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A New Approach for Districts**

David Sigler and Marla Ucelli Kashyap

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Develop, and Retain Effective Teachers
in High-Needs Districts**

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Developing Human Capital

Robert Rothman

A strong body of research shows that the quality of teaching is the most important school-related factor in student achievement, and school systems devote the overwhelming majority of their resources toward teachers. Nevertheless, there is considerable anxiety about teacher quality in American schools today. Not enough highly able people are going into teaching, and too many teachers leave the profession after a few years. Many teachers lack the knowledge and skills they need to teach all students effectively. And the students who need the strongest instruction often are taught by teachers with the least experience and expertise.

These problems are particularly acute in urban schools, which often have a difficult time recruiting and retaining teachers, and where students come from a wide array of backgrounds and have diverse learning needs.

Why do these problems persist? One reason is that the rules and procedures that affect teacher quality are often haphazard. Teacher education institutions prepare teachers; district human resource departments recruit them; principals evaluate them; collective bargaining agreements determine where they can work; and universities and private organizations provide professional development. Yet, these agencies and institutions seldom work together in a systematic way to ensure that all teachers are capable and effective in the classroom.

In the private sector, leading-edge companies are focusing increasingly on *human capital management*.

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They recognize that the individuals who work for them are their most important resources, and they do whatever they can to grow and develop them. To that end, they look at all aspects of their operations that affect their workers – from recruitment to development to evaluation to retention.

How can these approaches be applied to education? This issue of *Voices in Urban Education* examines some of the elements of a human capital development system.

- David Sigler and Marla Ucelli Kashyap define human capital management and discuss how school districts should organize themselves to develop such capital effectively.
- Barnett Berry, Diana Montgomery, Rachel Curtis, Mindy Hernandez, Judy Wurtzel, and Jon Snyder examine efforts in Boston and Chicago to prepare the teachers they need through “residencies,” modeled after medical education.
- Richard Kahlenberg considers ways that teachers unions can play constructive roles in improving teacher quality.
- Thomas Toch and Robert Rothman look at comprehensive methods of evaluating teachers that can promote improvements in teaching.
- Robin Lee Harris describes a partnership to strengthen science teaching between Buffalo State College and the Buffalo Public Schools that has resulted in a significant increase in teacher retention.

Many of the efforts described in these articles are new, and there is little data on their effectiveness. But they appear promising because they address human capital in a strategic way. They focus on the system’s

needs and bring to bear a wide array of resources to meet those needs.

Significantly, these resources often include support from institutions and organizations outside of the formal structure of school systems – unions, universities, private organizations. Educators increasingly recognize that they can only achieve the goal of improving learning for all students through partnerships, and partnerships to strengthen human capital are vitally important.

Of course, teachers are not the only component of the human capital equation in an education system. Districts and schools increasingly are forming partnerships with community organizations and institutions to enhance children’s learning outside of school, and these institutions need to grow and develop highly qualified individuals who are responsible for youths’ learning and development. Districts need to be sure that they are strategic and systematic in these partnerships so that organizations outside of school meet student needs.

School and district leaders are also vital components of a system’s human capital system. Districts increasingly are forming partnerships to strengthen their efforts at recruiting, preparing, and developing high-quality leaders. But that’s the subject of a future issue.

Human Capital Management: A New Approach for Districts

David Sigler and Marla Ucelli Kashyap

Developing human capital – strengthening the talent level of the teaching workforce – will require districts to transform the way they recruit, hire, train, evaluate, and pay teachers.

Research over the past twenty years has generated widespread agreement that among all the school-related factors that can influence student achievement, teachers matter most (Education Trust 2001). At the same time, research shows that in the American public education system, effective teachers are among the most inequitably distributed resources we have (School Communities that Work 2002). Thus, it is no surprise that there has been much discussion about how to recruit and retain high-quality teachers – especially in schools serving the most disadvantaged students.

Much of this discussion has, understandably, focused on the inadequacy of district human resources departments in addressing the situation or on the success stories of very limited numbers of schools in overcoming it. But this is simply too narrow. To truly understand how school districts can have the highest impact on teacher quality and to make sure that quality is distributed equitably within their schools, we need to examine the much more comprehensive idea of human capital management – how it extends

beyond traditional human resources and just who, exactly, is responsible for it.¹

So, what is human capital? In the private sector, *human capital* is generally defined as the accumulated value of an individual's intellect, knowledge, experience, competencies, and commitment that contributes to the achievement of an organization's vision and business objectives (OECD 2001). When we apply this idea to K–12 education, we realize that our “business objective,” or bottom line, is student achievement. In public education, *human capital* refers to the knowledge and skill sets of our teachers that directly result in increased levels of learning for students. In short, we are talking about what teachers know and are able to do – their talent level.

Given this definition, *human capital management* refers to how an organization tries to acquire, increase, and sustain that talent level over time. More specifically, it refers to the entire continuum of activities and policies that affect teachers over their work life at a given school district. These

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¹ In the context of public education, *human capital* refers not only to teachers, but also to principals, aides, other licensed service providers, etc. For the purposes of this article, we discuss human capital only as it relates to teachers.

activities range from recruitment and selection, to hiring and induction, to deployment and redeployment, to training and support, to evaluation, career advancement, compensation, and the termination of ineffective teachers (see Figure 1). While many of these activities are within the traditional purview of a district’s human resources department, some of the most important are not. When we acknowledge this, we realize that we cannot just look at human resources departments for answers, or continue viewing things like recruitment strategy, compensation, and evaluation in isolation. We must take the more comprehensive view of how we attract, manage, and keep talent in our schools that the human capital management idea suggests.

Some might argue that if school districts are failing in this effort, then managerial and budgetary autonomy at the school level is the best way to

improve teaching quality. Let good principals spend their resources as they want in order to get, keep, and develop the teachers they need. But even under the best of circumstances, this is only a partial solution. And while economy of scale is a compelling reason to claim that districts should handle things like professional development and recruitment, the most compelling reason for a strong district role in human capital management is *equity*.

Twinned with results, equity is a central focus for school districts. A smart district tailors and distributes resources – teaching talent key among them – to fit the specific needs and assets of each school’s students, staff, and community. Managing human capital effectively means, among other things, developing teachers with the specific knowledge and skills to serve *all* students in a district well. And often, it means ensuring that the most effective teachers work in the most challenging schools.

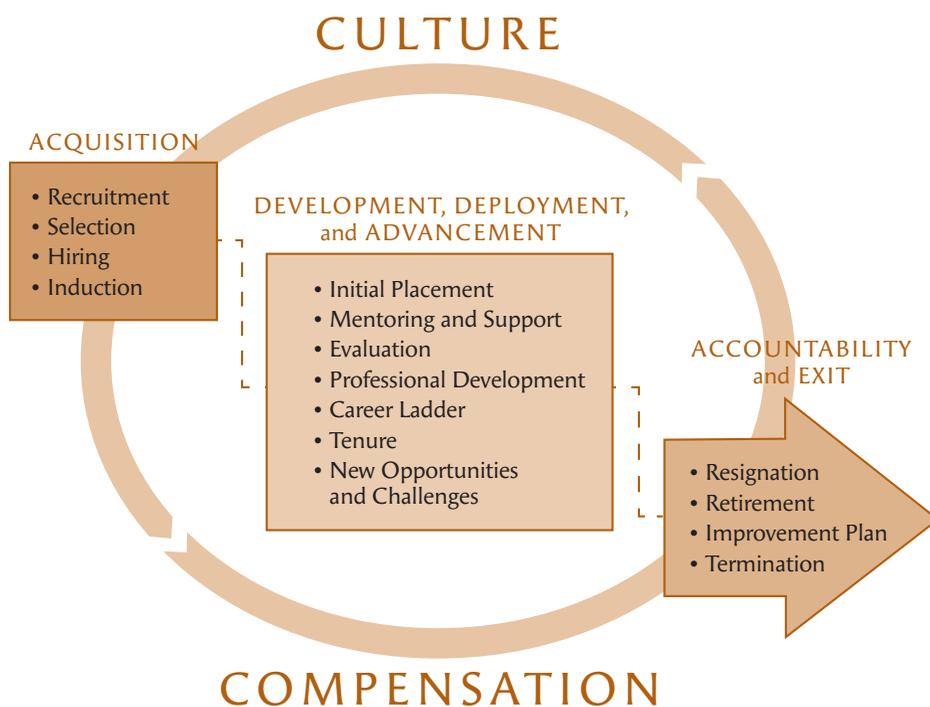


Figure 1. Human capital management continuum

So what else does focusing on effective human capital management and its continuum of components mean for how school districts operate? Essentially, it means that school districts have to make important changes in how they approach the work of managing human capital. Ranging from how human capital management is prioritized, to how central offices are organized, to how districts work with external partners, these changes are essential for districts committed to results and equity.

Not Just Another Department

The simple fact is that school districts must prioritize human capital management as a key function of their central offices. While many districts would claim that managing human capital is already a key function, few actually operate in that way. The implications of recognizing human capital management as a key function of district central offices are far-reaching, with an impact on central office structure, staffing, and leadership.

Currently, human resources departments in most districts are just that – functional departments that report to a chief operations officer rather than to a chief academic officer and, therefore, lack the essential connection to instruction that human capital management requires. In fact, elevating human capital management to one of a select few key district functions suggests that someone responsible for the coordination of human capital management activities should have a cabinet-level position.

In most cases, though, this person should not be a chief academic officer or a chief operations officer. Because these officials have so many responsibilities in their portfolios already, add-

The simple fact is that school districts must prioritize human capital management as a key function of their central offices. Few actually operate in that way.

ing human capital management means that it could easily be marginalized. In most cases, we are talking about a position devoted solely to thinking about human capital management strategy. Districts must respect the reality that good strategy in this area requires year-round focus. They must also recognize that prioritizing human capital management strategy means that they can no longer view themselves as victims of regional labor markets or local union contracts, rather than shapers of the education workforce their communities deserve.

In addition to changing how they *prioritize* human capital management, districts need to rethink how they *approach the work* of human capital management. Perhaps the most important aspect of this idea is that it forces us to see the interconnectedness of each of the continuum components and encourages us to think critically about their cause-and-effect

Key human capital management functions such as professional development, evaluation, collective bargaining, and policy development many times fall outside of human resources. These external functions are not coordinated with human resources. When this happens, the results are invariably bad for teacher quality.

relationships. Effective human capital management requires attention to *all* components of the continuum and strategic decisions about which to prioritize in a given district at any given time.

What's more, districts must sustain a concerted effort to coordinate these components, continuously, in complementary ways. In districts where the focus is on human resources alone or on the continuum components in isolation, the district's potential to impact teacher quality is severely limited.

Currently, in most school district central offices, when anything that has to do with teachers or teacher quality arises, people look to the human resources department. This makes some sense, given that many activities such as teacher recruitment, hiring, compensation, and transfers are handled in the typical school district's human resources department.

What is often overlooked, however, is that key human capital management functions such as professional development, evaluation, collective bargaining, and policy development many times fall outside of human resources. More

often than not, these external functions are not coordinated with efforts coming from within the human resources department. When this happens, the results are invariably bad for teacher quality. In short, it means that the average school district starts out at a disadvantage when it comes to human capital development because of the way its central office is organized.

Consider a situation present in many mid- to large-sized urban districts today. A district has an excellent recruitment and marketing campaign in human resources, paired with a high level of customer service for applicants and new hires. At the same time, this district's office of professional development has inconsistent and poor-quality mentoring and a lack of quality professional development options for teachers. The result for our imaginary school system, just as it is for most school systems with similar circumstances, is predictable: high turnover. Today's high-quality new hires quickly become tomorrow's attrition statistics.

Or, in another instance, a district could have an effective office of professional development that coordinates high-quality skill-building and training options, but that has no connection to the district's teacher evaluation process. In this case, while evaluations may iden-

tify areas for growth, there is no guarantee that teachers will be connected to the district resources that might help them in those areas and, therefore, an opportunity to improve teacher quality and the level of instruction in the district is missed.

Yet another example might be a district that has no problem recruiting elementary teachers, but cannot attract enough middle school subject teachers to meet its needs. This same district has human resources doing recruitment, while the office of teaching and learning handles teacher training and relationships with local teacher education programs. A district like this *must* work with those teacher preparation programs to address the lack of middle school teachers, either by encouraging current and incoming teacher candidates to consider coursework for a middle school certificate or by creating streamlined coursework options for current district elementary teachers to become certified in middle school subjects. Both of these options should be coordinated with incentives that the superintendent, teachers union, and budget office would need to approve. What in fact happens in many districts is that middle school classrooms go without teachers or are filled with uncertified staff.

Divide and Conquer

The coordination issue that these examples highlight is only compounded by the fact that many districts have the wrong people working on human capital management strategy. In many central office human resources departments, tasks such as providing good induction programs for new

teachers and ensuring a quality pool of teacher candidates are handled by the same personnel charged with processing leave-of-absence requests, handling staffing compliance, improving business processes, and executing typical human resources transactions for teachers in schools.

These two sets of activities are fundamentally different, and assigning the same staff to handle both often means that neither is done effectively. One set is much more rote and process oriented and requires mastery of a relatively static knowledge base. The other is dynamic and strategic and requires creativity and constant flexibility. Doing either set of activities well is its own full-time job that requires a specific set of professional strengths that does not necessarily lend itself to the effective accomplishment of the other.

As the examples illustrate, developing a comprehensive human capital management strategy and then prioritizing and coordinating the different components is complicated. It can get even more difficult and require adaptation when new circumstances arise such as changes in federal regulations, or when internal data reveal a potential



Districts need to separate the strategic aspect of managing human capital management from the transaction and compliance aspects of human resources and central office work.

problem such as a trend of retiring secondary teachers. It demands high-level understanding across a number of areas and close coordination of many complex activities. At the same time, getting people paid on time, processing requests for leave, and ensuring that schools abide by state or federal staffing-plan requirements are tasks that require efficiency, attention to detail, smooth business processes, and technical knowledge of human resources policy. Each set of activities suggests a different kind of staff member.

New Structure for a New Approach

The examples above show how the connections between the components of the human capital management continuum call for changes to how we approach the work of human capital management. Only when the individuals responsible for each of these components are working together, informing each other and coordinating their efforts regularly, can a district develop and implement a compre-

hensive strategy for maximizing its talent level and the impact that has on student achievement. While there is no one picture of what this should look like, the changes are concerned mainly with organizational structure and division of labor.

Foremost, school districts need to coordinate all components of the continuum. Synchronizing the work of many mid-level district staff working on related, but very different, human capital management activities is a formidable challenge and, more than likely, it means rethinking most traditional organizational charts.

One possibility is actually creating a dedicated office of human capital management. Effective coordination is most likely to happen when those responsible for the different components are working closely together, both substantively and physically. Actually housing activities such as teacher recruitment, evaluation, professional development, staffing, and collective bargaining in one office could, potentially, be the best way to coordinate them.

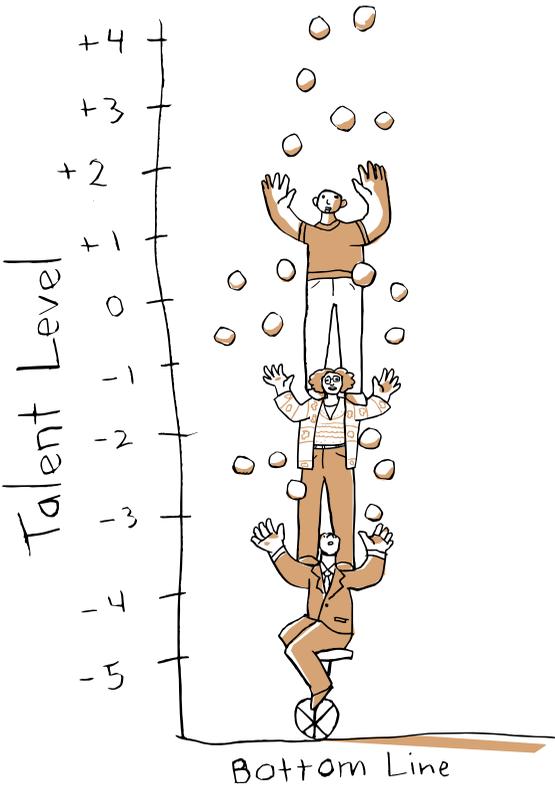
However, this potential solution does not mean simply expanding the purview of a human resources department; the second area of change deals with division of labor. Districts need to separate the strategic aspect of managing human capital management from the transaction and compliance aspects of human resources and central office work. Different personnel need to handle each of these sorts of activities. And, while business transactions and the everyday processes handled in human resources are critical to effectively run a central office and a school system, *strategy* needs to drive the overall efforts

around human capital management, rather than compliance or process. Staff working on how to best manage human capital to impact student achievement should figure out what *should* be done. Business process, transaction, and compliance staff should figure out how to *implement* that strategy. While these changes may seem intuitive or even obvious, they would represent major shifts for many of the country's largest school districts.

A Task for Many Hands

While we argue that the district's role in human capital management is central, it is equally important to recognize that districts can't do it alone. When it comes to human capital management, the interconnectedness of the components on the continuum means that a comprehensive strategy must deal effectively with each one or run the risk of undermining itself. Yet, most mid- to large-sized districts today lack the capacity to effectively handle all components of the continuum on their own. A district serious about managing human capital effectively must seek outside sources of expertise and build or augment key partnerships to help them fill in the gaps.

Every district has different strengths and weaknesses. When a district lacks capacity and expertise in an area of human capital management, it must look to external entities such as fee-for-service educational consulting companies, reform support organizations, and foundations and other nonprofits to provide it. A district adept at managing human capital concentrates its internal efforts and resources on the components of the continuum it does well and partners with outside expertise to provide the rest. Many large districts are already becoming more



hybrid and diverse organizations that balance the direct management of schools and provision of services with outsourcing to various service providers, community-based nonprofits, and even educational management organizations. There is no reason to exempt aspects of human capital management from this approach, and every reason to consider the possibility.

Also critical to a district's ability to effectively manage human capital are solid partnerships with existing stakeholder groups. These partnerships must distribute responsibility for and leadership of human capital management to provide the best chance for success. Perhaps the most common example of such a partnership – one that is too often ineffective – is that between a district administration and the local teachers union. As the membership organization for teachers, unions must become, as *United Mind Workers* puts it, “the guarantors of quality standards [for teaching] and the processes that cause them to come about” (Kerchner, Koppich & Weeres 1997, p 60).

Districts, on the other hand, must start treating unions as if *that* is what they should be. This means looking at ways to meaningfully partner with unions around important human capital management activities like evaluation, coaching, and professional development where districts can normally use extra capacity and expertise. Moreover, it means working with unions to effectively deploy human capital in a way that promotes equity.

One of Six Key Functions

The Annenberg Institute's School Communities that Work Task Force (2002) and, more recently, a variety of research activities undertaken to describe the practices of districts that

are improving their effectiveness, have led us to identify six key function and practice areas for “smart districts”: lead for results and equity; focus on instruction; manage human capital; use data for accountability; build partnerships and community investment; and align infrastructure with vision. While there are numerous examples of school systems making improvements in equity and results, all six areas present huge challenges – and “managing human capital” may be the most underdeveloped practice of all.

Yet, if school systems are to be successful at their core mission of providing *all* students with an excellent education, then good teaching must move from idiosyncratic to pervasive. The simple fact is that this is not possible unless school districts understand human capital management, elevate it to a central system function, and begin to make the difficult structural, organizational, and cultural changes required to realize their new vision.

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Urban Teacher Residencies: A New Way to Recruit, Prepare, Develop, and Retain Effective Teachers in High-Needs Districts

Barnett Berry, Diana Montgomery,
Rachel Curtis, Mindy Hernandez,
Judy Wurtzel, and Jon D. Snyder

Efforts to prepare teachers through “residencies,” modeled after medical education, offer promise as a way districts can develop a teaching corps that meets their needs.

The Aspen Institute and the Center for Teaching Quality (CTQ) based this article on a longer paper that was produced for CTQ. This work was conducted in partnership with the National Council for Accreditation of Teacher Education with support from the Arthur Vining Davis Foundations and with additional funding from the Bill & Melinda Gates Foundation. The paper is available on the Aspen Institute Web site at <www.aspeninstitute.org> and the CTQ Web site at <www.teachingquality.org>.

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In 2002, Boston’s then-superintendent Tom Payzant knew he had to find a new way to tackle the city’s growing teacher crisis. The district needed more math, science, and special education teachers, and – crucially – Boston’s highest-poverty schools needed teachers committed to teaching in challenging classrooms for more than just a few years.

Payzant also recognized that the teaching workforce was changing. Boston was seeing fewer talented young teachers wanting to make teaching a lifelong career and more wanting to teach for a few years and then move on. He needed a strategy that would secure a cadre of skilled, diverse teachers who would commit to Boston schools for at least three to six years. And, Payzant understood that the teacher preparation programs operating in Boston at the time were not going to be able to respond to these new challenges. The district would have to develop its own approach. In 2003, Payzant turned to the Boston Plan for Excellence (BPE) and worked in partnership with BPE to create the Boston Teacher Residency (BTR) program.

In Chicago, a parallel story was unfolding. Mike Koldyke, a retired venture capitalist, realized that universities could not prepare enough qualified teachers for Chicago’s 408,000 students. In 2001, Koldyke was able to inspire and engage a group of business and community leaders to design a program, the Academy for Urban School Leadership (AUSL), that could significantly advance and reform the teaching profession.

Understanding that producing the most effective graduates would require sound school leadership and similarly skilled colleagues, AUSL partnered with Chicago Public Schools (CPS) to become a school management organization in addition to a teacher preparation program. This arrangement allows AUSL to manage low-performing CPS schools and, importantly, to staff these schools with a critical mass of AUSL teachers and hire principals and administrative teams who support the AUSL model. AUSL is now considered a crucial part of the district’s strategy to change Chicago’s lowest-performing schools.

The programs in Boston and Chicago are known as *urban teacher residencies* (UTRs) because they are based on the medical residency model

The recognition is growing that the UTR design incorporates elements that research indicates are important for preparing and supporting beginning teachers – from a rigorous recruiting and admissions process to an intense three-year induction period.

that pairs professional course work with embedded clinical experience. UTRs are a nascent approach, but they have gained significant attention recently. The recognition is growing that the UTR design incorporates elements that research indicates are important for preparing and supporting beginning teachers – from a rigorous recruiting and admissions process to an intense three-year induction period.

Although these programs are too new to yield data on whether they are improving student learning in Boston and Chicago, promising early results indicate, among other impacts, that teachers trained in UTRs are far more likely to stay in high-needs schools. As a result, there is interest at the federal level in expanding these programs. The Higher Education Act includes millions of dollars in funding to start up or expand current UTR programs. And Democratic presidential hopeful Barack Obama has given the idea very public support. He sponsored the Teacher Residency Act in the Senate and, in a recent speech, promised to “create more teacher residency programs to train 30,000 high-quality teachers a year.”¹

Clearly, UTRs will be receiving more attention in the near future; it is, therefore, worthwhile to dig into these programs and unearth their key elements and evidence of effectiveness, as well as draw out lessons learned and policy implications for urban education leaders interested in developing their own UTR models.

How They Work

UTRs start by selecting candidates selectively and strategically. Candidates have strong academic records; many have math and science backgrounds.

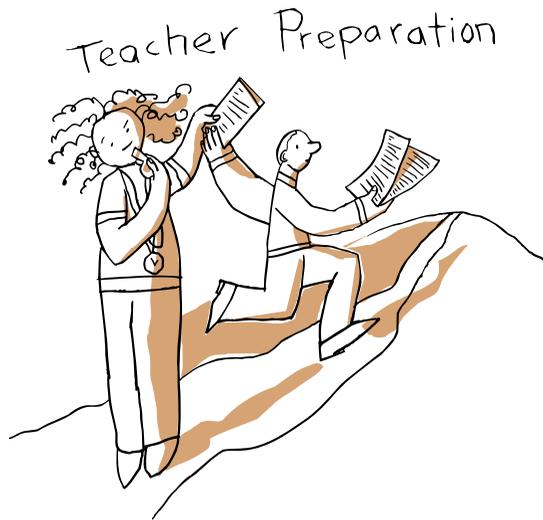
¹ May 27, 2008, Thorton, Colorado.

Recruitment efforts are focused on recent college graduates from top universities, mid-career professionals, and people who have demonstrated a commitment to the districts. Like most urban districts, BPS and CPS have a high percentage of Black and Latino students, so the programs focus on recruiting candidates who will reflect their student populations.

In UTRs, prospective teachers (residents) integrate their master's level course work with an intensive full-year residency alongside an experienced mentor teacher in an urban classroom before becoming teachers of record in their own classrooms in their second year. Residents work closely with their mentors as the mentor writes lesson plans, manages classroom behavior, grades papers, and assesses student progress. The mentor and resident meet one-on-one to discuss these elements of teaching and, with the mentor teacher acting as a guide, the resident begins independently writing lesson plans and leading classroom discussions. Over the course of a school year, the resident gradually takes on the full responsibilities of a classroom teacher.

As a resident tackles each new aspect of teaching, the resident and mentor continually meet to discuss, review, and assess progress. At the same time, residents are taking master's courses in teaching aligned with their clinical experiences. BTR works with faculty from a variety of institutions, while AUSL has developed a partnership with National-Louis University.

After a year, residents who successfully complete the program and pass required tests receive a master's degree and teaching credential and begin teaching in their own classrooms – most in high-needs areas such as special education and secondary math



and science. In Boston, because of the district's large population of special needs students, every resident in BTR is also prepared to receive certification in special education. Both CPS and BTR also provide intensive induction support into residency graduates' third and fourth years of teaching.

The UTRs offer financial incentives to residents to select their programs and to fulfill their teaching commitment. Upfront investments are made to attract, prepare, and support UTR candidates. During their residency year, residents receive a living stipend of \$11,100. Costs to the residents include \$3,700 for the master's degree tuition (which is financed by an AmeriCorps loan) and \$10,000 tuition for the residency program, which is loaned to residents and forgiven as they fulfill their three-year commitment to teach in high-needs district schools. The cost

UTRs have fundamentally changed the traditional consumer-producer relationship between school systems and teacher preparation programs by giving each city an alternative source of new teachers who are explicitly prepared to meet the district’s most pressing needs.

to BTR for providing these incentives and running the residency – including continued support to graduates – averages about \$37,500 per candidate.

UTRs have not solved the teacher-quality challenge in either city. As of 2008, for example, BTR prepared about 15 percent of all teachers hired by the district (or 84 teachers out of the 539 that were placed in BPS in school year 2007-2008). But they have fundamentally changed the traditional consumer-producer relationship between school systems and teacher preparation programs by giving each city an alternative source of new teachers who are explicitly prepared to meet the district’s – and students’ – most pressing needs and by giving the district a much greater role in ensuring teacher quality.

In addition, because UTRs often demonstrate best practices, from recruitment to induction, they have the potential to vastly improve systems for teacher development – or, in the more recent vernacular, human capital – in urban school districts. As such, UTRs can be a key element of urban districts’ portfolio of pathways into teaching and a linchpin of a larger strategy to strengthen their human capital systems.

Urban Teacher Residencies Up Close

UTRs are based on seven core design principles (see CUTR n.d.).

1. *UTRs tightly weave education theory and classroom practice together.*

Residents practice what is taught in courses and continuously test, reflect on, and improve their skills. They demonstrate their proficiency not through course grades, but through performance-based assessments and authentic projects that are informed by research and theory but grounded in actual classroom experiences. For example, a resident teacher in Chicago or Boston would study lesson plan development in her university classes and then work with her mentor to create a lesson plan for class that week. After the lesson plan is implemented, the mentor reviews the plan’s execution and possible improvements with the resident.

2. *UTRs focus on learning alongside an experienced, trained mentor.*

Working with a mentor teacher allows residents to experience a full-year school “life cycle,” from setting up classrooms to the closing of the school year. They learn firsthand how to build culture and community, organize long-term instructional goals, create formative assessments, and use data to reflect on teaching practices. There is evidence

that the relationship helps improve the mentors' practice as well. As one mentor explained, "I didn't realize how much thought I put into my practice until I had to verbalize it. . . . Mentoring has definitely improved my practice."

3. *UTRs organize teacher candidates in cohorts to cultivate professional learning communities and foster collaboration among new and experienced teachers.*

Learning to teach is no longer a solo activity. Cohorts of residents engage in a tightly prescribed sequence of coursework and clinical experiences as a group. The cohorts meet regularly and form an intellectual community and also function to help connect their practice with course work, as residents work together in the same school. The cohort model extends beyond the residency year – an effort is made to place residency graduates together as they assume teaching positions.

4. *UTRs build effective partnerships.*

Building effective partnerships is as important as it is challenging – universities and school districts are not traditionally known for their ability to partner. Recognizing that no single district, university, or nonprofit organization alone can solve the problem of preparation and retention of high-quality teachers for urban schools, UTRs bring together diverse organizations for the common goal of improving student achievement and can be critical to supporting teacher learning over the lifespan of a teacher's career and impacting long-lasting reform in urban schools. Leadership and support at the highest levels was key to making these partnerships work in Boston and Chicago.

5. *UTRs serve school districts.*

Admissions goals and priorities for UTRs are driven by the needs of the districts' students. As noted above, AUSL and BTR place a priority on recruiting in the districts' high-needs areas like science and mathematics, and BTR residents are prepared to receive an additional licensure in special education because of Boston's large population of students with special needs. Additionally, residents learn the district's instructional initiatives and curriculum while they come to understand the history and context of the community in which they will teach. UTRs can also serve districts by pushing them to improve their practices. For example, BTR's high-quality work on new teacher screening and induction has spurred BPS to revamp the way it screens candidates and supports all of its novices.

6. *UTRs support residents once they are hired as teachers of record.*

UTRs are designed to provide more sophisticated induction programs. In Chicago, after graduating from the residency program, residents continue to receive individualized coaching and induction support through year two of



teaching and additional professional development support in years three and four. An induction coach works with the new teacher once or twice a week; new teachers are assigned a grade partner and cluster leader; there is common preparation time with grade-level partners and other preparation time is used for observations. Because these teacher supports are all rooted in a common definition of quality teaching, they are beginning to pay dividends for the schools and the students served. As one university faculty member noted:

AUSL is okay with putting teachers into low-performing schools, because AUSL believes teachers have to learn...what it's like to teach in those environments....But AUSL [also] provides strong support for teacher candidates in those low-performing schools. And you can't have one without the other.

7. *UTRs establish and support differentiated career roles for veteran teachers.*

The UTRs have begun to create opportunities for excellent veteran teachers to take on roles as mentors, supervisors, and instructors while still holding positions as K–12 classroom teachers.

After three years, 90 percent of BTR graduates and 95 percent of AUSL graduates are still teaching. (In comparison, nationally, between 30 percent and 50 percent of urban teachers leave within the first five years.)

AUSL mentors earn a 20 percent salary supplement and they can be offered meaningful leadership opportunities, such as opportunities to create benchmark assessments and curriculum used in network schools, without becoming administrators. Both BTR and AUSL are beginning to see their most successful residents develop to become mentors.

The Effectiveness of UTRs

While UTRs appear to be a promising innovation, the critical question is whether UTRs have measurable impact. There are a few areas of UTR outcomes worth considering.

Student Learning

Only a few years in operation, UTRs do not yet have sufficient data to determine the impact of their graduates based on multiple measures of student achievement. However, both BTR and AUSL have commissioned outside research to determine their effectiveness, and data should be forthcoming.

Skills and Competencies

In ratings of BTR graduates, principals considered 88 percent of BTR teachers to be as effective or more effective than other first-year teachers in their schools and over 94 percent indicated their desire to hire additional BTR graduates. And anecdotal evidence suggests students agree. As one fifth-grader from Harvard Elementary School in Chicago said:

I think the difference [after AUSL took over the school] is that these teachers care. Last year teachers didn't care. They use to just sit and watch.... There was no learning. They taught only when they see the principal walk in. But this year teachers care a lot. They teach...like, every second. They teach whatever needs to be learned.

Diversity, Hard-to-Staff Classes, and Retention

Both AUSL and BTR have been successful in recruiting high-caliber candidates of color – in 2007, 57 percent of AUSL residents and 55 percent of BTR residents were people of color. (In comparison, about 28 percent of Teach for America members in Chicago in 2007 were people of color.) In Boston, 57 percent of BTR’s middle and high school residents teach mathematics, science, or English Language Learners (ELLs).

UTRs have extremely high retention rates; after three years, 90 percent of BTR graduates and 95 percent of AUSL graduates are still teaching. (In comparison, nationally, between 30 percent and 50 percent of urban teachers leave within the first five years.)

Mentor Skill and Retention

New roles for experienced teachers have led to renewed enthusiasm and motivation and contributed to the retention of veteran teachers. And the leadership skills that mentors develop are serving as a potential pipeline to other leadership positions. Each program has created positions, often filled by mentors, to manage and/or continue developing school-based or cross-school groups of mentors.

Impact on the Human Capital System

While the UTRs are still relatively young programs, there are examples of ways in which they have begun to impact their districts’ human capital systems. BTR has forged important changes in how teachers are recruited and screened in the district. BTR and BPS staff members now coordinate to direct potential teachers to appropriate preparation pathways based on individuals’ strengths and needs. BTR and BPS



have also adopted one set of standards for teaching, and those standards are becoming an increasingly integral part of the professional development and teacher assessment systems throughout the district.

Chicago Public Schools is a far more decentralized system than the smaller Boston district, yet the impacts of AUSL are clear. AUSL is a significant part of the CPS plan for improving low-performing schools. In addition, the close link between AUSL and National-Louis University (NLU) resulted in changes in the university’s preparation program. As part of the partnership, NLU modified its traditional two-year teacher education program to integrate its course work with the year-long AUSL teacher residency. Among other changes, the university changed its

UTRs must be able to clearly define whom they attract, how residents are prepared, where they teach, and how effective they are in helping students learn. UTRs also need to demonstrate more clearly the cost-effectiveness of their programs.

format for lesson plans based on input of AUSL staff and mentors, worked with NLU faculty and school-based mentors to collaboratively evaluate residents' work, and modified course content and sequence to better meet the needs of teachers in an urban context. Faculty reported that the success of residents in the AUSL training academies and high-needs CPS schools has prompted exploration of new kinds of clinical placements in other NLU preparation programs.

Cost-Effectiveness

UTRs are distinct from other teacher preparation programs not so much in *how much* they cost, but in *when* the costs are incurred. UTRs make more upfront investments than other pathways to certification, and financial data suggest that successful UTRs can be quite cost effective. The upfront expense of requiring a full-time, paid internship can be offset by both the retention of novice teachers, their teaching effectiveness over time, and the wider positive impacts UTR can have the district's human capital system.

Building for Success

The Chicago and Boston experiences suggest some valuable lessons for other districts. Based on our study of these two districts, we describe in this section a number of factors important to consider when districts and their partners begin to explore the design and implementation of a UTR program. These action steps can guide an analysis of a district's readiness to implement a successful program and direct attention toward important features for initiating and sustaining a successful UTR.

1. *Assess the readiness of a school system, institution of higher education, and/or community-based organization to undertake the work of developing a UTR.*

Districts must have a sustained, well-developed teaching and learning infrastructure, where good teaching and learning are clearly defined and consistently supported. Higher-education institutions should develop an organization-wide commitment to investing in teacher education. There must be institutional support of faculty who work with UTRs – most commonly indicated through providing time to teach the courses and valuing their contributions in the university tenure decision-making process. Finally,

participating nonprofit organizations must have the expertise to lead teacher education efforts, including staff who have the necessary content knowledge to help build teaching and learning programs. Nonprofit leaders need to understand the values, culture, and interests of each partner.

2. *Identify high-quality schools and classrooms in which to prepare residents.*

Districts must have a sufficient number of schools at all levels in which the culture is collaborative and collegial for adults; that are encouraging and supportive of all students' learning; and in which there is a constant focus on learning and continuous improvement. Setting high expectations is a critical component to ensure a quality UTR.

3. *Define clear standards for high-quality teaching and support teachers' progress toward meeting those standards.*

An effective and sustainable UTR depends on having in place clear standards for high-quality teaching that are consistent with or identical to the district's standards for all teachers. A centerpiece of both BTR's and AUSL's programs is a set of standards for teachers and common expectations for what high-quality teaching looks like. These standards, drawn from emerging research on teacher effectiveness, should drive the curriculum design of the UTR and the recruitment, selection, support, and evaluation of residents, mentors, and school-based program staff.

4. *Develop teacher leaders and expand career options.*

UTRs, by design, introduce a variety of teacher leadership roles: mentoring residents, coordinating the work of school-based clusters of mentors and residents, and teaching UTR

coursework. Developing teacher leaders allows districts to spread teaching expertise and keep its best educators. In doing so, UTRs can strengthen teacher preparation for universities and school districts. However, districts and universities face significant challenges as well as opportunities. For example, UTRs must press districts to cluster cohorts of new teachers, and recruitment and placement efforts should focus more on teams of teachers with key teacher leaders rather than on individuals.

5. *Collect evidence to improve programs and build political will.*

UTRs, like a number of other higher-education-based and alternative programs, are beginning to assemble evidence on the effects of their programs on teacher retention and student achievement. These data will be critical for improving their efforts and attracting the support of policy-makers, practitioners, and the public. UTRs must be able to clearly define whom they attract, how residents are prepared, where they teach, and how effective they are in helping students learn. UTRs also



need to demonstrate more clearly the cost-effectiveness of their programs – in terms of both student learning and teacher retention.

6. *Determine how UTRs can play a broader role in strengthening a district's human capital system.*

In Chicago, AUSL has begun to manage turnaround schools and create the conditions where their residents can effectively learn and thrive. As one of many organizations that partners with this large and fairly decentralized district to manage turnaround schools, AUSL has deep involvement in and impact on this subset of schools but limited impact on districtwide strategy. In Boston, on the other hand, BTR partnered with the central office to inform and shape district policies and practices, identifying system barriers and bringing to scale some of BTR's most promising practices. The choice of how the UTR can best engage with and impact the district depends, of course, on district context and needs and the capacities within the UTR.

Urban districts have a portfolio of pathways into teaching. Districts should take steps to actively manage the portfolio to gain the mix of talent that best meets district needs in the most cost-effective way possible.

Policy Implications

Ensuring that UTRs succeed will require some changes in district, state, and federal policy.

Demanding High Standards

State and local policy-makers should hold all preparation pathways to the same quality assurance standards. Investments in new-teacher performance assessments would allow recruits – regardless of the pathway they choose – to demonstrate, upon completion, that they are prepared to teach. At the same time, policy-makers should be willing to pay them more than other recruits – and even *substantially* more if they are effective and continue teaching for more than five years.

Creating Financial Incentives

Policy-makers should target available teacher preparation funding to providers who are best able to respond to high-needs school districts. At the federal level, the Teaching Residency Act, recently authorized as part of the Higher Education Act, is a step in this direction. State policy-makers should work to ensure that state investments in teacher education are producing teachers prepared and committed to teach in the state's high-needs schools. States may take different routes to this policy goal, but creating competition, accountability, and incentives to prepare teachers for specific state and district needs is essential. Local policy-makers can allocate more salary dollars to high-needs schools with high proportions of new teachers. These schools would then have funds to pay residents' stipends and mentors to support them.

Managing a Portfolio of Pathways

Increasingly, urban districts have a portfolio of pathways into teaching, and UTRs are a potentially valuable addi-

tion to this portfolio. Districts should take steps to actively manage the portfolio to gain the mix of talent that best meets district needs in the most cost-effective way possible. To accomplish this, district administrators should develop metrics to assess new teachers' performance and retention, report data by preparation source and cost to the district, forecast teacher workforce needs, and use this information to guide decisions about which programs to support. Districts and preparing institutions should communicate findings to policy-makers, teaching candidates, and the public that ultimately funds their human capital systems.

In Closing

The power and potential of UTRs lies in their commitment to address the real teacher supply and quality needs of school districts; leverage the best K–12 educators as mentors and teacher educators in preparing the next generation of teachers; and promote redesigned schools organized for students and teachers to learn. These commitments are simultaneously basic and revolutionary. They are not proprietary to UTRs; they are not new. But UTRs offer a model that can expand the vision for recruiting, preparing, and retaining quality teachers for urban schools.

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The Role of Unions in Promoting Teacher Quality

Richard D. Kahlenberg

The expected transition in national union leadership provides an opportunity to consider ways that teachers unions can play constructive roles in improving teacher quality.

This summer, the nation's two major teachers unions, the National Education Association (NEA) and the American Federation of Teachers (AFT), changed leadership. The NEA's Dennis Van Roekel replaced president Reg Weaver, and the AFT's Randi Weingarten replaced Edward J. McElroy. The transitions provide a good opportunity to step back and rethink the role of unions in increasing teacher quality.

Critics see unions as an unproductive force in education, generally, and in teacher quality issues, particularly. At the 1996 Republican National Convention, in his acceptance speech, Bob Dole famously said he had no quarrel with teachers, but he thundered at teachers unions: "If education were a war, you would be losing it. If it were a business, you would be driving it into bankruptcy. If it were a patient, it would be dying." He continued: "And to the teacher unions I say, when I am president, I will disregard your political power, for the sake of the parents, the children, the schools, and the nation." More recently, at a December 2007 Republican presidential debate in Iowa, candidates fell over one another attacking teachers unions. Mitt Romney, for example, called teachers unions "the

biggest obstacle to change in education." The main critique on teachers' quality issues is that unions protect incompetent teachers and block proposals to reward good ones.

At their best, however, as the collective voice of teachers, democratically elected union leaders should be at the forefront of promoting higher teacher quality. Under the leadership of the legendary AFT president Albert Shanker, for example, the AFT unleashed numerous proposals that cut against traditional orthodoxy in an attempt to turn teaching from mere occupation into a true profession. With polling data suggesting that younger teachers today are particularly interested in ways that unions can improve educational quality, it may be time for a resurgence of union leadership in this area (Duffett et al. 2008).

A good touchstone for reform today is a vision Al Shanker laid out in an April 1985 speech, "The Making of a Profession." There, Shanker provided a conceptual framework that tied together a number of educational reforms – better teacher pay, a national

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teacher test, differential teacher pay, and peer review – under a rubric of teacher professionalism. In the speech, Shanker outlined a classical definition of what it meant to be a professional and urged steps to make teaching more like medicine and law. A professional receives a liberal arts education, then specialized training, and must pass a rigorous exam before beginning to practice. She participates in an internship, is guided by mentors, and participates in reviewing the performance of colleagues. Once these professional responsibilities are met come the reciprocal set of rights: greater autonomy and higher compensation.

In this article, I suggest that the new leadership of the NEA and AFT could boost teacher quality by pushing efforts in four areas:

- raise the wages and benefits of teachers and the status of the profession
- support a rigorous exam for entry into the profession
- support innovative types of performance pay and career ladders that will lure good teachers into the profession and keep them in the classroom
- support efforts to remove inadequate teachers from the profession through teacher peer review

Raising Wages, Benefits, and Status

To attract and retain great teachers, unions need to fulfill their essential function of bargaining for better wages and benefits and policies that result in greater dignity for teachers. While boosting wages and benefits is not often thought of as part of the teacher quality agenda – indeed, unions are

denounced as blue-collar organizations that undercut professionalism – in fact, teachers unions have been critical to reducing mistreatment of teachers by principals and ensuring appropriate compensation. Albert Shanker told teachers, “A professional is an expert and, by virtue of his or her expertise, is relatively unsupervised. And you are constantly supervised and told what to do” (Kahlenberg 2007, p. 43).

The evidence clearly suggests that teachers unions have increased teacher salaries and fringe benefits above what they would have been in the absence of collective bargaining (Stone 2000). In addition, teachers unions appear to have reduced turnover, not only by boosting pay, but by giving all employees a voice and a remedy other than simply exiting the profession altogether. In some measure because of collective bargaining, between 1961 and 2001 the average annual salary of public





school teachers (in current dollars) rose from \$5,264 to \$43,262 (U.S. Department of Education 2003).

Having said that, unions need to do an even better job of winning pay increases to attract excellent talent to the teaching profession. According to a new study by Lawrence Mishel, Sylvia Allegretto, and Sean Corcoran (2008), teachers make 14.3 percent (\$154 a week)¹ less than people in occupations with similar educational and skill levels – “accountants, reporters, registered nurses, computer programs, members of the clergy, and personnel officers.” Until the basic laws of supply and demand are suspended, unions will need to push for higher wages in order to attract highly qualified candidates. This is not unprofessional; it’s an essential ingredient to raising the caliber of the profession.

¹ Measuring weekly pay accounts for the fact that teachers have summers off.

Rigorous Preparation and Entry-Level Exams

A second plank in Albert Shanker’s teacher professionalization platform – still unrealized today – was the imposition of a rigorous national exam for new teachers. Shanker said the national teacher exam would help professionalize teaching, making teachers more like doctors and lawyers, who must pass rigorous licensing examinations. In a January 1985 address, Shanker noted that the existing system of state-by-state teacher standards, supported by the NEA, was not working. Several states did not even have tests and, while many of the rest used the Educational Testing Service’s National Teachers Examination, each state set its own passing score. Shanker said the existing standards “would be considered a joke by any other profession.” He said a Florida test for math teachers required only a sixth-grade proficiency. “That’s equivalent to licensing a doctor on the basis of elementary biology” (Kahlenberg 2007, pp. 294–296).

While most of the reaction to Shanker’s call for a tough national teaching exam was very positive and some states moved in the right direction, Shanker’s call for a rigorous national test was never enacted, and far more rigor is still needed.²

Rewarding Talent and Keeping Great Teachers in the Profession

Shanker’s third point was that teachers unions need to be open to the idea of “merit pay,” or “pay for performance,” so long as it is properly

² Lee Shulman, president of the Carnegie Foundation for the Advancement of Teaching, in e-mail correspondence with the author, August 23, 2006.

structured. Advocates of performance pay appropriately argue that in order to attract and retain high-quality teachers, school officials should be allowed to pay higher salaries to exceptional teachers. Without that option, talented candidates might not enter teaching in the first place and extraordinary teachers are likely to leave. Because teachers reach their top salary level by their mid-thirties, precisely when people in other professions see their salaries take off, the main way to increase one's salary is to move into administration.

Traditional merit pay schemes have often failed, however – in part, because they didn't identify talent fairly. Merit pay plans in which principals made the judgments were subject to abuse. Principals might reward “obedient” teachers rather than the best ones. Such plans simply increased the power of supervisors, Shanker noted, “reminding the employee of his dependence on management for rewards” (Kahlenberg 2007, p. 281). Likewise, there was the question of principal competence. Would a principal who formerly taught physical education know what makes for a good French teacher?

The second major problem with traditional plans was that they usually involved dividing a fixed pot of money. By making teachers compete with one another, merit pay plans discouraged collaboration among teachers and the sharing of effective lessons.

In July 1985, Shanker proposed a system to get around both problems – the National Board for Professional Teaching Standards (NBPTS) – to provide teachers board certification, akin to doctors, and the possibility of extra pay. Based on an idea proposed a quarter century earlier by academic Myron Lieberman, Shanker called for the creation of a series of new national

boards, made up largely of teachers and set up in different areas of the curriculum, like math and science and history, to certify excellent teachers who passed a rigorous test and other evaluations. Local school boards and states would then have an incentive to pay board-certified teachers salary premiums. A national board, using objective criteria, would avoid the problems of favoritism that plagued traditional merit pay schemes. And because there were no fixed quotas limiting who could qualify, national board certification would not pit teachers against one another and discourage cooperation the way many merit pay schemes did. While controversial at the time, the national board is now widely accepted.

Today's union leaders, faced with the question of whether gains in student test scores might be an appropriate basis for pay bonuses, should look to the national board as precedent. Rather than rejecting the idea of performance pay outright – claiming any measure will be flawed – union leaders should

In order to attract and retain high-quality teachers, school officials should be allowed to pay higher salaries to exceptional teachers. Without that option, talented candidates might not enter teaching in the first place and extraordinary teachers are likely to leave.

engage in the hard work of finding measurements that are fair and accurate. In the case of the national board, its sixty-three members – two-thirds of whom were teachers or educators – worked a year and a half to identify “what teachers should know and be able to do.” Says former NBPTS president Jim Kelly, “It had to be invented each step. It had never been done before anywhere in the world” (Kahlenberg 2007, pp. 298–302). Union leaders today should be equally engaged in finding ways to identify accurate methods of rewarding teachers who boost test scores.



Likewise, the NBPTS’s avoidance of a strict quota that discouraged teacher cooperation should be a model for proposed performance pay schemes. Another way to ensure that pay for performance encourages cooperative behavior is to bestow bonuses for collective schoolwide gains. In New York City, for example, teachers in a school that raises achievement are provided extra rewards, a system that gives a strong incentive for teachers to share

good ideas, because everyone’s pay depends upon the performance of the school as a whole.

Weeding Out Bad Teachers

Finally, teachers unions should be champions of finding fair and responsible ways to get rid of bad teachers. Critics have complained that the system of tenure, backed up by union lawyers, makes it virtually impossible to fire bad teachers once they have passed the probationary period (usually after three years). In New York City, for example, critics complain that firing a teacher requires a principal to document inadequacies for six months and then sit through union grievance proceedings that can last for years. Critics say teachers are fired much less often than employees in the private sector, in part because it cost six figures to terminate a teacher’s employment (Toch 1996; Stern 2003; Brimelow 2003). Union leaders need to respond to these concerns and to concede – as Albert Shanker did – that teacher incompetence is a significant problem.

What is to be done? Abolishing tenure entirely makes little sense. Given the low pay provided teachers, tenure is an important tool for attracting good-quality teachers. More fundamentally, tenure is essential to protecting academic freedom and avoiding politicization of the profession. Under tenure, as Al Shanker noted, “an elected politician can’t say, ‘I’m going to fire you because you didn’t support me in the last election.’” Likewise, tenure protects against districts firing senior teachers and hiring younger, cheaper ones in lean

Shanker argued that teachers needed to come up with a way of weeding out bad teachers. “Either we are going to have to say that we are willing to improve the profession ourselves or the governors are going to act for us.”

times. If teachers did not have tenure, they might have an incentive to give students good grades for fear that a bad grade might trigger an effort by parents to fire them. Due process – the right to know why a discharge is being sought and the right to have the issue decided by an impartial body – should be guaranteed before someone’s employment is terminated (Kahlenberg 2007, p. 283).

If eliminating tenure is out of the question and defending teacher incompetence is equally intolerable, is there a third way? In 1984, Shanker embraced an explosive one, still little used today: peer review. First used in Toledo, Ohio, peer review involves master teachers reviewing new and veteran colleagues, providing assistance, and, in some cases, recommending termination of employment for colleagues. Under the plan, the brainchild of union president Dal Lawrence, Toledo set up a nine-member advisory board (consisting of five teachers and four administrators) to make decisions on assisting and, if necessary, terminating the employment of new and veteran teachers. Six votes were required for action.

Some AFT officials objected that the union should not be involved in evaluating and firing its own members. Under traditional labor-management

relations, there is a bright line between workers and supervisors to avoid dual loyalties. But Shanker argued that if teachers wanted to protect basic tenure rights, they needed to come up with a way of weeding out bad teachers. According to Shanker, “Either we are going to have to say that we are willing to improve the profession ourselves or the governors are going to act for us.”

But peer review was not merely a defensive measure to preserve tenure, Shanker argued. It was a way of advancing professionalism. Peer review and assistance was common among professors, doctors, and lawyers, who police themselves, he said, and it would make teachers unions more like craft guilds, which have apprenticeship and job placement programs. Peer review would also strengthen the case for teacher involvement in other areas, like textbook selection and curriculum development. If teachers implied that only administrators were smart enough to be able to determine who is a good teacher, that undercut the argument that teachers should be involved in these other areas, Shanker said. Finally, Shanker argued, teachers have a strong self-interest in favoring a system that

weeds out substandard colleagues. “Teachers have to live with the results of other people’s bad teaching – the students who don’t know anything,” he wrote.

In fact, for that reason, peer review has led to more dismissals than had occurred when administrators were in charge. In Cincinnati, which was the second city in the country to adopt peer review, 10.5 percent of new teachers were found less than satisfactory by teacher reviewers, compared with 4 percent by administrators, and 5 percent were recommended for dismissal by teachers, compared with 1.6 percent of those evaluated by principals. The same has been true in other cities (Kahlenberg 2007, pp. 284–288).

Yet, nationally, the plans have come under attack from both management and the NEA. In Rochester and Cincinnati, school principals sought to end peer review, in part because peer review encroaches on the prerogatives of management and in part because it is expensive to invest in serious evaluation and development of teachers. In Ohio, the NEA sought to scuttle Toledo’s plan in the state legislature. Today, only about 50 or 60 of 14,000 school districts employ peer review (Toch & Rothman 2008). Lawrence acknowledges that the program is

“still in its infancy stage.” As scholars Charles Kerchner, Julia Koppich, and Joseph Weeres (1997) note, peer review started “with a flurry of interest, and then [did] not spread” (p. 4).

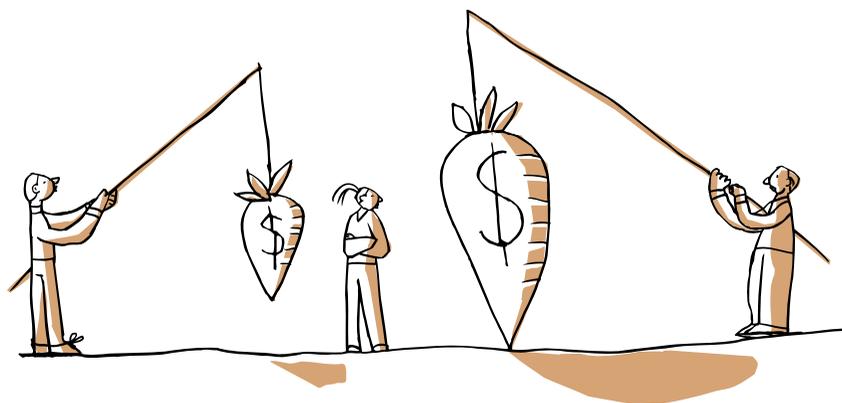
Today, new union leadership needs to revive the idea. The leading complaint against teachers unions today is that they protect incompetents, and peer review provides a sensible response that enhances the professionalization of teaching.

A Clear Choice

Teachers unions are at a crossroads, and the new leadership is faced with a clear choice: muddle along with current policies, or recapture the innovative spirit of Albert Shanker, who *Education Week* said ran the AFT as much like a think tank as a union (Bradley 1997). With research confirming that teachers have an enormous influence on student achievement, the stakes could not be higher.

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Avoiding a Rush to Judgment: Teacher Evaluation and Teacher Quality

Thomas Toch and Robert Rothman

Comprehensive methods of evaluating teachers that avoid the typical “drive-by” evaluations can promote improvements in teaching.

The troubled state of teacher evaluation is a glaring and largely neglected problem in public education, one with consequences that extend far beyond the current debate over performance pay. Because teacher evaluations are at the center of the educational enterprise – the quality of teaching in the nation’s classrooms – they are a potentially powerful lever of teacher and school improvement. But that potential is being squandered throughout public education, an enterprise that spends \$400 billion annually on salaries and benefits.

The task of building better evaluation systems is as difficult as it is important. Many hurdles stand in the way of rating teachers fairly on the basis of their students’ achievement, the solution favored by many education experts today. And it’s increasingly clear that it’s not enough merely to create more-defensible systems for rewarding or removing teachers. Teacher evaluations pay much larger dividends when they also play a role in improving teaching.

This article explores the causes and consequences of the crisis in teacher evaluation. And it examines a number

of national, state, and local evaluation systems that point to a way out of the evaluation morass. Together, they demonstrate that it’s possible to evaluate teachers in much more productive ways than most public schools do today.

Drive-Bys

It’s hard to expect people to make a task a priority when the system they are working in signals that the task is unimportant. That’s the case with teacher evaluation.

Public education defines teacher quality largely in terms of the credentials that teachers have earned, rather than on the basis of the quality of the work they do in their classrooms or the results their students achieve.

It’s not surprising, then, that measuring how well teachers teach is a low priority in many states. The nonprofit National Council on Teacher Quality (NCTQ) reports that, despite many calls for performance pay coming from state capitals, only fourteen states require school systems to evaluate their public school teachers at least once a year, while some are much more lax than that. Tennessee, for example, requires evaluations of tenured teachers only twice a decade (NCTQ 2007a).

Thomas Toch is co-director of Education Sector. Robert Rothman is senior editor at the Annenberg Institute for School Reform. They are co-authors of Rush to Judgment: Teacher Evaluation in Public Education (Washington, DC: Education Sector, 2008), from which this article is excerpted by permission.

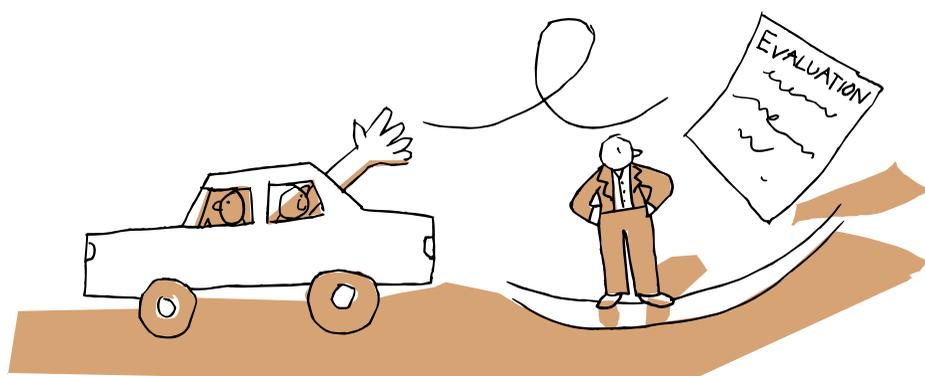
An NCTQ analysis of the teacher contracts in the nation's fifty largest districts (which enroll 17 percent of the nation's students) suggest that not much teacher evaluation is enshrined in local regulations, either. Teachers union contracts dictate the professional requirements for teachers in most school districts. But the NCTQ study found that only two-thirds of them require teachers to be evaluated at least once a year and a quarter of them require evaluations only every three years (NCTQ 2007b).

The evaluations themselves are typically of little value – a single, fleeting classroom visit by a principal or other building administrator untrained in evaluation wielding a checklist of classroom conditions and teacher behaviors that often don't even focus directly on the quality of teacher instruction. "It's typically a couple of dozen items on a list: 'Is presentably dressed,' 'Starts on time,' 'Room is safe,' 'The lesson occupies students,'" says Michigan State University professor Mary Kennedy, author of *Inside Teaching: How Classroom Life Undermines Reform*, who has studied teacher evaluation extensively. "In most

instances, it's nothing more than marking 'satisfactory' or 'unsatisfactory.'"

It's easy for teachers to earn high marks under these capricious rating systems, often called "drive-bys," regardless of whether their students learn. Raymond Pecheone, co-director of the School Redesign Network at Stanford University and an expert on teacher evaluation, suggests by way of example that a teacher might get a "satisfactory" check under "using visuals" by hanging up a mobile of the planets in the Earth's solar system, even though students could walk out of the class with no knowledge of the sun's role in the solar system or other key concepts. These simplistic evaluation systems also fail to be remotely sensitive to the challenges of teaching different subjects and different grade levels, adds Pecheone.

Unsurprisingly, the results of such evaluations are often dubious. Donald Medley of the University of Virginia and Homer Coker of Georgia State University reported in a comprehensive 1987 study, "The Accuracy of Principals' Judgments of Teacher Performance," that the research up



to that point found the relationship between the average principal's ratings of teacher performance and achievement by the teachers' students to be "near zero."

Principals fared better in a recent study by Brian Jacob of Harvard's Kennedy School of Government and Lars Lefgren of Brigham Young University (2005) that compared teacher ratings to student gains on standardized tests. Principals were able

produced "unsatisfactory" ratings, while 93 percent of the city's 25,000 teachers received top ratings of "excellent" or "superior."

And principals use evaluations to help teachers improve their performance as rarely as they give unsatisfactory ratings. They frequently don't even bother to discuss the results of their evaluations with teachers. "Principals are falling prey to fulfilling the letter of the law," says Dick Flannery, director of professional development for the National Association of Secondary School Principals, a principals' membership organization. "They are missing the opportunity to use the process as a tool to improve instruction and student achievement."

New Models

A small number of local, state, and national initiatives have sought a different solution to drive-by evaluations – comprehensive evaluation systems that measure teachers' instruction in ways that promote improvement in teaching.

The Teacher Advancement Program (TAP) is a good example. Launched by the Milken Family Foundation in 1999 and now operated by the nonprofit, California-based National Institute for Excellence in Teaching, TAP is a comprehensive program to strengthen teaching through intensive instructional evaluations, coaching, career ladders, and performance-based compensation. It's now in 180 schools with 5,000 teachers and 60,000 students in five states and the District of Columbia.

Principals use evaluations to help teachers improve their performance as rarely as they give unsatisfactory ratings. They frequently don't even bother to discuss the results of their evaluations with teachers.

to identify with some accuracy their best and worst teachers – the top 10 or so percent and the bottom 10 or so percent – when asked to rate their teachers' ability to raise math and reading scores.

But principals don't put even those minimal talents to use in most public school systems. A recent study of the Chicago school system by the nonprofit New Teacher Project (2007), for example, found that 87 percent of the city's 600 schools did not issue a single "unsatisfactory" teacher rating between 2003 and 2006. Among that group of schools were sixty-nine that the city declared to be failing educationally. Of all the teacher evaluations conducted during those years, only 0.3 percent

Standards for Teaching

TAP measures teaching against standards in three major categories – designing and planning instruction, the learning environment, and instruction – and nineteen subgroups targeting things like how well lessons are choreographed, the frequency and quality of classroom questions, and ensuring that students are taught challenging skills like drawing conclusions.

Schools using TAP evaluate their teachers using a rubric that rates performance as “unsatisfactory,” “proficient,” or “exemplary.” Standards and rubrics such as TAP’s “create a common language about teaching” for educators, says Katie Gillespie, a fifth-grade teacher at DC Preparatory Academy, a District of Columbia charter school in its third year of using TAP. “That’s crucial,” says Gillespie.

Connecticut’s Beginning Educator Support and Training Program (BEST), the nation’s first – and, until recently, only – statewide evaluation system, draws heavily on the state’s teachers in drafting standards.

The Connecticut Department of Education established BEST in 1989 to strengthen its teaching force by supplying new teachers with mentors and training and then requiring them in their second year to submit a portfolio chronicling a unit of instruction. The unit needs to involve at least five hours worth of teaching, to capture how teachers develop students’ understanding of a topic over time, something “drive-by” evaluations can’t and don’t do.

State-trained scorers evaluate the portfolios from four perspectives – instructional design, instructional implementation, assessment of learning, and teachers’ ability to analyze teaching and learning – using four standards: conditional, compe-

tent, proficient, and advanced. The state established committees of top Connecticut teachers to draft the standards, which were circulated to hundreds of teachers, administrators, and higher-education faculty members for comment.

The nonprofit National Board for Professional Teaching Standards also has sponsored a large-scale system of teacher evaluations. It has conferred advanced certification in sixteen subjects on some 63,000 teachers nationwide since its inception in 1987, using a two-part evaluation: candidates submit a Connecticut-like portfolio and complete a series of half-hour online essays.

Teams of teachers from around the country draft standards in each certification area, and hundreds of teachers, administrators, and state and federal officials comment before the standards are finalized. The Educational



Comprehensive models capture a much richer picture of a teacher’s performance. The National Board portfolios include lesson plans, instructional materials, student work, two twenty-minute videos of the candidate working with students in classrooms, teachers’ written reflections on the two taped lessons, and evidence of work with parents and peers.

Testing Service (ETS) manages the evaluation system under a contract with the National Board.

Multiple Measures

While traditional evaluations tend to be one-dimensional, relying exclusively on a single observation of a teacher in a classroom, the comprehensive models capture a much richer picture of a teacher’s performance.

The National Board portfolios, for example, include lesson plans, instructional materials, student work, two twenty-minute videos of the candidate working with students in classrooms, teachers’ written reflections on the two taped lessons, and evidence of work with parents and peers. That’s on top of the six online exercises that National Board candidates take at one of 400 evaluation centers around the country to demonstrate expertise in the subjects they teach.

In total, National Board candidates spend between 200 and 400 hours demonstrating their proficiency in five areas: commitment to students’ learning, knowledge of subject and of how to teach it, monitoring of student

learning, ability to think systematically and strategically about instruction, and professional growth.

An advantage of portfolios is that, unlike standardized-test scores, they can be used to evaluate teachers in nearly every discipline. National Board certification is open to some 95 percent of elementary and secondary teachers.

Teamwork

Another way to counter the limited, subjective nature of many conventional evaluations is to subject teachers to multiple evaluations by multiple evaluators.

In schools using TAP, teachers are evaluated at least three times a year against TAP’s teaching standards by teams of “master” and “mentor” teachers that TAP trains to use the organization’s evaluation rubrics (master teachers are more senior and do less teaching than mentors). Schools combine the scores from the different evaluations and evaluators into an annual performance rating.

TAP evaluators must demonstrate an ability to rate teachers at TAP’s three performance levels before TAP lets them do “live” teacher evaluations. Then TAP requires schools using the program to enter every evaluation into a TAP-run online Performance Appraisal

Management System that produces charts and graphs of evaluation results, which are used to compare a school's evaluation scores to TAP evaluation trends nationally. And every year TAP ships videotaped lessons to evaluators that they must score accurately using TAP's performance levels as a prerequisite for continuing as TAP evaluators.

In Connecticut, every BEST portfolio is scored using the program's standards by three state-trained teacher-evaluators who teach the same subject as the candidate. Failing portfolios are rescored by a fourth evaluator. As in the TAP program, scorers must complete nearly a week's worth of training and demonstrate an ability to score portfolios accurately before participating in the program.

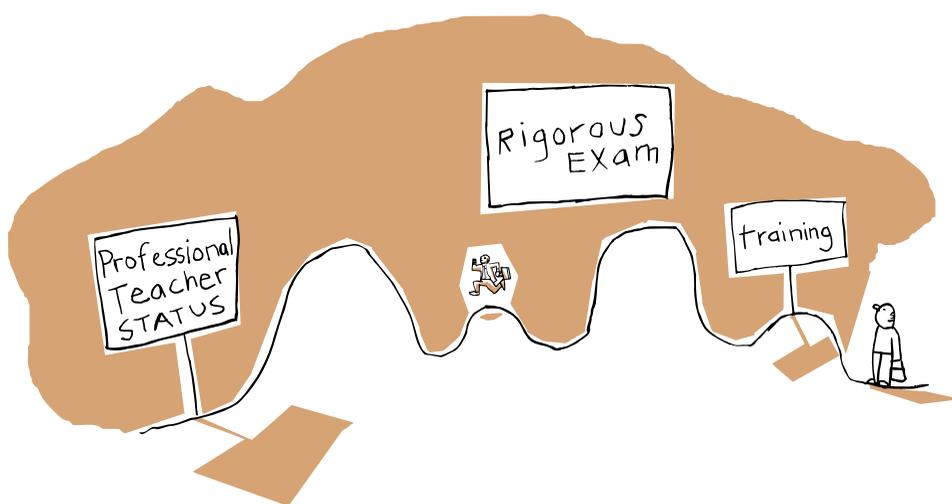
Not surprisingly, using evaluators with backgrounds in candidates' subject and grade levels, as TAP and BEST do, strengthens the quality of evaluations. "Good instruction doesn't look the same in chemistry as in elementary reading," says Mike Gass, executive director of secondary education in Eagle County, Colorado, where the district's fifteen schools use TAP.

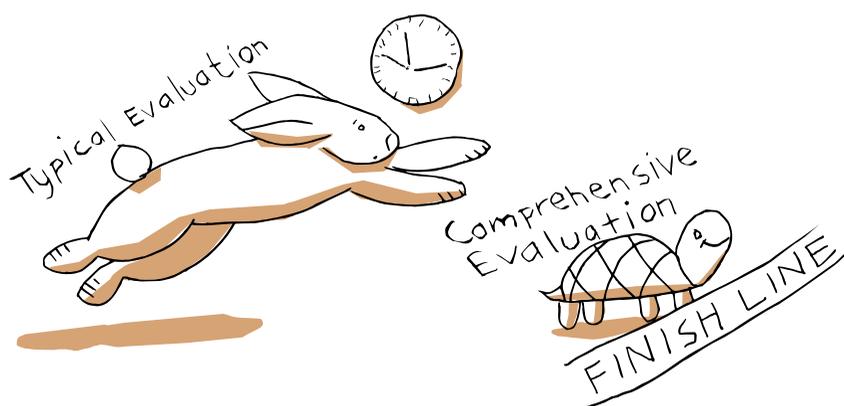
Under traditional evaluations – done as they are by principals or assistant principals – it's rarely possible to use evaluators with backgrounds in the candidate's teaching area, especially at the middle and high school levels, where teachers typically teach only one subject. Many evaluations, as a result, focus on *how* teachers teach, at the expense of *what* they teach. Evaluators, writes Michigan State's Kennedy, "are rarely asked to evaluate the accuracy, importance, coherence, or relevance of the content that is actually taught or the clarity with which it is taught" (Kennedy 2007).

Subject-area and grade-level specialists, scoring rubrics, evaluator training, and recertification requirements like TAP's increase the "inter-rater reliability" of evaluations. They produce ratings that are more consistent from evaluator to evaluator and that teachers are more likely to trust.

Places to Grow

Unlike traditional teacher evaluations, these systems are part of programs to improve teacher performance, not merely weed out bad apples. They are





drive-in rather than drive-by evaluations. At a time when research is increasingly pointing to working conditions as being more important than higher pay in keeping good teachers in the classroom, the teachers in the comprehensive evaluations programs say that the combination of extensive evaluations and coaching that they receive helps make their working conditions more professional, and thus more attractive.

At DC Preparatory Academy, which serves 275 middle school students in northeastern Washington, D.C., using evaluations to strengthen teaching is part of the fabric of the school. The school opened in 2003 and brought on TAP in 2005. And in the TAP model, a key role of evaluations by master and mentor teachers is identifying the teachers' weaknesses that mentors will work on with teachers during the six weeks between evaluations.

"I felt I was a really good teacher before I got here," says Gillespie, in her second year at DC Prep after spending four years teaching in nearby Fairfax County, Virginia. "I got really high marks on my evaluations [in Fairfax]. But holy moly, I've learned under TAP that I've got a lot of places to grow." Some studies have suggested that

teachers' performance plateaus after several years in the classroom. But few teachers in public education get the sort of sophisticated coaching that Gillespie receives under TAP; if more did, perhaps studies would reveal that their performance continued to improve.

"It makes a difference when people are constantly there to help you," adds Gillespie's colleague, seventh-grade English teacher Geoff Pecover. "The expectations are high. My principal last year in DCPS [the District of Columbia Public Schools, where Pecover taught for three years] showed up to evaluate my class with the evaluation form already filled out, and the post-conference was a waste of time. You didn't feel like you were learning anything."

To further strengthen the relationship between evaluation and instruction, TAP requires schools to have weekly, hour-long "cluster" meetings where master/mentor teachers work with teams of teachers of a particular subject or grade level.

Cost Factors – Time and Money

Not surprisingly, comprehensive classroom evaluation systems are more time-consuming and more expensive than once-a-year principal evaluations or evaluations based only on student test scores.

In schools with complex models like TAP's, the administrative challenges of training and retraining evaluators, conducting classroom visits, and tying the evaluation system to teacher professional development activities are daunting. "We didn't realize how demanding it was," says Natalie Butler, DC Prep's principal. "You just have to make the investment."

TAP and other comprehensive evaluation models also are a lot more demanding on teachers under evaluation. The upward of 400 hours some candidates for National Board certification spend in that process suggests as much, and the demands are even greater on teachers facing multiple evaluations and follow-up work under programs like TAP. "The typical teacher evaluation process puts teachers in a passive role," says Catherine Fiske Natale, a Connecticut official with the state's BEST program. "This is different." But it is not unprecedented, at least by international standards. Researchers Shujie Liu of the University of Southern Mississippi and Charles Teddlie of Louisiana State University (2005) report in a study of Chinese teacher evaluation practices that Chinese teachers are expected to observe the classes of other teachers as many as fifteen times a semester and write a 1,500-word essay every semester on some aspect of their teaching experience.

At \$1,000 per teacher, it would cost \$3 billion a year to evaluate the nation's three million teachers using a

Connecticut- or National Board-like portfolio or TAP's multiple evaluations –multiple evaluators model. By way of contrast, public education's price tag has surpassed \$500 billion a year, including some \$14 billion (about \$240 per student) for teachers to take "professional development" courses and workshops that teachers themselves say don't improve their teaching in many instances.

Yet many school systems have been reluctant to use these resources on comprehensive evaluation systems such as TAP's. "It is really difficult to get them to use Title II monies," says Kristan Van Hook, TAP's senior vice president for public policy and development, referring to the section of NCLB that funnels some \$3 billion in teacher-improvement grants to the nation's school systems. "They are very reluctant to change how they spend that money. It's tied up in things like salaries for reading tutors and class-size reduction."

Sending a Message

Comprehensive evaluations – with standards and scoring rubrics and multiple classroom observations by multiple evaluators and a role for student work and teacher reflections – are valuable

Comprehensive evaluations are valuable regardless of the degree to which they predict student achievement. They contribute much more to the improvement of teaching than today's drive-by evaluations.

regardless of the degree to which they predict student achievement, and regardless of whether they're used to weed out a few bad teachers or a lot of them. They contribute much more to the improvement of teaching than today's drive-by evaluations or test scores alone. And they contribute to a much more professional atmosphere in schools.

As a result, they make public school teaching more attractive to the sort of talent that the occupation has struggled to recruit and retain. Capable people want to work in environments where they sense they matter, and using evaluation systems as engines of professional improvement signals that teaching is such an enterprise. Comprehensive evaluation systems send a message that teachers are professionals doing important work.

But superficial principal drive-bys will continue to pervade public education – and teacher evaluation's potential as a lever of teacher and school improvement will continue to be squandered – if school systems and teachers unions lack incentives to do things differently.

Ultimately, the single salary schedule may be the most stubborn barrier to better teacher evaluations. As Kate Walsh, president of the National Council on Teacher Quality and member-designate of the Maryland State Board of Education, says: "If there are no consequences for rating a teacher at the top, the middle, or the bottom, if everyone is getting paid the same, then why would a principal spend a lot of time doing a careful evaluation? I wouldn't bother." Many teachers unions, of course, argue that the failure of principals to take evaluations seriously requires a single salary schedule.

There's no simple solution to this Catch-22. But TAP, for one, has addressed it head-on by combining comprehensive evaluations that teachers trust with performance pay. The program's comprehensive classroom evaluations legitimize performance pay in teachers' minds, and its performance-pay component gives teachers and administrators alike a compelling reason to take evaluations seriously. Pay and evaluations become mutually reinforcing, rather than mutually exclusive.

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For further information

The publication from which this article is excerpted is available online at <www.educationsector.org/usr_doc/RushToJudgment_ES_Jano8.pdf>.

The Buffalo Science Teachers' Network: Providing Support, Improving Retention

Robin Lee Harris

A partnership between a university and a school system to strengthen science teaching through a teachers' network has resulted in a significant increase in teacher retention.

The Buffalo Science Teachers' Network (BSTN) grew out of a need for middle school science teachers in Buffalo Public Schools (BPS) to interact through professional development activities. They were isolated because of the structure of teaching in the fifty BPS K–8 elementary schools. Over the past eight years, BSTN has brought anywhere from sixteen to thirty-five science and special education teachers together on a regular basis, both in real time and virtually, to share ideas, work toward common goals, evaluate district data, plan for future progress, and pursue individual goals in an atmosphere of trust and respect.

BSTN provides support, nurturing, a sense of community, and incentives to increase retention of teachers in a high-turnover area – middle school science. Our retention efforts are rewarded: retention in BPS for middle school science teachers who participate in BSTN is 38 percent higher than for those who do not participate.

Robin Lee Harris is an associate professor of science education at Buffalo State College and project director of the Buffalo Science Teachers' Network.

The Development of a Network of Science Teachers

Before there was a network, three like-minded educators – an urban science director, a newly retired teacher, and a new college professor – met and identified local needs.

First, our local urban school district had a need for an environment that nurtured teachers at various stages of development and took them out of isolation from other science teachers. Their science director wanted an environment that supported growth and change – a place where mistakes could be made, with a mentor nearby who could help turn those mistakes into learning opportunities. Second, at our college, our science pre-service teacher candidates had few interactions with urban science teachers, except for traditional formal practices. And third, a new state science exam was being introduced in the eighth grade. Middle school students in grades five through eight needed to learn about inquiry, how to conduct experiments, how to perform a range of tasks. This was new and needed to be addressed in curriculum development and teacher development.

Goal Setting

Once our needs were discussed, a set of mutual goals was developed:

1. Enhance student achievement.
2. Infuse New York State Math, Science, and Technology (NYSMST) standards and assessments in all activities.
3. Coordinate efforts to meet the induction and/or professional development needs of the collaborating district.
4. Provide content and pedagogical instructional activities for pre-service and in-service teachers.
5. Incorporate principles of effective professional development.

Everyone in the network benefits as the objectives of these goals unfold. The urban teachers receive new ideas



and help in their classrooms from the mentor, pre-service teachers, and each other. The pre-service teachers who are introduced to the BPS curriculum have an opportunity to try out new skills in a low-risk environment. The BPS middle school students are provided with enrichment opportunities that help them complete their portfolio

projects and learn new science. The Buffalo State College (BSC – SUNY College at Buffalo) pre-service science teacher program benefits from the opportunities its candidates receive to practice the knowledge, skills, and dispositions on their personal road to teacher certification.

Teacher-Centered Professional Development

The BSTN project is dedicated to self-directed, goal-oriented professional development. Each member of the network decides on his or her needs and works with others with the same needs to enhance their teaching.

For example:

- Some in-service teachers are working on their master's degree and may use BSC higher-education faculty as mentors, guides, and instructors.
- Some in-service teachers with tenure act as cooperating teachers for BSC teacher candidates.
- Others mentor and pursue other professional development opportunities, such as attending and presenting at local, state, and national conferences.
- Some are conducting action research projects and are sharing their results with others at conferences and annual meetings.
- Some are working on their teaching skills through equity training.

Teacher-directed professional development is fulfilling to the teacher participants of our network. As one sixth-grade teacher put it, "BSTN provides opportunities for good professional development and to attend conferences, things I love to do!" A seventh/eighth-grade teacher stated:

I joined BSTN when I was very discouraged about my role as a seventh and eighth teacher, alone in an elementary school without technology! BSTN filled my needs with networking and technology and overall support.

Always with project goals in mind, especially that of improving student achievement, BSTN provides professional development opportunities, including mentoring and networking for all who interact within the network. Our network provides teachers, who otherwise might only see each other a couple of times a year at districtwide science meetings, with many opportunities to share and learn from each other. There is an extensive e-mail system, and partners work together on mutual projects. These interactions include after-school enrichment programs, outreach through science challenges such as *Science Olympiad* and *Urban Roots*, and opportunities for leadership, mentoring, research, travel, presentations, grant writing, and piloting new curriculum. Because of these many interactions, we can recruit, retain, and mentor teachers.

A sixth-grade teacher described the benefits in this way: “BSTN helps me to become and stay involved in BPS, and it helps me to recognize opportunities for students (and myself) to become involved in the community.” A seventh-grade teacher agreed. “BSTN offers the chance to have a role in mentoring young science teachers and in testing and implementing new teacher resources and curriculum.”

Successful Professional Development: Implementing Standards

The National Staff Development Council has created professional development standards in three areas; Context, Process, and Content. These standards form the basis of various state

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standards, as well as the standards of the National Council for Accreditation of Teacher Education¹ and the *National Science Education Standards* (National Research Council 1996).

The BSTN incorporates these standards into all of our project activities. In the area of Context, the *N* in BSTN means *Network*. We are an interactive learning community. We develop leaders through opportunities for all to:

- mentor and be mentored
- pursue research ideas for learning new skills, processes, and content
- lead others through presentations, workshops, and in the classroom

We share resources and materials. Some are purchased, but often we develop teaching materials during project meetings.

BSTN’s first goal, to “improve student achievement,” is central in following the Process and Content standards. In order to improve student achievement, we have to find out what our students know and can do. We analyze available test data. We have used state test data to drive our instruc-

¹ See the National Council for Accreditation of Teacher Education Web site at <www.ncate.org/public/standards.asp>.

Professional development in the form of long-term collaborative networks such as BSTN can provide a needed sense of belonging. The bond of connection between our partners is strong.

tional changes over the past five years. New York State's Intermediate Level Science Test is research based and designed to assess the science learned in grades five through eight.

Teachers in the network evaluate their school's progress and that of the district as a whole in order to determine *areas of challenge* for the next school year. Then, as a group, we develop lessons, activities, and even whole units to address these areas. We check the data the next year to assess our progress. When there is a need, teachers enhance their knowledge through instruction in content and pedagogy, often from each other. In the pursuit of enhancing achievement, the network taps into many local organizations where students can learn science.

Influences on Teacher Retention

Teacher retention is a serious problem, particularly in urban areas, and particularly in mathematics and science. Major losses to the profession occur at two points in teachers' careers: in the first five years of teaching, and at around twenty-five to thirty years of teaching. The late leavers are probably looking for a change, but what about those early leavers? According to a report prepared for the Education Commission of the States, those who leave tend to come from schools that have high numbers of low-income minority

students and academic low-achievers; are secondary schools; and are private and/or smaller schools (Guarino et al. 2004). Teachers also reported leaving schools where they felt that they did not have the support of the administration or any autonomy.

The same report identified four elements that may influence teacher retention: teacher preparation, nurturing, work environment, and financial incentives. Problems in any of these four elements can increase teacher turnover and create a financial loss to the district because of the need to recruit and train new teachers. When districts work to enhance each of the four elements, then teachers may stay, irrespective of local demographics. The BSTN has worked to be a positive influence in each of the four elements, and the data show that retention has improved.

Teacher Preparation

BSC's certification program includes three pre-student teaching methods courses. Students spend about half of their 100 field hours in these courses in BPS teachers' classrooms. Many of these teachers are affiliated with BSTN. Teacher candidates are introduced to the BPS middle school curriculum, which includes a middle school portfolio assessment that has been recently revised by BSTN teachers.²

² The thirteen portfolio items are available at <www.buffaloschools.org/ScienceDept.cfm?subpage=265>.

After completion of one or two quarters of student teaching in Buffalo, teacher candidates feel that they are ready for the challenge of teaching in an urban science classroom. They know what to expect and whom to ask for help. They have the content, instructional skills, and technological tools to be successful beginning teachers. Those who join BSTN receive three years of mentoring over and above what the BPS provides. This urban teacher mentoring program was initiated in 2001, and all of the beginning teachers that have been a part of this program continue to teach in BPS. We believe that this extra help in the early years contributes to retention.

Current BSTN statistics show that 53 percent of the thirty-eight teacher participants are graduates of BSC, nearly twice the percentage of BSC graduates among science teachers in BPS. We attribute this higher rate to the active recruitment of potentially successful urban science teachers from our recent program completers.

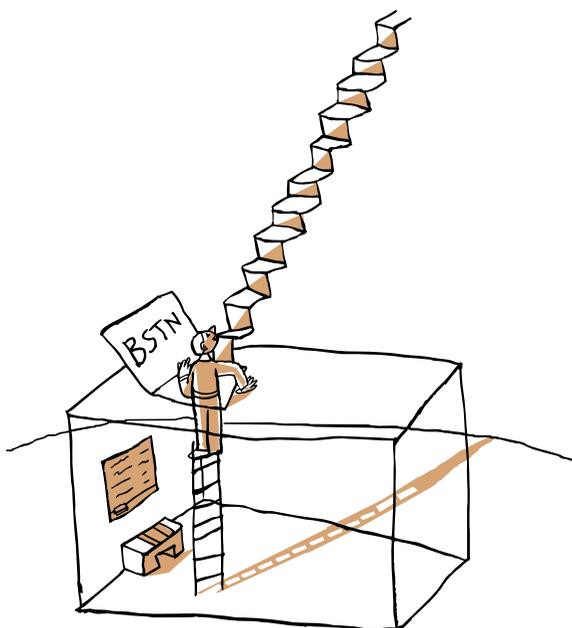
Our certification program also acts as a filter to those that might not be as successful in an urban setting. And we recruit prospective teachers: one of our student teaching seminars is dedicated to working locally after program completion. Yes, the science directors bring application packets!

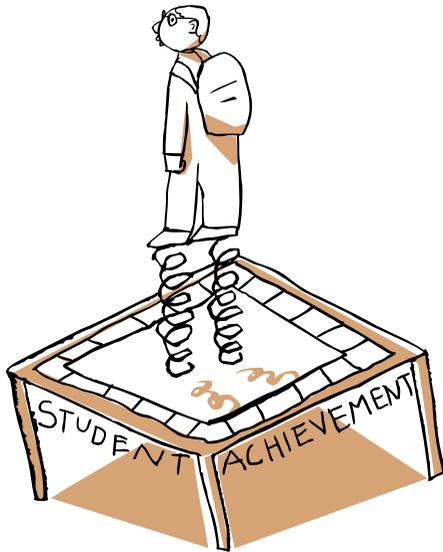
“I knew that I wanted to teach in Buffalo prior to BSTN,” a ninth-grade teacher said. “BSTN was a gift/blessing given to me as a result of my prior commitment to work with inner-city children.” A seventh/eighth-grade teacher added that the network provided a “great model for classroom management and inquiry lessons.”

Nurturing

Educational psychologists such as William Glasser and Abraham Maslow have shown that one of our basic human needs is to have a sense of belonging and to feel loved. If teachers have these needs satisfied, they are more likely to stay in teaching. Professional development in the form of long-term collaborative networks such as BSTN can provide this needed sense of belonging. Teachers feel able to express their passion and commitment to science education within a community of like-minded teachers. The bond of connection between our partners is strong. We nurture each other by respecting each other’s work. Our common goals make developing connections easier. When we work toward the achievement of common goals, each partner’s voice is listened to and each idea is vetted for use in our classrooms.

Summer institutes in BSTN have many activities proposed by members. In the last four summer institutes, more than 85 percent of the activities were facilitated by members; in





2005, all of the activities were member driven. We have embraced the idea that our local partners have the expertise to teach and share new ideas. We grow our own experts. This encourages others to seek new experiences that enhance the abilities of all partners and contribute to a sense of belonging.

“BSTN gives science teachers the confidence and ability to try new things,” a seventh-grade teacher said. Another said, “There is a great support system that makes teaching science easier.”

Work Environment

The work environment includes four areas of concern that need addressing in order to promote the retention of teachers. They are: *support*, *common vision*, *autonomy*, and *community*. The BSTN learning community addresses each of these four areas.

SUPPORT

Support comes both administratively and from the community of individuals who make up the school culture, including parents, students, teachers, staff, and administrators. In addition, the community at large needs to sup-

port teachers. There is nothing as disheartening as to read a newspaper article highlighting the latest problem in the local school. Teachers need to know that they have a backup when they are isolated in their classrooms day by day. In BSTN, the science director supports science activities and lets teachers know that they have support in many ways. This one person sometimes makes the difference between retaining or losing a teacher. She often does it just by listening.

COMMON VISION

All teachers have the common goal of improving student achievement, and all schools need to manifest this goal in a variety of ways. In each case, all members of the school community need to be involved in working toward this goal. It has to be more than banners in the hallways and a Friday inspirational assembly. BSTN aggressively pursues the vision/goal of improving student achievement. Partners work all year long on goals set at winter meetings to enhance student achievement during the year. From data collection to analysis to listing possible actions to the development of new lessons and approaches to collect new data, BSTN works as a team in eighteen different schools to make this happen.

AUTONOMY

Teachers by nature are leaders; it's what they do with 125 middle-level seventh- or eighth-graders, in five groups of about 25 each, every day for 185 days! They are also inventive, inspired, passionate, committed, and flexible. They do not like to be micro-managed. It makes them question their abilities. It takes up precious planning

time. In BSTN we work to mentor and help beginning teachers reach levels of confidence that allow them to feel comfortable working in a diverse classroom.

COMMUNITY

In Buffalo, schools are organized into K–8 configurations and high schools. There are a few 6–12 schools, but with the exception of the occasional seventh- or eighth-grade cross-discipline team that works together, content teachers in the middle school grades, for the most part, are isolated from each other.

BSTN is one type of community that keeps individual teachers from feeling isolated. BSTN provides them with at least twenty-five colleagues – colleagues with whom to share resources, lessons, and ideas, and sometimes to just listen. Strong bonds of connections to colleagues counteracts the sense of isolation that some of the teachers experience. Another plus that BSTN provides is the connection to BSC instructors and pre-service science teachers. Often classroom teachers have an idea that they would like to try and the college can provide people power to help with after-school activities or special lessons.

“It’s nice to belong to a group of dedicated professionals willing to share ideas and develop new ones,” a mentor teacher said. An eighth-grade teacher noted, “It makes our tough assignments much easier.”

Financial Incentives

When teachers have a positive work environment, feel nurtured, and are well prepared for teaching, financial incentives are less of an influence on retention. Nevertheless, it helps. We all wish to earn a fair salary and be rewarded for our productivity. BSTN is a network affiliated with but not a part of any school system and, as a state-funded project it offers a small annual stipend to teacher participants. It can also support travel, presentation preparation, and leadership activities. What our teachers do like are the resources that we purchase and share with members.

We also offer the power of many teachers’ experiences that can be tapped at the sending of an e-mail. Teachers who have been in their career more than twenty years can often experience a ceiling effect. Unless they want to leave the classroom and move to an administrative position, there are rare opportunities for advancement. BSTN provides avenues for leadership that might otherwise be unavailable.

“Resources. . . Without BSTN I’d have none,” a seventh/eighth-grade teacher said. A sixth-grade teacher added, “My participation in BSTN has not only provided me professional development, it has provided me with materials for my classroom and expanded my skills as a teacher.”

In BSTN, the science director supports science activities and lets teachers know that they have support in many ways. This one person sometimes makes the difference between retaining or losing a teacher.

The Effects: BSTN Increased Retention

In light of the effects of BSTN on the factors associated with retention, it might be reasonable to assume that teachers who participate in the network are more likely to stay in teaching than other teachers. And, in fact, our data show that the retention rate for BSTN teachers is considerably higher than for the district as a whole.

Figure 1 shows a summary of retention data over a six-year period. The general retention in Buffalo public schools for middle school science teachers is about 61 percent. For those middle school science teachers who are

Percent Retained	BSTN	Non-BSTN	Overall
Retained as BPS Teachers	84%	61%	69%
Retained in BPS system*	86	N/A	N/A
Percent Turnover	BSTN	Non-BSTN	Overall
Retained as BPS Teachers	16%	39%	31%
Retained in BPS system*	14%	N/A	N/A

Figure 1. 1999–2005 retention data for BPS middle school science teachers

*Note: Two former BSTN teachers are now administrators; it was not possible to track if the non-BSTN teachers were still working in the BPS system, but not as teachers; we only know whether they were science teachers.

a part of BSTN, though, the retention rate is 84 percent, a 38 percent increase after participating in BSTN. In addition, at least two of the BSTN teachers became administrators. Thus, BSTN is increasing teacher retention in the Buffalo public schools.

Comments from teachers support these data. A seventh/eighth-grade teacher said, “It’s the best! Now I will stay until I retire!”

Other Benefits

Teacher retention in an urban school system is just one of the ways BSTN has benefited BPS. BSTN has teacher-leaders, teacher-mentors, and teacher-researchers at all stages and levels of their teaching careers. Our leaders facilitate many programs and presentations. Our mentors seek to inspire beginning teachers to learn what is needed to be successful by learning and sharing new ideas. Our researchers pilot curriculum and bring new ways of looking at data to all of us. BSTN supports local outreach activities in environmental issues; our teachers work in after-school programs that enhance science learning; our teachers reach out into the science community and bring back ideas to share with the rest of us. We are a network of aspiring and inspiring teachers. We are the Buffalo Science Teachers’ Network. As one sixth-grade teacher put it,

It is great to belong to a group of diverse like-minded people! I am never bored! I always learn something new; my brain is always churning with ideas during and after our meetings.

References

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For further information

To learn more about the Buffalo Science Teachers’ Network, visit BSTN’s Web site at <<http://bstn.wikidot.com>>



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- 1,626 pounds of greenhouse gases were prevented from forming.