysis of Teacher Compensation for Masters Degrees." Bothell, WA: Center on Reinventing Public Education. Available online at http://www.crpe.org/cs/crpe/download/csr_files/rr_crpe_masters_jul09.pdf.

Toch, T. and Rothman, R. (2008). "Rush to Judgment: Teacher Evaluation in Public Education." Washington, DC: Education Sector. Available online at http://www.educationsector.org/usr_doc/RushToJudgment_ES_Jan08.pdf.

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