Center for **Public Education**

Teaching

THE TEACHERS

Effective Professional Development in an Era of High Stakes Accountability

Allison Gulamhussein

National School Boards Association
Center for Public Education

READ THE REPORT 〉

Allison Gulamhussein is a doctoral student at George Washington University and a former high school English teacher. She was the spring 2013 policy intern for the Center for Public Education.

The Center for Public Education is a national resource for credible and practical information about public education and its importance to the well-being of our nation. CPE provides up-to-date research, data, and analysis on current education issues and explores ways to improve student achievement and engage public support for public schools. CPE is an initiative of the National School Boards Association. **www.centerforpubliceducation.org**

Founded in 1940, the National School Boards Association (NSBA) is a not-for-profit organization representing state associations of school boards and their more than 90,000 local school board members throughout the U.S. Working with and through our state associations, NSBA advocates for equity and excellence in public education through school board leadership. **www.nsba.org**

National School Boards Association
cpe
Center for Public Education

Center for **Public Education**

TABLE OF CONTENTS

TOUCH OR CLICK TO NAVIGATE

1 Introduction

We often ask questions about how students learn, but not often about how teachers learn.

In the coming years, schools will be hit with a trio of potent reforms: teacher evaluations that will include student test scores, widespread adoption of higher academic standards, and the development of high stakes standardized tests aligned with these new standards. Each of these reforms challenges the status quo, demanding that schools systematically and continuously improve student performance, marking and measuring their progress each and every step along the way.

The new reforms will require significant changes in the classroom. The Common Core State Standards that have been adopted by 46 states and the District of Columbia, represent a retreat from the traditional rote, fact-based style of instruction toward teaching that fosters critical thinking and problem solving. Even non-Common Core states are pursuing a college and career-ready agenda that calls for the development of these skills among students and holds schools accountable for doing so. To meet these new standards, teachers will have to learn new teaching practices.

This is not just about providing professional development but about providing *effective* professional development. Availability alone is not an issue. In fact, in a recent study, researchers found that while 90 percent of teachers reported participating in professional development, most of those teachers also reported that it was totally useless (Darling-Hammond et al, 2009). Thus, the real issue isn't that teachers aren't provided professional development, but that the typical offerings are ineffective at changing teachers' practice or student learning.

« SECTION OPENER

Schools must consider how teachers learn and adopt new techniques for instruction and tailor the training accordingly.

In this high-stakes era of higher standards and teacher evaluations based in part on student achievement, professional development has to have a laser-light focus on one thing—student learning. However, at present, most professional development misses the mark. One-time workshops are the most prevalent model for delivering professional development. Yet, workshops have an abysmal track record for changing teacher practice and student achievement. (Yoon et al, 2007).

Districts cannot just do more of the same. They have to develop new approaches to teacher learning on their campuses, approaches that create real changes in teacher practice and improve student achievement. Hence, the real challenge schools face is how to create opportunities for teachers to grow and develop in their practice so that they, in turn, can help students grow and develop their knowledge and ability to think critically.

This paper aims to provide a research-based answer to how districts can structure professional development so that teachers change their teaching practices, leading to students learning more. This paper will address the many facets of developing an effective professional development program, starting with an assessment of the strengths and weaknesses of current practice in light of new reform demands. Next, the paper will examine what research says about the structure of professional development that truly changes teachers' work and the learning of students. Lastly, the paper will explore what funding effective professional development might look like in a district, while providing some surprising details about the amount districts spend today on professional development.

« SECTION OPENER

Main Findings

1. **The Common Core standards focus on teaching for critical thinking, but research shows that most classroom instruction is weak in this area. Therefore, professional development needs to emphasize practices that will turn students into critical thinkers and problem solvers.**

2. **Most professional development today is ineffective. It neither changes teacher practice nor improves student learning. However, research suggests that effective professional development abides by the following principles:**

   - The duration of professional development must be significant and ongoing to allow time for teachers to learn a new strategy *and* grapple with the implementation problem.
   - There must be support for a teacher during the implementation stage that addresses the specific challenges of changing classroom practice.
   - Teachers' initial exposure to a concept should not be passive, but rather should engage teachers through varied approaches so they can participate actively in making sense of a new practice.
   - Modeling has been found to be a highly effective way to introduce a new concept and help teachers understand a new practice.

- The content presented to teachers shouldn't be generic, but instead grounded in the teacher's discipline (for middle school and high school teachers) or grade-level (for elementary school teachers).

3. **Research estimates that pre-recession spending on professional development occupied between two to five percent of a typical district's budget. However, many districts do not track their professional development spending at all, leaving them in the dark about their costs.**

4. **In switching to effective professional development, the most significant cost item for districts will be purchasing time for teachers to spend in professional learning communities and with coaches.**

5. **Support during implementation must address the dual roles of teachers as both technicians in researched-based practices, as well as intellectuals developing teaching innovations.**

Center for **Public Education**

3

PROFESSIONAL DEVELOPMENT AS THE LINCHPIN IN REFORM

Meeting the new demands of standards-based reform will mean schools must not only change their approach to student learning, but teacher learning.

JUMP TO

3 Professional Development as the Linchpin in Reform

The overwhelming message of current accountability reforms is that student achievement is what matters most in a school building. However, the million-dollar question for districts is how to get there. This section makes the case that teacher learning is the best investment. Research suggests that the paradigm of instruction needed to prepare students for college and 21st century careers is not the paradigm of instruction most teachers currently use in their practice. In other words, teacher learning is the linchpin between the present day and the new academic goals.

Professional development can no longer just be about exposing teachers to a concept or providing basic knowledge about a teaching methodology. Instead, professional development in an era of accountability requires a *change in a teacher's practice* that leads to increases in student learning.

The Common Core standards are the most visible embodiment of college-career ready knowledge and skills. At their "core," Common Core standards are intended to move away from rote memorization to develop students' critical thought (NGA, CCSSO, 2010). Such a change is a radical one. As early as 1909, researchers began to look at American classrooms and found that teachers overwhelmingly asked students fact-recall questions. Countless studies throughout the 20th century repeatedly showed the same thing (Burstall, 1909; Colvin, 1919; Bloom, 1954; Bellack et al., 1966; Nystrand & Gamoran, 1991; Nystrand et al., 1999). A large-scale study of English classes found that 85 percent of 8th and 9th- grade instruction was a combination of lecture, recitation, and seatwork— activities which require memorization and regurgitation, and very little critical thought (Nystrand et al., 1997).

« SECTION OPENER

3 Professional Development as the Linchpin in Reform

Teaching the Teachers

The 2012 MET study from the Gates Foundation confirms that little has changed since1909 (Kane & Stainger, 2012). The study used trained observers to watch 7,491 videos of instruction by 1,333 teachers from six socio-economically and geographically diverse districts. All of these observations pointed to one glaring weakness — the *vast majority* of teachers were not teaching for critical thinking.

While almost all of the participating teachers managed well-behaved, on task classes, the following practices were rarely seen: students participating in meaning making and reasoning, investigation and problem-based approaches, questioning strategies, and student generation of ideas and questions—the exact kind of teaching the Common Core calls for (Kane & Stainger, 2012).

Seen in this light, it becomes clear that the Common Core (backed up by teacher evaluations connected to tests aligned with the standards) cannot be categorized merely as a tool of accountability. These reforms seek to do much more than just hold teachers "accountable" for student learning. Instead they aim much higher, striving to completely revolutionize the nature of learning and instruction in U.S. classrooms. For teachers, merely keeping students working bell to bell is not enough; teachers have to learn new ways to teach, ways to teach they likely never experienced themselves and that they rarely see their colleagues engage in. Creating this type of teacher development is one of the biggest challenges school districts face today. ■

« SECTION OPENER

Center for **Public Education**

4

BUILDING EFFECTIVE PROFESSIONAL DEVELOPMENT

Why the Status Quo is Ineffective

The Implementation Problem

JUMP TO

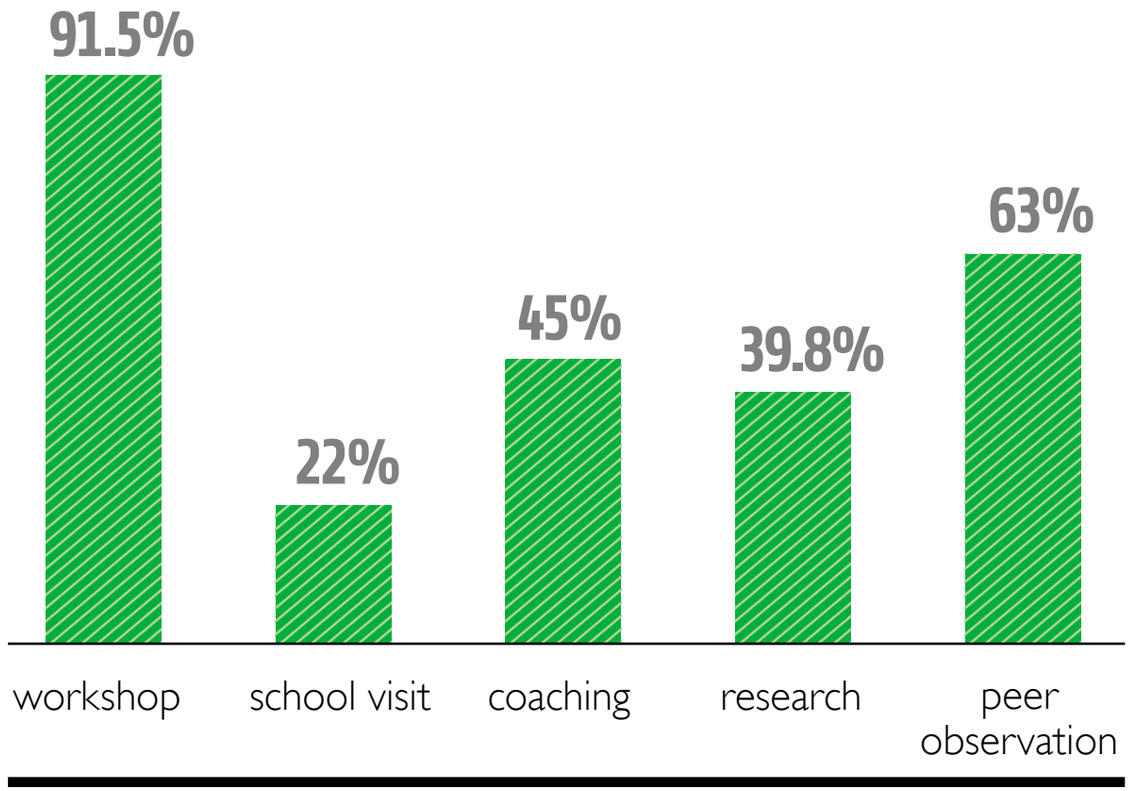
Why the Status Quo is Ineffective

First, districts should recognize the problem isn't that teachers don't participate in professional development. It's that, on the whole, the majority of the professional development they do participate in is ineffective. As mentioned, over 90 percent of teachers report having participated in professional development in the past year, but the majority also report that it wasn't useful (Darling-Hammond et al., 2009). This is because most development happens in a workshop-style model which research shows has little to no impact on student learning or teacher practice (Darling-Hammond et al., 2009).

One comprehensive study analyzed 1,300 studies representing the entire landscape of professional development research (Yoon et al., 2007). The researchers found the only professional development programs that impacted student achievement were lengthy, intensive

FIGURE 1

Types of Professional Development Provided to Teachers the Previous Year



SOURCE: Darling-Hammond et al., 2009

SECTION OPENER

programs. Programs that were less than 14 hours (like the one-shot workshops commonly held in schools) had *no effect* on student achievement. Not only did these workshop programs fail to increase student learning, they didn't even change teaching practices. An earlier study of the various models of professional development found if the training merely described a skill to teachers, as traditional workshops do, only 10 percent of teachers could transfer the skill to practice. The majority of the teachers simply left the training completely unchanged (Bush, 1984).

20 The number, on average, of separate instances of practice it takes a teacher to master a new skill, and this number may increase if a skill is exceptionally complex.

SOURCE: (Joyce & Showers, 2002).

The Implementation Problem

Why isn't the workshop effective? Simply put, traditional professional development operates under a faulty theory of teacher learning. The one-time workshop assumes the only challenge facing teachers is a lack of knowledge of effective teaching practices and when that knowledge gap is corrected, teachers will then be able to change.

Research finds otherwise. It turns out teachers' greatest challenge comes when they attempt to implement newly learned methods into the classroom.

In all forms of learning a new skill, mere knowledge of it is never as difficult as its implementation. Think about this in the context of sports. If a football coach wants to improve his team, he might begin by working on the fundamentals of blocking. In other words, he might recognize the players lack knowledge of a particular strategy, blocking, that will improve

« SECTION OPENER

their game. He might explain what blocking is, demonstrate it (that is, modeling), and even have the players practice blocking in the artificial setting of practice. However, when players initially bring this new skill into the real life arena of a game, it doesn't transfer smoothly. They are used to playing the game another way and the other parts of their performance have to also change to make room for the new skill (Joyce & Showers, 1982).

Hence, the area of greatest struggle is not in *learning* a new skill but in *implementing* it, something referred to as the "implementation dip" (Fuller, 2001). This is true with any new skill—learning about writing isn't as difficult as actually writing, learning about bicycling isn't as difficult as actually riding a bike, and learning about a teaching method isn't as difficult as actually implementing it.

Numerous studies speak to the challenges teachers face when they try to implement newly-learned skills in their classrooms. For example, a recent case study examined veteran science teachers as they attempted to implement

If school districts want teachers to change instruction, the implementation stage must be included and supported more explicitly in professional development offerings, as this is the critical stage where teachers begin to commit to an instructional approach.

inquiry learning into their classrooms. The group had worked extensively outside of the classroom with experts, learning the theory of inquiry learning. They also observed model lessons and wrote their own together collaboratively. Despite all of that groundwork on the logic and research behind the model, the teachers' first attempt to apply the new method was unsuccessful and messy (Ermeling, 2010). The teachers

4 Building Effective Professional Development

had to practice inquiry teaching several times, watching video tapes of their attempts in teams and hearing feedback about their performance before they were able to master the skill.

This case study is not an outlier. In fact, studies have shown that teacher mastery of a new skill takes, on average, 20 separate instances of practice and that number may increase if the skill is exceptionally complex (Joyce & Showers, 2002).

The implementation dip is further complicated by the fact that research shows teachers change their underlying beliefs about how to teach something only *after* they see success with students (Guskey, 2002). Researchers have documented this phenomenon since the 1980s (e.g. Huberman, 1981;Guskey, 1984). Indeed, when teachers do not see success, they tend to abandon the practice and revert to business as usual.

Collectively these principles present a Catch-22: to internalize a practice and change their beliefs, teachers must see success with their students, but student success is very hard to come by initially, as learning new skills takes several attempts to master. Crafting effective professional development means confronting this reality and building a significant amount of support for teachers during the critical implementation phase in one's actual classroom. ■

« SECTION OPENER

Center for **Public Education**

5

5 PRINCIPLES OF EFFECTIVE PROFESSIONAL DEVELOPMENT

Principle I	Principle IV
Principle II	Principle V
Principle III	

JUMP TO

Clearly the one-time workshop is an insufficient professional development approach to building the capacity of teachers to foster student knowledge and higher order skills. A considerable body of research identifies characteristics of effective programs. School leaders seeking to provide meaningful learning opportunities for their staff should follow these principles:

Some studies have concluded that teachers may need as many as *50 hours* of instruction, practice and coaching before a new teaching strategy is mastered and implemented in class.

SOURCE: (French, 1997)

Professional Development Principle 1:

The duration of professional development must be significant and ongoing to allow time for teachers to learn a new strategy and grapple with the implementation problem.

Professional development that is longer in duration has a greater impact on advancing teacher practice, and in turn, student learning. This is likely because extended professional development sessions often include time to practice application of the skill in one's own class, allowing the teacher to grapple with the transfer of skills problem.

In nine different experimental research studies of teacher professional development, *all* found that programs of greater duration were positively associated with teacher change and improvements in student learning (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). In fact, in a study analyzing the impact of a science professional development

SECTION OPENER

program on teacher's practice, researchers found that teachers with 80 hours or more of professional development were significantly more likely to use the teaching practice they learned than teachers who had less than 80 hours of training (Corcoran, McVay & Riordan, 2003).

These findings corroborate research on teacher learning, which shows mastery of a new skill is a time-consuming process for teachers. French (1997) concluded that teachers may need as many as 50 hours of instruction, practice and coaching before a new teaching strategy is mastered and implemented in class.

Professional Development Principle 2:

There must be support for a teacher during the implementation stage that addresses the specific challenges of changing classroom practice.

If school districts want teachers to change instruction, the implementation stage must be included and supported more explicitly in professional development offerings, as this is the critical stage where teachers begin to commit to an instructional approach.

Simply increasing the amount of time teachers spend in professional development alone, however, is not enough. The time has to be spent wisely, with a significant portion dedicated to supporting teachers during the implementation stage. Support at this stage helps teachers navigate the frustration that comes from using a new instructional method.

Studies have found that when teachers are supported during this phase, they change their teaching practices. Truesdale

« SECTION OPENER

(2003) studied differences between teachers attending just a workshop and teachers attending the workshop and then being coached through implementation. The study found that coached teachers transferred the newly learned teaching practices, but teachers who only had the workshop quickly lost interest in the skill and did not continue to use it in their classrooms. Likewise, Knight and Cornett (2009) found in a study of 50 teachers that those who had coaching along with an introductory workshop were significantly more likely to use the new teaching practice in their classes than those who only were only exposed to the workshop.

Professional Development Principle 3:

Teachers' initial exposure to a concept should not be passive, but rather should engage teachers through varied approaches so they can participate actively in making sense of a new practice.

In the same way students must first understand a concept before applying it, teachers need a thorough understanding of research or theory before they can attempt implementation in their classrooms. Therefore, attention also has to be paid to how new practices are introduced.

Traditional workshops are not only largely ineffective at changing teachers' practice, but a poor way to convey theoretical concepts and evidence-based research. This is because many professional development workshops involve teachers as passive listeners only. Again, just like students, teachers learn better when they are able to actively participate and make sense of the information being presented (French, 1997). Professional development sessions which aim to make teachers aware of a concept have been shown to be more successful when they allow teachers to learn the concept in varied, active ways (Roy, 2005; Richardson, 1998). These activities can include: readings, role playing techniques, open-ended discussion of what is presented, live modeling, and visits to classrooms to observe and discuss the teaching methodology (Roy, 2005; Goldberg, 2002; Rice, 2001; Black, 1998; Licklider, 1997).

SECTION OPENER

Professional Development Principle 4:

Modeling has been found to be highly effective in helping teachers understand a new practice.

While many forms of active learning help teachers decipher concepts, theories, and research-based practices in teaching, modeling — when an expert demonstrates the new practice — has been shown to be particularly successful in helping teachers understand and apply a concept and remain open to adopting it (Snow-Renner & Lauer, 2005; Carpenter et al., 1989; Cohen & Hill, 2001; Garet et al., 2001; Desimone et al., 2002; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Saxe, Gearhart, & Nasir, 2001; Supovitz, Mauyer, & Kahle, 2000). For example, instead of hearing about inquiry learning in science, a master teacher might teach a science class using inquiry methodology while being observed by a teacher who is learning this skill. In this way, teachers can see how the method is used successfully in a class of real students.

Professional Development Principle 5:

The content presented to teachers shouldn't be generic, but instead specific to the discipline (for middle school and high school teachers) or grade-level (for elementary school teachers).

Districts often provide staff-wide training on the first days of school, assuming all teachers can benefit equally from the presentation of generic concepts (such as classroom management). The truth is, while there may be a few general principles that apply to all teachers, these are 1) best understood and mediated with attention to how those general principles manifest within the content a teacher teaches and 2) pale in comparison to useful concepts that are discipline-specific.

For example, asking open-ended questions can apply to all disciplines and grade-levels. But the more nuanced applications of this concept (how to scaffold the open-ended questions with increasing levels of difficulty, or which open-ended questions to ask) are centered in the content one teaches. Furthermore, there are few pedagogical principles that span all disciplines, but there are many important areas of analysis and exploration that are highly discipline-specific which go unaddressed and unacknowledged in generic professional development.

Several studies, for instance, have shown that professional development that addresses discipline-specific concepts and skills has been shown to both improve teacher practice, as well as student learning (Blank, de las Alas & Smith, 2007; Carpenter et al., 1989; Cohen & Hill, 2001; Lieberman & Wood, 2001; Merek & Methven, 1991; Saxe, Gearhart, & Nasir, 2001; Wenglinsky, 200; McGill-Franzen et al., 1999). Teachers themselves report that their top priority for professional development is learning more about the content they teach, giving high marks to training that is content-specific (Darling-Hammond et al., 2009). ■

Center for **Public Education**

6

THE DUAL ROLES TEACHERS PLAY

Teacher as Technician

Teacher as Intellectual

JUMP TO

6 The Dual Roles Teachers Play

Preparing all students for college and careers demands instruction that moves away from rote, memorization-based learning, instead elevating critical thinking and problem solving (Conley, 2011). Some important work has been done in several disciplines — such as inquiry thinking in science and high-level questioning strategies in the humanities — about teaching methods that foster critical thinking. However, the research base is not extensive enough so that everything a teacher does in a classroom can be covered with a proven, evidence-based skill. Instead, teachers will have to change the tire while the car is running so to speak, creating their own innovations in instruction while teaching to higher standards, including the Common Core (Little, 1993).

Researcher Judith Little describes these two different functions as 1) the teacher as a technician and 2) the teacher as an intellectual (Little, 1993). An effective professional development program, therefore, needs to address both functions, understanding that there are differences in the ways each should be supported.

Teacher as Technician

Technical skill training

Teacher's role: To implement particular skills or strategies which are backed by research

Focus: Explaining the skill and strategy and research base behind it with support for the teacher as he/she tries to transfer the skill or strategy to the classroom

Structure: Workshop and Coaching

Teacher as an Intellectual

An inquiry process where teachers innovate

Teacher's role: An intellectual examining broad research on learning and developing innovative classroom strategies to achieve goals

Focus: Exposing teachers to pedagogical research in teacher's content area and provides support for innovation and implementation through a local teacher community

Structure: Professional Learning Communities

« SECTION OPENER

Supporting the Teacher as a Technician

As discussed earlier, professional development should 1) expose teachers to various pedagogical strategies and the research base behind them, and 2) support teachers as they implement the research based strategy into their classroom, recognizing that implementation is the most difficult learning stage for teachers.

Effective PD must also provide support for teachers to innovate new teaching strategies to meet the demands of reform.

Individual teacher coaching has been shown to be successful in supporting teachers to implement new, research-based practices into their classrooms (Bush, 1984; Showers, 1982; Showers, 1984; Knight, 1998; Knight, 2007; Batt, 2009; Slinger, 2004). While teacher coaching takes many forms, such as instructional coaching, literacy coaching and cognitive coaching, the basic structure remains essentially the same: a teacher meets with a coach before teaching to discuss how the strategy will be implemented into the lesson, the coach observes the teacher teaching with the new strategy, and the teacher and coach meet together to debrief about the lesson and how it could be improved. The cycle is repeated several times, as research shows teachers need as many as 20 different times practicing with a strategy to master it (Joyce & Showers, 1982).

Studies have shown that coaching is effective at changing teacher practice and student achievement (Showers, 1984; Hull et al., 1998; Stephens et al., 2007). For example, South Carolina's Reading Initiative provided instruction to teachers on research-based literacy practices along with individual coaching. One study showed that students in classes with coached teachers made higher gains on standardized reading exams than peers who were taught by non-coached teachers (Stephens et al., 2007).

Teacher as Technician: A Coaching Model

STAGE ONE: Introduction to New Teaching Ideas

- New teaching methodology is presented to teachers and the research supporting it
- The presentation of the material requires active learning, not passive learning from the teachers
- Modeling has been shown by research to be very helpful at this stage
- The content is not generic, but focused on the exact concepts a teacher teaches

STAGE TWO: Support During Implementation in the Classroom

- A coach meets with the teacher before he/she teaches a lesson with the new teaching skill, hearing the teacher's concerns about the lesson and giving feedback on the structure of the lesson.
- The coach then observes the lesson with the new teaching skill.
- The coach and teacher meet together after the lesson to debrief, and they create suggestions to improve using the teaching skill in the next lesson.
- The cycle is repeated several times, as research shows that it can take as many as 20 practices for teachers to master a new instructional skill.
- The time given for this process is extensive, as research shows effective professional development is ongoing and longer in duration than traditional models.

Supporting the Teacher as Intellectual

Allowing teachers to flourish as intellectuals requires 1) providing time and resources which allow teachers to think through and create innovative teaching methods, and 2) providing a support system for teachers as they implement those innovations, so that the awkward implementation stage does not merely result in frustration, but instead in continued practice and refinement of the teaching method.

Many school districts have implemented such structures through professional learning communities. These are communities of practitioners, often teachers in the same department or grade level, who complete cycles of teaching inquiry together, creating innovations in teaching and then experimenting with those innovations in their own classrooms. In these communities, teachers begin by actively exploring "artifacts" that allow them to think about challenges the group faces in the classroom. Such artifacts might include student assessments, recent research about a particular aspect of learning or teaching, or even student standardized test results.

For one highly effective Algebra professional learning community, the group used an entire binder of resources with research-based approaches to math instruction, which the group added to and used frequently in guiding their innovations (Stoll et al., 2007). In Chicago, a principal organized a monthly "Breakfast Club" as a professional learning community, where teachers began by reading the research on early childhood literacy, discussing the challenges they faced in their own classrooms, and developing innovations in teaching to address these issues (Stoll et al., 2007).

After analyzing various student artifacts, teachers in a typical professional learning community will create a classroom technique to address a specific concept or skill that each member will try in their classroom. Later, they reconvene to debrief how it went and how it could be improved, using student data from the lesson (e.g., quiz data, writing samples, video of student discussions) to inform

6 The Dual Roles Teachers Play

their decisions. In essence, the team becomes a group of coaches for one another, supporting each other during implementation through feedback and collective refining of strategies. These teachers continue to repeat these inquiry cycles over and over again, until they feel they've arrived at an acceptable solution to the issue identified in the classroom. From there, teachers can pose new questions for inquiry, repeating the cycle over and over again.

Through these inquiry cycles, teachers are able to customize the innovations using their own research on teaching and data on student learning, creating instructional methodologies that will elicit higher-order thinking—something that has been a rarity in most K-12 classes.

Research suggests that there's an exceptionally strong relationship between communal learning, collegiality, and collective action (key aspects of professional learning communities) and changes in teacher practice and increases in student learning. In a study of 12 schools implementing Critical Friends Group, a professional learning community

Research suggests that there's an exceptionally strong relationship between communal learning, collegiality, and collective action (key aspects of professional learning communities) and changes in teacher practice and increases in student learning.

with specific protocols to guide observations and discussions, researchers found teachers did indeed change their teaching practice; teachers became more student-centered with a focus on student mastery (Dunne et al., 2000).

These communities haven't only changed teacher practice, they've also been shown to increase student achievement.

For instance, Rosenholtz (1989) found that in schools where teachers met regularly to examine their practice and learn strategies to improve it, students had better academic progress.

Likewise, Louis and Marks (1998) found a relationship between positive professional learning communities and student achievement. Little (1982) analyzed a group of schools that were "beating the odds," and found that teachers in these schools more frequently jointly planned, designed and evaluated instructional materials, teaching each other how to become better teachers. Math achievement was also found to be positively affected in schools with high performing professional learning communities (Wiley, 2002).

Other benefits can also accrue. A five-year study of 1,500 schools found that schools with active professional learning communities had lower student absenteeism and dropout rates. All these findings suggest that professional learning communities can be a vehicle for teacher change and school reform (Louis & Marks, 1998). ■

Teacher as Intellectual: A Professional Learning Community Model

STAGE ONE: Introduction to New Teaching Ideas

- "Artifacts" such as, student work and standardized test scores are presented, spurring thought and discussion among teachers
- Teachers engage actively, not passively, in reading and analyzing the artifacts, identifying how they connect to challenges they're facing in the classroom
- The artifacts are not generic, but focused on the exact concepts a teacher teaches

STAGE TWO: Support During Implementation in the Classroom

- Teachers identify a predominant area of concern after their analysis of artifacts
- Together, the team develops a teaching innovation that addresses the concern raised
- All teachers on the team practice the new strategy in their classroom
- Because this implementation stage is the most difficult and comes with the highest likelihood for frustration, the teachers reconvene after implementation to "coach" one another. They share how the lesson went and brainstorm how to improve its use or tweak it for future lessons.
- If possible, teachers may observe one another to see others teach with the new innovation.
- The cycles of implementation and team discussion are extensive, as research shows that it can take as many as 20 practices for teachers to master a new instructional skill.
- The time needed for this process is considerable, as research shows that effective professional development is ongoing and longer in duration than traditional models.

Center for **Public Education**

7

FUNDING EFFECTIVE PROFESSIONAL DEVELOPMENT

Time, the Largest Cost

Other Costs

JUMP TO

7 Funding Effective Professional Development

Many districts may embrace calls for more effective professional development but fear they will be unable to fund such programs. Such worries are valid. However, there's reason to believe effective professional development funding doesn't necessarily require more spending, but a restructuring of existing funds.

Districts first must identify how much they are currently spending on professional development, though, in truth, few districts are able to accurately identify this number. State education agencies and school districts usually use a cost accounting model to track revenues and expenditures (Miles et al., 2003). In this cost accounting model, there are broad categories to track spending (Odden et al., 2002).

School districts often place professional development spending into instructional support, a category that also includes spending for curriculum development, instructional supervision, computer technology and media, and other library costs (Odden et al., 2002). In such a system, administrators aren't able to isolate spending solely for professional development.

FIGURE 2

Research Finds District Spending on Professional Development Hard to Quantify

Study	District PD Expenditures
Hertert, 1997	1.7 to 7.6% of total budget
Miller et al., 1994	2% of total budget
Miles et al., 1999	3.8% of total budget $23 million a year $4,894 per teacher and principal
Miles & Hornbeck, 2000	2.4 to 4.3 % of total budget 2.4 to 5.9% of budget (With in-service days) $2,010 to $5,528 per teacher
Miles et al., 2003	3.5% of total budget $19 million $4,380 per teacher

« SECTION OPENER

However, some studies have aimed to look "inside the black box" of professional development expenditures by using surveys, state documents, and other information sources to drill down on the real amount districts spend (Miles et al., 2003; Odden et al., 2002). What these researchers find is that while districts may think they spend very little on professional development, most districts spend a tremendous amount.

For example, one district reported spending $460,000 on professional development; however, after a detailed study of the district's spending, the actual figure was $8.9 million (Odden et al., 2002). Other studies found that, pre-recession, districts were spending on average between two to five percent of their total budget on professional development (Hertert, 1997; Little, 1987; Miller et al., 1994; Elmore & Burney, 1997; Miles et al., 1999; Miles & Hornbeck, 2000; Odden, 2002).

The federal government helps states and districts with professional development funds, mostly through Title II, Part A. In 2012-13, 44.4% of the $2.33 billion Title II dollars went to support teacher development. Nonetheless, school budgets

FIGURE 3

School Administrators Detail Budget Items Getting the Ax in Sequestration's Aftermath

Impact on 2013 budget	Percent of districts
Reducing professional development	69.4
Reducing academic programs (enrichment, after-school, interventions, etc)	58.1
Personnel layoffs (non-instructional staff)	56.6
Increased class size	54.9
Personnel layoffs (instructional staff)	54.8
Deferring technology purchases	52.8
Deferring textbook purchases	38.0
Deferring maintenance	36.6
Eliminating summer school	34.6
Reducing courses offerings	25.6
Reducing extra-curricular activities	25.6

SOURCE: Ellerson, 2012

« SECTION OPENER

are still struggling after taking a double hit with the recession and again after sequestration. According to a 2012 survey from the American Association of School Administrators, professional development is the first item to experience cuts by far with 69.4 percent of school districts reporting they would be reducing these funds in the face of budget shortfalls (AASA, 2012). Nonetheless, it will serve districts well to do an accounting of current professional development spending. It may reveal that current dollars are larger than assumed.

Districts should begin by identifying how much they are currently spending on professional development, though, in truth, few districts are able to accurately nail down this number.

Time, the largest cost

Research consistently finds that effective professional development requires a significant amount of teacher time (Darling-Hammond et al., 2009; Yoon et al., 2007). This is largely due to the fact that the learning curve for teachers is greatest at the implementation stage, when teachers need the most support as they practice new teaching methodologies over an extended time period. Unfortunately, teacher time can be costly.

The ideal structure for ongoing professional development is to provide teachers time embedded in the school day, preferably setting aside three to four hours per week for collaboration and coaching (Killion, 2013). Time spent in this way, however, is time away from students who must still be supervised, adding a new layer to staffing or administrative needs.

Afterschool professional development mitigates the need for more staff, but there are limits to how much time can be added to teachers' work schedule. In many districts, the extra time would need to be addressed in contracts and in

some places, compensated. This may be part of the reason districts are so apt to fall back on traditional workshop professional development, which may only take a few hours of teachers' time total.

There are several ways in which a district might purchase additional teacher time. One option is for a district to simply pay for more daily working hours through a teacher's contract. However, schools might also consider more cost effective ways of purchasing teacher time (Odden et al., 2002). For example, districts might choose to pay substitutes to cover a teacher's class. Of course, this would have to be weighed against the negative effect of not having teachers in their classrooms. Furthermore, it might prove impractical if teachers meet on a weekly or other consistent basis, as many researchers recommend (Darling-Hammond et al., 2009; Yoon et al., 2007).

Some districts have paid stipends to teachers for professional development time (Odden et al., 2002). The stipends were set at a lower hourly rate than the teacher's salaried pay, but were still attractive to teachers. Depending on the state or district, any of these scenarios may have to be negotiated through collective bargaining of teacher contracts.

Despite the large price tag for teacher's time, there's reason to believe that the reallocation of funds within a district's current teacher training budget could cover the cost of effective, research-based professional development. In a well-known model for restructuring from the 1990s, New York's District 2 committed to raise achievement through professional development, even without substantial monetary investments (Elmore & Burney, 1997).

The district spent about three percent of its budget overall to develop a program that had both coaching and professional development labs, where expert teachers hosted other teachers. Utilizing a combination of outside consultants and in-house talent, coaches worked with teams of teachers to present effective teaching strategies and model lessons; they then observed and debriefed teachers as they attempted implementation. Each consultant worked one on one with a block of about eight teachers for three to four months. Not

7 Funding Effective Professional Development

only was the district able to create this program and keep costs to about three percent of the district's budget, the district experienced substantial increases in student achievement after implementing the program (Elmore & Burney, 1997).

In creating this professional development program, the largest cost for the district was 1) the cost of teachers' time and 2) the staffing costs for coaching and developing model lesson plans in the professional development lab.

Learning Forward, formerly the National Staff Development Council, recommends that districts form a time study team to develop a plan for finding more collaboration time for teachers through a seven step process as follows:

Step 1: Forming a time Study team addresses engaging representatives from various parts of the school or school system community to participate in the time study process and determining who will develop recommendations for the decision makers.

Step 2: Examining assumptions about time describes processes for assessing current perceptions held about time for education. Understanding personal assumptions about time early in the process will provide fundamental information for the Time Study team as they engage in their work.

Step 3: Understanding existing time includes strategies for conducting an analysis of how time is currently used to inform the work of the Time Study team. In some cases, repurposing existing time is the first way to increase time for collaborative professional learning.

Step 4: Studying time options provides resources and guides the Time Study team as members examine models from other schools and school systems to inform their work.

Step 5: Forming and adopting recommendations about time launches a public discussion about how to fulfill the need within the given parameters. After developing concrete recommendations, members of the Time Study team should decide how to vet them

« SECTION OPENER

for consideration and modification before they make final recommendations.

Step 6: Establishing a plan to implement and evaluate accepted recommendations is an essential part of the work. Ongoing monitoring and assessment can generate information about the efficiency and effectiveness of the time investment.

Step 7: Reviewing time use and results provides ongoing data to make adjustments and improvements in the use of time to achieve the maximum benefits for both educators and students.

SOURCE: Learning Forward, 2013.

Other Costs

This report urges districts to employ both a teacher as technician (accomplished through coaching) and a teacher as an intellectual (accomplished through professional learning communities) approach to teacher development. While both models require considerable investments in teacher time, there are other costs to consider, too.

Teacher as Technician: Coaching

This model could possibly be more expensive than professional learning communities, as districts need to invest in training to introduce teachers to new strategies as well as salaried staff who serve as coaches. It is labor-intensive.

This model requires a well-planned, active presentation of research-based skills to teachers. Districts will need someone to plan and present these sessions to teachers. Districts can choose to hire consultants to develop staff training or use in-house talent. While in-house talent is likely to be less expensive, some outside consultants may have a deeper

Coaching: Cost Components

- Teachers' Time
- Staff to Plan and Deliver Active Training about Research-Based Teaching Practices
- Staff to Serve as Instructional Coaches
- Training Materials

level of expertise, especially of research-based practices. These considerations should be weighed when planning the introductory sessions.

In addition, districts will need staff to serve as coaches for teachers during the implementation stage. These coaches should be expert teachers who are well-versed in the particular instructional strategy teachers are aiming to master. Again, districts can hire these coaches from outside or promote from within, or a combination of two. However, each coach should have enough time to work with a teacher carefully and thoroughly to ensure the teacher has mastery of the skill.

Teacher as Intellectual: Professional Learning Communities

This model's predominant cost is also teacher time. However, districts might do well to begin by consulting with a group that specializes in professional learning communities, such as Critical Friends Group, or develop experts in house. The objective is to secure individuals who can present the concept and structure of professional learning communities to the staff and initially support the teacher inquiry cycles. Schools launching learning communities have found such support necessary.

For example, a single Title I elementary school formed a professional learning community, which resulted in impressive increases in their students' scores (Ermeling et al, 2009). Other schools in the district decided to follow their example, but did not see similar increases in student achievement. The district went back to the drawing board.

They trained leaders for professional learning communities and provided a better structure for the community work, including protocols for the meetings between teachers. The district saw an immediate impact on the conduct of inquiry cycles in meetings and within three years, the schools with PLCs were outperforming similar schools in the district without the PLCs (Ermeling, 2009).

While professional learning communities do not require expert presenters, these groups do need leaders who can suggest artifacts and topics for the group to consider for analysis. Districts could hire staff to do this, but they could also assign current staff to this task and reducehis or her responsibilities in other areas. Department chairs and grade level chairs are well-positioned for the task. These individuals are already well-steeped in the content taught by the department or grade-level (Blank de las Alas & Smith, 2007; Carpenter et al., 1989; Cohen & Hill, 2001; Lieberman & Wood, 2001; Merek & Methven, 1991; Sax, Gearhart, & Nasir, 2001; Wenglinsky, 2000; McGill-Franzen et al., 1999). ■

Professional Learning Communities: Cost Components

- Teachers' Time
- Staff to Develop Initial Training for All Staff About PLCs and Protocols for Inquiry Meetings
- Cost of Decreasing Responsibility of Department or Grade Level Chair so They Can Develop Artifacts for Consideration and Lead PLC
- Materials for Artifacts (articles, books, webcasts)

« SECTION OPENER

Center for **Public Education**

8

DISCUSSION AND CONCLUSION

Questions to Consider

JUMP TO

1 Introduction
2 Main Findings
3 PD as the Linchpin in Reform
4 Building Effective PD
5 5 Principles of Effective PD
6 The Dual Roles Teachers Play
7 Funding Effective PD
8 Discussion and Conclusion

8 Discussion and Conclusion

There is an undeniable truth that teaching is inherently complex and nuanced. Professional development must recognize this.

The great irony of traditional professional development, notably the one-time workshop, is that it aims to get teachers to use a model for instructing students that it typically ignores when teaching teachers. Recent education reforms and standards urge teachers to incorporate students' prior knowledge, make learning social through collaboration and discussion, and engage students in meaning making. Paradoxically, school districts rarely apply these same learning theories to teachers' own learning. If teachers cannot simply "pour" knowledge into students' minds through lecture, what makes districts think that the same can be done with teachers?

Ultimately, research tells us that teachers learn much the same way that students do. When teachers are first introduced to a concept or teaching skill, their learning should be active, not passive. Further, as when students write an essay, prove their mathematical thinking, or design an experiment, the application of the skill is far more challenging than simply recognizing the logic behind it. The same is true for teachers.

Several researchers have called this the "implementation dip" of practice where the first integration of a new skill into existing practice is often awkward, requiring several more practices before the skill is mastered (Fullan, 2001; Joyce & Showers, 1982). Because this period is awkward and comes with a high probability of frustration, support during the implementation stage is critical to ensure teachers do not give up but instead push through

« SECTION OPENER

towards mastery. For research-based practices, coaching has proved successful in supporting this implementation dip and changing teachers' practice. However, because the research base on critical thinking instructional practices is incomplete, schools must also empower teachers to be innovators and researchers themselves through professional learning communities, where fellow teachers can serve as a network of coaches for each other. Research suggests these models of professional development change teacher practice and are possible without significant increases in district spending.

Districts wanting to craft effective professional development to improve the staff capacity should consider these questions:

Questions for districts to consider

- **What existing professional development does the district provide?**
- **Does the district's current professional development programming align with research about teacher learning?**
- **Is professional development producing an impact on student learning?**
- **How is spending for professional development tracked by the district?**

Districts must ask themselves how they can create meaningful learning experiences for teachers that improve their practice.

- **Does the district need to develop more effective accounting codes to pinpoint professional development spending?**
- **How much exactly is the district spending on professional development?**
- **How much teacher time is paid for within the current contract that is not used for individual teacher planning or classroom teaching?**
- **Which model for purchasing teacher time is most cost efficient for the district?**
- **What current in-house staff can be used to provide coaching and professional learning communities?**
- **What external resources can be used to staff coaching and professional learning communities?**
- **Is an in-house or consulting model of staffing more cost efficient and effective for the goals of the professional development, or is it better to have a combination of the two?** ■

SECTION OPENER

References

Abelmann, C. & Elmore, R. (1999). *When accountability knocks, will anyone answer?* Philadelphia, PA: Consortium for Policy Research in Education.

Alseike, B. U. (1997). Cognitive coaching: Its influence on teachers. *Dissertations Abstracts International*, 58 (8), 2911. (University Microfilms No. 9804083)

Andrews, D. & Lewis, M. (2007). Transforming practice from within: the power of professional learning community. In L. Stoll & K.S. Louis (eds) *Professional learning communities: Divergence, depth and dilemmas*. Maidenhead: Open University Press.

Banilower, E. (2002). Results of the 2001-2002 study of the impact of the local systemic change initiative on student achievement in science. Arlington, VA: National Science Foundation.

Batt, E. G. (2010). Cognitive coaching: A critical phase in professional development to implement Sheltered instruction. *Teaching and Teacher Education*, 26 (2010), 997-1005.

Kane, T. J. & Staiger, D. O. (2012). *Gathering feedback for teaching: Combining high-quality observations with student surveys and achievement gains*. Seattle, WA: Bill and Melinda Gates Foundation.

Birman, B. F., Desimone, L., Porter, A.C., & Garet, M. (2000). Designing professional development that works. *Educational Leadership*, 57 (8), 28-33.

Bush, R.N. (1984). *Effective staff development in making schools more effective: Proceedings of three state conferences*. San Francisco, CA: Far West Laboratory.

Butler, D. L. & Schnellert, L. (2012). Collaborative inquiry in teacher professional development. *Teaching and Teacher Education*, 28 (2012), 1206-1220.

Corcoran, T. (1995). *Transforming professional development for teachers: A guide for state policymakers*. Washington, D.C.: National Governor's Association.

Corcoran, T., McVay, S., & Riordan, K. (2003). *Getting it right: The MISE approach to professional development*. Philadelphia, PA: Consortium for Policy Research in Education.

Correnti, R. (2007). An empirical investigation of professional development effects on literacy instruction using daily logs. *American Educational Research Association*, 29 (4), 262-295.

Darling-Hammond, L., Chung Wei, R., Andree, A., & Richardson, N. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Oxford, OH: National Staff Development Council.

Deussen, T., Coskie, T., Robinson, L., & Autio, E. (2007). *"Coach" can mean many things: five categories of literacy coaches in Reading First (Issues & Answers Report, REL 2007-No. 005)*. Washington, DC: U.S. Department of Education, Institute of Educational Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest.

Donaldson, M. L. & Papay, J. P. (2012). *Reforming teacher evaluation: One*

References

district's story. Washington, DC: Center for American Progress.

Dunne, F., Nave, B., & Lewis, A. (2000). Critical friends: Teachers helping to improve student learning. *Phi Delta Kappa International Research Bulletin* (CEDR) (28), 9-12.

Edwards, J. L., Green, K. E., & Lyons, C. A. (1998, April). *Personal empowerment, efficacy, and environmental characteristics*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Edwards, J. L., & Newton, R. R. (1995, April). *The effect of cognitive coaching on teacher efficacy and empowerment*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Edwards, J. L. (1993). The effect of cognitive coaching on the conceptual development and reflective thinking of first year teachers. *Dissertation Abstracts International*, 54 (3), 895 (University Microfilms No. 9320751)

Ellerson, N. M. (2012). *Cut deep: How the sequester will impact our nation's schools*. Alexandria, VA: American Association of School Administrators.

Elmore, R. (1997). *Investing in teacher learning: Staff development and instructional improvement in community school district #2, New York City*. New York City, NY: National Commission on Teaching and America's Future and Consortium for Policy Research in Education.

Elmore, R. (2000). *Building a new structure for leadership*. Washington, D.C.: Albert Shanker Institute.

Elmore, R. (2002). *Bridging the gap between standards and achievement: The imperative for professional development in education*. Washington, DC: Albert Shanker Institute.

Ermeling, B. (2009). Tracing the effects of teacher inquiry on classroom practice. *Teaching and Teacher Education*, 26 (3), 377-388.

Gallimore, R., Ermeling, B.A., Saunders, W. M., & Goldenberg, C. (2009). Moving the learning of teaching closer to practice: Teacher education implications of school-based inquiry teams. *Elementary School Journal*, *109 (5)*, 537-553.

Gamse , B. C., Bloom, H. S., Kemple, J. J., & Jacob, R. T. (2008). Reading First Impact Study: Interim Report (NCEE 2008-4016). Washington, DC: National Center for Educational Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Garmeston, R. Linder, C., & Whitaker, J. (1993). *Reflections on cognitive coaching. Educational Leadership, 51 (2)*, 57-61.

Guskey, T.R. (2002). Professional development and teacher change. *Teachers and Teaching: theory and practice, 8 (3)*, 381-391.

Hull, J., Edwards, J. L., Rogers, M. S., & Swords, M. E. (1998). *The Pleasant View experience*. Golden, CO: Jefferson County Schools.

Joyce, B. & Showers, B. (2002). *Student achievement through staff development*. Alexandria, VA: Association for Supervision and Curriculum Development.

Joyce, B. & Showers, B. (1982). The coaching of teaching. *Educational Leadership, 40 (1)*, 4-10.

Killion, Joellen (2013). *Establishing Time for Professional Development*. Oxford, OH. Learning Forward. 6

Kohler, F. W., Crilley, K. M., Shearer, D. D., & Good, G. (1997). Effects of peer coaching on teacher and student outcomes. *The Journal of Educational Research*, 90 (4), 240-250.

Knight, J. (2009). Coaching: *Approaches and perspectives*. Thousand Oakes, CA: Corwin Press.

Knight, J. & Cornett, J. (2009). *Studying the impact of instructional coaching*. Lawrence, KS: Kansas Coaching Project for the Center on Research on Learning.

Knight, J. (2007). *Instructional coaching: A partnership approach to improving instruction*. Thousand Oaks, CA: Corwin Press.

Knight, J. (1998).*The effectiveness of partnership learning: A dialogical method for staff development*. Lawrence: University of Kansas Center for Research on Learning.

Learning Forward. (2013). *Establishing time for professional learning*. Washington, D.C.: Learning Forward

Learning Network. (2006). *Data sheet: The Learning Network in Battle Creek, Michigan*. Katonah, NY: Richard C. Owens Publishers.

Lee, V. E., & Smith, J. B. (1996). Collective responsibility for learning and its effects on gains in achievement for early secondary students. *American Journal of Education, 104 (2)*, 103-147.

Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago, IL: University of Chicago Press.

Louis, K. S., Kruse, S. D., & Associates. (1995). *Professionalism and community: Perspectives in reforming urban schools*. Thousand Oaks, CA: Corwin Press Inc.

Louis, K. S., & Marks, H. (1998). Does professional community affect the classroom? Teachers' work and student experience in restructured schools. *American Journal of Education, 106 (4)*, 532-575.

McKibbin, M. & Joyce, B. (1980). Psychological states and staff development. *Theory into Practice, 19 (4)*, 248-255.

Miles, K. H., Odden, A., Fermanich, M., Archibald, S., & Gallagher, A. (2003). Inside the black box of school district spending on professional development: Lessons from comparing five urban districts. *Journal of Education Finance, 30 (1)*, 1-26.

Moche, R. (2000/2001). Coaching teachers' thinking. *Journal of Jewish Education, 66*, 20-29.

Moche, R. (1999). Cognitive coaching and reflective thinking of Jewish day school teachers. *Dissertation Abstracts International, 59 (3)*, 678. (University Microfilms No. 9826689)

Nelson, T. & Slavit, D. (2008). Supported teacher collaborative inquiry. *Teacher Education Quarterly, 4*, 99-116.

Neufeld, B., & Roper, D. (2003). *Coaching: A strategy for developing*

References

institutional capacity, promises and practicalities. Washington, D.C.: Aspen Institute Program on Education, & Providence, RI: Annenberg Institute for School Reform.

Newman, F. & Wehlage, G. (1997). *Successful school restructuring: A report to the public and educators by the Center on Organization and Restructuring of Schools*. Madison, WI: Document Service, Wisconsin Center for Educational Research.

Odden, A., Archibald, S., Fermanich, M., & Gallagher, H. A. (2002). A cost framework for professionaldevelopment. *Journal of Education Finance*, 28 (1), 51-74.

Ray, T. M. (1998). Implementing the NCTM's standards through cognitive coaching. *Teaching Children Mathematics, 4 (8)*, 480.

Rosenholtz, S. J. (1989). *Teachers' workplace: The social organization of schools*. New York: Longman.

Saunders, W. M., Goldenberg, C. N., & Gallimore, R. (2009). Increasing achievement by focusing grade-level teams on improving classroom learning: A prospective, quasi-experimental study of Title I schools. *American Educational Research Journal, 46 (4)*, 1006-1033.

Seashore, K. R., Anderson, A. R., & Riedel, E. (2003). *Implementing arts for academic achievement: The impact of mental models, professional community and interdisciplinary teaming*. Paper presented at the Seventeenth Conference of the International Congress for School Effectiveness and Improvement, Rotterdam, January.

Showers, B. (1982). *Transfer of training: The contribution of coaching*. Eugene, OR: Centre for Educational Policy and Management.

Showers, B. (1984). *Peer coaching: A strategy for facilitating transfer of training*. Eugene, OR: Centre for Educational Policy and Management.

Shulman, L. S. (2004). T*he wisdom of practice: Essays on teaching, learning, and learning to teach*. San Francisco, CA: Jossey-Bass.

Siffington, S., Washburn, S., & Elliott, K. (2011). Instructional coaching: Helping preschool teachers reach their full potential. *YC Young Children, 6 (3)*, 12.

Slinger, J. L. (2004). Cognitive coaching: Impact on student and influence on teachers. *Dissertation Abstracts International, 65 (7)*, 2567. (University Microfilms No. 3138974)

Stephens, D., Morgan, D., Donnelly, A., DeFord, D., Young, J. Seaman, M., et al. (2007). *The South Carolina Reading Initiative: NCTE's Reading Initiative as a statewide staff development project*. Urbana, IL: National Council of Teachers of English.

Stoll, L. & Louis, Karen S. (2007). *Professional learning communities: divergence, depth, and dilemmas*. New York: McGraw Hill.

Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change, 7*, 221-258.

Teemant, A., Wink, J., & Tyra, S. (2011). Effects of coaching on teacher use of sociocultural instructional practices. *Teaching and Teacher Education, 27 (2011)*, 683-693.

« SECTION OPENER

References

Truesdale, W. T. (2003). The implementation of peer coaching on the transferability of staff development to classroom practice in two selected Chicago public elementary schools. *Dissertation Abstracts International, 64 (11)*, 3923. (University Microfilms No. 3112185)

Vanderburg, M. & Stephens, D. (2010). The impact of literacy coaches: What teachers value and how teachers change. *The Elementary School Journal, 111 (1)*, 141-163.

Wiley, S. (2001). Contextual effects of student achievement: School leadership and professional Community. *Journal of Educational Change, 2 (1)*, 1-33.

Youngs, P. (2013). *Using teacher evaluation reform and professional development to support Common Core assessments*. Washington, D.C.: Center for American Progress.

BAW Learning Walk Day Round #3

With Wendy Sadd

revised 4-10-17

Tuesday, April 11… two floater subs all day booked by Marjorie.
Three school districts are coming to join us too.

TIME	WHO
8:15-9:15	Wendy & Ginger meet in leveled library with 5 staff members listed on this table. Folks to cover these classes: Melton & Bange - floater sub Baker's classroom - Knipfer Crider's classroom - Lichtenberg &/or Bradley Henderson's classroom - Marsh
8:45-10:45	**Melton & Bange** each have a FLOATER SUB
9:30-10:00	• **Melton & Bange** with Wendy & Ginger (observe Kemp & Baker as they teach BAW)
10:00-10:30	• **Melton & Bange** with Wendy & Ginger (observe Stephens as she teaches BAW)
10:30-11:00	**DEBRIEF in leveled library with Melton & Bange**
11:00-12:00	**LUNCH**
12:00-1:30	**Baker** will have a FLOATER SUB
12:00-12:30	**Baker** with Wendy & Ginger (observe Frantz & Melton as they teach BAW)
12:30-1:00	**Baker** with Wendy & Ginger

	(observe Bange & Frueauf as they teach BAW)
1:00-1:30	**DEBRIEF in leveled library with Baker**
2:00-3:30	**Crider & Henderson** each have a FLOATER SUB
2:00-2:30	**Crider & Henderson** with Wendy & Ginger (observe Davis & Huff as they teach BAW)
2:30-3:00	**Crider & Henderson** with Wendy & Ginger (observe Beekman & Caldwell as they teach BAW)
3:00-3:30	**DEBRIEF in leveled library with Crider & Henderson**

Observers this round were non-observers last round.
The goals are:
#1. Observe a BAW lesson in classrooms & scribe what you see/hear
#2. Record evidence
#3. Analyze data to make improvements

Ohio

Standards for Professional Development

APRIL 2015

Ohio | Department of Education

Introduction

All of Ohio's educators and parents share the same goal – that Ohio's students learn at the highest levels possible and be prepared for the demands of the future. Research shows that teachers have a tremendous impact on student learning, and that the schools in which they operate impact teachers. A strong relationship exists between educational leadership, professional learning, teaching knowledge and practices, and student results. Creating a system of effective professional learning is one way that school systems can support all educators, and encourage improved teaching and learning. Through ongoing professional learning, educators gain the new knowledge, skills and ideas that allow them to best meet students' learning needs.

THE UPDATING OF OHIO'S STANDARDS FOR PROFESSIONAL DEVELOPMENT

During the 2005-2006 school year, the Ohio Educator Standards Board presented its first set of Standards for Professional Development in the publication *Organizing for High Quality Professional Development*. The board, a group of educators representing teachers and university education faculty statewide, began updating the standards in the 2013-2014 school year. The goal of this work was to ensure the standards reflect the nation's expanding knowledge about the elements of effective professional learning.

During the updating process, the *Standards for Professional Learning* developed by the international nonprofit education association Learning Forward served as a leading resource. By adapting and integrating Learning Forward's standards into Ohio's benchmarks, our state joins many others in benefitting from the collective wisdom of numerous experts in the field of professional learning and the collaboration with education associations, organizations and agencies. The Ohio Standards for Professional Development define the essential elements of a strong professional learning system. The Educator Standards Board recommended that the State Board of Education of Ohio adopt these standards.

GUIDELINES FOR A SUCCESSFUL PROFESSIONAL LEARNING SYSTEM

To be effective in increasing educator effectiveness and student learning, a system of professional learning must:

- Occur within a collaborative culture in which *all* share collective responsibility for continuous improvement.
- Be advanced by leaders who prioritize professional learning and develop the capacity and structures to support it.
- Be supported by resources.
- Be data-based, and use data for planning, assessment and evaluation.
- Represent best-practice models and theories of adult learning and active engagement.
- Be research-based, using what is known about change to sustain implementation.
- Focus on specific goals and align outcomes with existing educator and student standards.

Simply adopting these standards does not ensure success. Instead, effective school systems must commit to them by creating a culture of inquiry, in which all feel a shared responsibility and a commitment to continuous improvement. In these systems, educators will practice collaboration and shared leadership, and support meaningful professional learning with adequate resources. Successful implementation will occur within a system of accountability, focused on measurable data and results.

ORGANIZATION

The Ohio Standards for Professional Development include seven standards:

Standard 1: Learning Communities
Standard 2: Leadership
Standard 3: Resources
Standard 4: Data
Standard 5: Learning Designs
Standard 6: Implementation
Standard 7: Outcomes

The standards are organized by standard, narrative, element and indicator.

- The **standard** is the broad category of knowledge, skills or performance.
- The **narrative** more fully describes the content and rationale for each standard.
- The **elements** are the statements of the characteristics of effective professional learning.
- The **indicators** show the observable and measurable actions that educators must take to implement a system of effective professional learning.

INTENDED AUDIENCES

The Ohio Standards for Professional Development articulate the conditions, processes and content required for an effective system of professional learning. Users of Ohio's standards will see that the standards are written from a systems perspective – to describe what occurs within an effective system of professional learning. The standards are not written from the perspective of a single leader or an individual educator but, rather, they describe the overall elements essential for success. As such, their primary audience will be those responsible for implementing systems of professional learning in their schools or districts. The standards are written for multiple audiences including planners, providers, participants and evaluators of professional learning. Individuals and organizations will find them useful in the following ways.

Individual Educators	The standards will guide educators in designing their individual plans for professional learning and identifying effective professional learning opportunities.
Principals	The standards will guide principals in designing their individual plans for professional learning and working to ensure that their schools offer effective systems of professional learning.
School and District Leaders	School and district leaders responsible for designing, implementing and evaluating systems of professional learning should use the standards to design, implement and evaluate the system's professional learning program.
Higher Education	Members of higher education institutions should plan course offerings for educators that align with the characteristics of high-quality professional learning.

External Vendors	External vendors of professional learning should use the standards to ensure that they offer Ohio educators high-quality professional learning opportunities.
Local Professional Development Committees	Members of local professional development committees can use the standards to help educators create individual plans and to evaluate the plans of individual educators.

HOW TO USE THE STANDARDS

The Ohio Standards for Professional Development set clear expectations for professional learning in the state's schools and districts. Individual educators, teams, school and district staff may use the standards to guide their efforts in selecting and evaluating professional learning opportunities. Institutions of higher education, external vendors and other educational providers also will find the standards beneficial as they establish policies and opportunities for professional learning.

The standards are not a recipe book for how to create a specific professional learning system locally. Rather, the standards and other resources from the Ohio Department of Education and Learning Forward are resources districts should use as they work together in small groups to develop effective systems and processes that meet their needs.

The following offer suggestions for how educators serving in a variety of roles can use the standards to support effective professional learning. Each individual can:

- Study the standards to develop knowledge of effective professional learning practices and become stronger advocates for effective professional learning.
- Evaluate professional learning opportunities with the standards, to identify standards-supported opportunities and request improvements in other existing professional learning opportunities.
- Apply the standards to the planning, design, facilitation and evaluation of professional learning they lead.

Ohio Standards for Professional Development

Standard 1: Learning Communities

Professional learning that increases educator effectiveness and results for all students…**occurs within learning communities committed to continuous improvement, collective responsibility and goal alignment.**

Effective professional learning takes place within a system, with a culture of collaboration and shared responsibility. In an effective system, all members are focused on a cycle of continuous improvement, which maintains its focus on a set of targeted goals that align with larger school and system goals. For some school systems, meeting this standard may require a conceptual or cultural shift. For others, it may simply require a greater focus on specific steps in a cycle of continuous improvement or greater support for collective participation in learning communities.

Elements	Indicators
1.1 Engage in continuous improvement.	**1.1.1** Develop capacity to apply a cycle of continuous improvement. • Use data to determine student and educator learning needs; • Specify targeted, shared goals for student and educator learning; • Offer and support professional learning that extends educators' knowledge of content, content-specific pedagogy, how students learn and management of classroom environments; • Select and implement evidence-based strategies to achieve focused student and educator learning goals; • Support application of learning with local support at the work site; • Use evidence to monitor and refine implementation; and • Evaluate results. **1.1.2** Apply the continuous improvement cycle.
1.2 Develop collective responsibility.	**1.2.1** Create a culture of inquiry in which all members share a collective responsibility for students' success. **1.2.2** Foster engagement of and collaboration among all staff in meeting the needs of students, including their social, emotional, mental and learning needs.
1.3 Create alignment and accountability.	**1.3.1** Specify targeted, shared goals for student and educator learning. **1.3.2** Align professional learning with individual, school and system goals – including the Ohio educator and student standards.

Standard 2: Leadership

Professional learning that increases educator effectiveness and results for all students…**requires skilled teacher leaders and administrators who develop capacity, and advocate and create support systems for professional learning.**

Leaders in an effective professional learning system may be found at the classroom, school or system levels. What these leaders share is the belief that professional learning is key to increasing student results – and, as a result, learning is among their top priorities. Effective leaders maintain a persistent focus on educator professional learning. They develop expertise among others in the community and create the systems and structures needed to enable learning. For some school systems, meeting this standard may require structural shifts. For others, it may require clearer articulation of the role of professional learning on student results or a more targeted focus on developing skills for shared leadership, collaboration and effective participation in learning communities.

Elements	Indicators
2.1 Develop capacity for learning and leading.	**2.1.1** Develop capacity among educators for leadership of professional learning – including the building of knowledge for collaborating in teams successfully. **2.1.2** Understand and use best-practice research and the Standards for Professional Learning in making decisions about professional learning.
2.2 Advocate for professional learning.	**2.2.1** Articulate the link between student learning and professional learning. **2.2.2** Advocate high-quality professional learning by promoting learning with staff, students, parents, system leaders, public officials and community members and challenging ineffective practices.
2.3 Create support systems and structures for professional learning.	**2.3.1** Establish systems and structures for effective professional learning. **2.3.2** Prepare and support staff for skillful collaboration. **2.3.3** Contribute to the development and maintenance of a collaborative culture. **2.3.4** Create learning communities that offer all educators the chance to share ways of improving teaching and learning as they work in small teams organized by grade, subject, roles, interests, goals or other areas of responsibility.

Standard 3: Resources

Professional learning that increases educator effectiveness and results for all students…**requires prioritizing, monitoring and coordinating resources for educator learning.**

To achieve goals, effective professional learning requires human, fiscal, material and technological resources – and time. Resources may come from many sources – including partnerships with institutions of higher education, as well as allocations from government, public and private agencies and educators themselves. Making decisions about resource allocation requires a clear understanding of available resources, a thoughtful consideration of priorities and creative thinking about ways to embed learning into educators' practice. Once resources have been allocated, tracking and monitoring these resources to evaluate their effectiveness is an essential step to ensure that thoughtful decisions are made in how to allocate, adjust and coordinate resources.

Elements	Indicators
3.1 Prioritize time and human, fiscal, material and technological resources.	**3.1.1** Define internal and external resources for professional learning, including staff, materials, technology, funding, time and partnerships (such as with institutions of higher education and external vendors). **3.1.2** Recommend resources to align professional learning with high-priority student and educator learning needs and to support implementation. **3.1.3** Allocate time for collaborative professional learning within the schedule.
3.2 Monitor resources.	**3.2.1** Monitor effectiveness and efficiency of the use of resources for professional learning by reviewing data and adjusting direction of resources as needed.
3.3 Coordinate resources.	**3.3.1** Design and implement a comprehensive, professional learning resource plan, which includes repurposed resources, schedules, technology, internal and external human resources and grants or other funding sources.

Standard 4: Data

Professional learning that increases educator effectiveness and results for all students…**requires the use of a variety of sources and types of student, educator and system data to plan, assess and evaluate professional learning.**

To have a balanced and comprehensive view of student, educator and system performance, educators must collect, analyze and interpret multiple sources of quantitative and qualitative data. Sources for this data might include formal and informal measures, such as demographics of student populations, the results of the Ohio Principal and Teacher Evaluation Systems, formative and summative assessments, performance assessment results, observations, samples of work, portfolios and self-reports of educator needs. Data plays a role in informing the goals for professional learning, allowing systems to accelerate and continue educator growth and provide support as needed. In addition, data is essential in evaluating progress and outcomes of professional learning. The process of analyzing data can be professional learning in and of itself for educators who work in teams to analyze student work or design shared assessments. Ongoing data collection informs and sustains a cycle of continuous improvement.

Elements	Indicators
4.1 Analyze student, educator and system data.	**4.1.1** Develop capacity to analyze and interpret data. **4.1.2** Analyze and interpret multiple sources of qualitative and quantitative • student data • educator data • school and system data to determine professional learning needs.
4.2 Assess progress.	**4.2.1** Determine formative data to assess progress toward professional learning benchmarks and goals. **4.2.2** Collect, analyze and use formative data to continuously assess progress

Elements	Indicators
	toward professional learning benchmarks and goals. **4.2.3** Use analysis of progress to make adjustments in professional learning, including solving problems, changing learning designs or coaching and support systems, activities and timeframes.
4.3 Evaluate professional learning.	**4.3.1** Contribute to the development of an evaluation plan for professional learning. **4.3.2** Use a variety of formative and summative data to evaluate professional learning's effectiveness and impact on student performance, professional practice, school culture and organizational structures. **4.3.3** Support the use of data by facilitating data review and analysis to evaluate the effectiveness of school wide learning designs, content and duration. **4.3.4** Use evaluation results to improve professional learning.

Standard 5: Learning Designs

Professional learning that increases educator effectiveness and results for all students…**integrates theories, research and models of human learning to achieve its intended outcomes.**

Research has revealed much about how people learn, and educators should use this information to design high-quality professional learning that will impact teaching and student achievement. The use of multiple designs for learning are supported by evidence and while they differ, they share features such as active engagement, modeling of new techniques or practices; opportunities for application, reflection, self-assessment and feedback; and monitoring and support during implementation. Successful professional learning can occur within the school day or outside of it; take place in face-to-face, online or hybrid settings; can be focused on individuals or on groups; and can vary in terms of level of structure. Most effective systems will incorporate multiple learning designs. For some systems, a consideration of effective designs may result in an expansion of what is viewed as professional learning. For example, collaborating with colleagues, analyzing student data, observing peers, examining student work and designing shared lessons or assessments are all job-embedded designs that can result in professional learning.

Elements	Indicators
5.1 Apply learning theories, research and models.	**5.1.1** Develop and share a knowledge base about theories, research and models of adult learning. **5.1.2** Acquire and share knowledge about multiple designs for professional learning, such as peer coaching, collaborative learning communities, action research and the examination of student work.
5.2 Select learning designs.	**5.2.1** Acquire, share and apply knowledge of learning designs, including technology-based designs, when considering multiple factors to select effective designs for professional learning. **5.2.2** Develop and share knowledge about technology-enhanced learning designs. **5.2.3** Implement effective learning designs.
5.3 Promote active engagement.	**5.3.1** Ensure that learning is relevant to educators' day-to-day work and supported in practice. **5.3.2** Implement engagement strategies to maximize learning.

Standard 6: Implementation

Professional learning that increases educator effectiveness and results for all students…**applies research on change and sustains support for implementation of professional learning.**

When systems have in place the foundational elements for professional learning, they must then take action. Knowing is not the same as doing. To change educator practice and increase student learning takes time and requires an understanding of change. Creating meaningful changes in professional practice requires an attention to possible barriers as well as ongoing feedback and support to reduce these potential roadblocks. As they work to implement new knowledge and skills, school districts can support educators formally and informally; individually or through learning communities or teams; through coaching or peer support; and through materials, resources and models. Constructive feedback and opportunities for reflection can ensure that educators continue to move higher on the continuum of their practice.

Elements	Indicators
6.1 Apply change research.	**6.1.1** Build knowledge of research on change. **6.1.2** Apply research on change to plan and lead the implementation of professional learning.
6.2 Sustain implementation.	**6.2.1** Differentiate support for implementation of professional learning. **6.2.2** Continue support to reach high-fidelity implementation of professional learning.
6.3 Provide constructive feedback.	**6.3.1** Develop capacity to give and receive constructive feedback. **6.3.2** Provide constructive feedback to accelerate and refine implementation of professional learning.

Standard 7: Outcomes

Professional learning that increases educator effectiveness and results for all students…**aligns its outcomes with educator performance and student curriculum standards.**

Student and educator standards specify what students and educators should know and be able to do. By aligning professional learning with these high expectations for students and educators, the link between educator learning and student learning becomes explicit. Making these connections creates a coherent system in which activities for professional learning do not take place in isolation. Instead, opportunities for learning are purposeful and focused on clear goals, specific contexts and demonstrated areas of need.

Elements	Indicators
7.1 Meet performance standards.	**7.1.1** Use Ohio's educator standards to identify professional learning needs. **7.1.2** Use Ohio's educator standards to make decisions about the content of professional learning.
7.2 Address learning outcomes.	**7.2.1** Use Ohio's student learning standards to identify professional learning needs. **7.2.2** Use Ohio's student learning standards to select the content of professional learning. **7.2.3** Offer and support professional learning that extends educators' knowledge of content, content-specific pedagogy, how students learn and management of classroom environments.
7.3 Build coherence.	**7.3.1** Connect professional learning with building, local and statewide initiatives. **7.3.2** Contextualize professional learning, building on earlier professional learning and bridging to planned future experiences.

The Ohio Educator Standards Board, the State Board of Education and the Ohio Department of Education do not recommend or endorse any specific for-profit professional learning program for use by educators. The updated Ohio Standards for Professional Development present educators with benchmarks for selecting, evaluating and designing professional learning opportunities that meet high-quality criteria.

NIET | NATIONAL INSTITUTE FOR EXCELLENCE IN TEACHING

BEYOND "JOB-EMBEDDED"

Ensuring That Good Professional Development Gets Results

March 2012

NIET | NATIONAL INSTITUTE FOR EXCELLENCE IN TEACHING

BEYOND "JOB-EMBEDDED"

Ensuring That Good Professional Development Gets Results

Introduction

Two recent studies by Biancarosa et al.[1] and by Saunders et al.[2] have finally demonstrated that "job-embedded, sustained professional development" can significantly improve student achievement. But there's a catch. In both studies, effective professional development (PD) strategies were successful only under certain circumstances or only in some schools and classrooms. The determining factor was not the quality of the PD itself, but rather the conditions under which it was delivered. It turns out that job-embedded PD can be highly effective, but *only* when there is a sufficient infrastructure in place to support it.

For over ten years, TAP: The System for Teacher and Student Advancement has pioneered a comprehensive approach to school reform focused on the quality of teaching and the advancement of effective educators in schools. TAP provides powerful opportunities for career advancement, professional growth, fair and more accurate evaluation, and increased compensation based on performance. This comprehensive system of reform is reaching approximately 20,000 teachers and 200,000 students in districts across ten states in the 2011-2012 school year.

The TAP system, which is managed and supported by the National Institute for Excellence in Teaching (NIET), incorporates both of the strategies that the research studies have found to be potentially effective—*collaborative learning teams* and *instructional coaching*. But TAP also takes the next critical step by helping schools create an infrastructure that supports high-quality PD and ensures that the activities ultimately deliver positive results, both for teachers and for their students. Building on recent research, this paper describes how the TAP system enables schools to support, oversee, and reinforce job-embedded PD so that teachers and students consistently benefit from it. This paper also describes how effective PD can be aligned with teacher evaluation systems to better ensure that teachers receive specific feedback to support improvements in their practice.

Job-Embedded Professional Development Works…Sometimes

A broad new consensus has emerged about the best approach to professional development. Instead of attending one-shot workshops and journeying to conferences, experts say that teachers should be able to learn on the job with plenty of opportunities for collaboration and individualized support. Nearly every report on PD now dutifully includes a list of core features of effective PD, including a **focus on curriculum** and shared instructional challenges; **collective participation**; opportunities for **active learning**; sustained **duration**; and **coherence** with student achievement goals and other policies.

1. Biancarosa, G., Bryk, A.S., & Dexter, E.R. (2010, September). Assessing the value-added effects of Literacy Collaborative professional development on student learning. *The Elementary School Journal,* 111(1), 7-34.
2. Saunders, W.M., Goldenberg, C.N., & Gallimore, R. (2009, December). Increasing achievement by focusing grade-level teams on improving classroom learning: A prospective, quasi-experimental study of Title I schools. *American Educational Research Journal,* 46(4), 1006–1033.

No Child Left Behind endorsed that vision by emphasizing that PD should be "high-quality, sustained, intensive and classroom-focused" and "not one day or short-term workshops or conferences."[3] Since then, many districts and schools have shifted considerable resources toward various forms of job-embedded PD that fit the new mold, such as providing teachers with time to meet in collaborative teams or opportunities to work with instructional coaches.

Yet until very recently, researchers had produced almost no strong evidence that job-embedded PD can significantly improve student learning. Moreover, among the oft-cited attributes of effective professional development, only one feature on the list—sustained duration—has had reasonably solid research to back it.[4]

Fortunately, that has changed. In 2010 Gina Biancarosa, Anthony Bryk, and Emily Dexter published the results of a four-year longitudinal study providing solid evidence that instructional coaching can improve student learning. During the third year of implementation, instructional coaching contributed to a 32 percent increase in value-added student learning gains—a huge impact in the realm of PD research.

> ***At the classroom level, "The vast majority of teachers in most of the participating schools showed substantial value-added effects by the end of the study."***

Similarly, a study published in December 2009 showed that providing teachers with time to participate in collaborative teams also can improve student achievement. (Such strategies go by many different names, including "professional learning communities," "grade-level teams," or, as in TAP schools, "cluster groups.")

> ***According to the study's authors, William Saunders, Claude Goldenberg, and Ronald Gallimore, "This might be one of the first quasi-experimental investigations demonstrating increased average achievement over time in schools that implemented teacher teams focused on improving student learning."***

However, both studies included an important catch: While generally effective, the strategies were successful only under certain circumstances or only in some schools and classrooms. For decision makers, that catch is just as important as the positive overall findings. Job-embedded PD can be very expensive. According to Education Resource Strategies, "The investment in teacher time for collaborating with colleagues represents the largest single item of professional development spending at the school level."[5] High-quality instructional coaching requires a significant investment as well.[6]

Especially in tough budget times, the challenge for education leaders and policymakers is not just to invest in "what works," but also to take steps to ensure that what *can* work *does* work. When potentially effective PD achieves only limited success or uneven results, scarce dollars are wasted and students who could have benefited do not. Fortunately, both recent studies were among a new generation of results-based PD research to, as *Education Week* put it, "... offer solid clues not only to what works but also when, under what conditions, and to some extent, why."[7]

3. Elementary and Secondary Education Act, Section 9101(34)(A)(v).
4. Wayne, A.J., Yoon, K.S., Zhu, P., Cronen, S., & Garet, M.S. (2008, November). Experimenting with teacher professional development: Motives and methods. *Educational Researcher,* 37(8), 469-479.
5. Education Resource Strategies. (2009, April). Teaching Quality: The First Priority. Watertown, MA. (p. 7) ERS estimates that collaborative PD time accounts for about 65 percent of school-level professional development spending.
6. Knight, D.S. (2010, December 15). *The Economic Cost of Instructional Coaching*. Submitted to the graduate degree program in Curriculum and Teaching and the Graduate Faculty of the University of Kansas. Examining three schools, Knight found the actual cost of instructional coaching programs to range from $3,260 to $5,220 per teacher.
7. Viadero, D. (2010, May 12). Coaching of teachers linked to stronger gains in reading. *Education Week*, 29(31), 6-7.

When Effective PD Works and Fails

In the study by Biancarosa et al., the impact of the coaching program varied significantly across schools and even across classrooms in the same school. The biggest reason: Some teachers received no coaching while others enjoyed as many as 43 sessions. Not surprisingly, schools whose teachers received the most coaching experienced much bigger increases in value-added student learning gains. Uneven amounts of coaching contributed to lower *overall* implementation than planned: On average, teachers received only about *half* of the coaching sessions that the program's developers recommend.[8]

The researchers analyzed various factors that might have inhibited or facilitated one-on-one coaching. The biggest inhibitor was the teacher-per-coach ratio, which varied from school to school. When the ratio grew too large, coaches found themselves spread too thinly.[9]

But other factors turned out to be important too. In a presentation for the federal Institute of Education Sciences, the researchers compared two schools with the same teacher-to-coach ratio but with a wide gap in the number of coaching sessions teachers received. Unequal amounts of coaching had a stunning impact on student outcomes. In the "high-coaching" school, although value-added scores started out below average, they increased during the study. In the "low-coaching" school, school-level value-added scores were above average but subsequently declined.[10]

Why did coaching vary so much even in schools where coaches carried the same workload? The answers had to do with school leadership, support, and buy-in. Coaches who perceived greater support from school principals and faculty provided nearly one additional coaching session on average per teacher per semester. And teachers who expressed stronger commitment to school improvement efforts and greater comfort initiating professional interactions tended to receive more coaching.[11] As one researcher summed up the problem for *Education Week*, "...in some ways, coaching is a voluntary activity."[12]

In the study by Saunders et al., the driver turned out to be how teams spent their time when they met, and ensuring the right kind of "quality time" was no easy matter. Researchers concluded that collaborative teams have a positive impact on student achievement when they "...focus on a specific student learning need over a period of time and shift to an emphasis on *figuring out* an instructional solution that produces a detectable improvement in learning, not just *trying out* a variety of instructional activities."[13] When that happens, teachers literally see the impact of new teaching strategies on student learning and become invested in changing classroom practices to get better results.

8. Biancarosa, Bryk, & Dexter. (2010).
9. Atteberry, A., Bryk, A., Walker, L., & Biancarosa, G. (2008). *Variations in the Amount of Coaching in Literacy Collaborative Schools*. Paper presented at the 2008 Conference of the American Educational Research Association, New York, New York.
10. The "high-coaching" school also saw variation in *classroom-level* value-added scores decrease over the course of the study so that teaching became more equitably effective for students, while in the "low-coaching" school, variation among teachers increased so that teaching effectiveness became more inequitably distributed.
11. Biancarosa, G., Bryk, A.S., Atteberry, A., & Hough, H. (2010, June). *The Impact of Literacy Coaching on Teachers' Value-Added to Student Learning in Literacy Collaborative.* Presentation at the Institute of Education Sciences Annual Conference, National Harbor, Maryland, June 28-30, 2010.
12. Viadero, D. (2010).
13. Gallimore, R., Ermeling, B., Saunders, W., & Goldenberg, C. (2009, May). Moving the learning of teaching closer to practice: Teacher education implications of school-based inquiry teams. *The Elementary School Journal*, 109(5), 537-553.

But teams in the study only worked that way when certain supports were in place. At first the program trained principals to bring together and facilitate the collaborative teams, but that approach failed to support rigorous implementation and to yield improvements in student learning.

During the next phase, the program shifted toward a "distributed leadership" approach wherein school leadership teams—including teacher-leaders as well as principals—received intensive training and support. Additionally, the training included explicit protocols for planning and structuring collaborative teacher meetings so that critical shift from "trying out strategies" to "figuring out solutions" occurred reliably across collaborative teams. The new approach worked. Over the final three years, student achievement improved faster than average and at a faster rate than in comparison schools.[14]

Digging deeper, researchers identified several specific features that seemed critical for collaborative team success, including the following:

- While principal support was crucial, collaborative teams were more successful when facilitated by ***teacher-leaders*** who implemented the new strategies in classrooms themselves and could show evidence of improved student learning.
- Teams were more successful when teacher-leaders were trained to use ***explicit protocols*** to guide teams through a process of identifying student learning problems, selecting instructional strategies, analyzing student work for evidence of impact, and honing strategies until they achieved results.
- Finally, to persist in focused problem-solving long enough to achieve success, teams needed ***regular time to meet***, and school leadership teams needed to protect that time from competing demands.[15]

Clearly, it is not enough for professional development merely to be job-embedded or to exhibit the broad features recommended by experts—or even to be of "high-quality." Investments in *potentially* effective strategies such as instructional coaching or collaborative meeting time will not pay off unless they are facilitated in deliberate ways to ensure consistent results. Specifically, schools must have an infrastructure in place that guarantees a "yes" on each of the four questions researchers typically ask when they evaluate professional development:

1) Do all teachers experience high-quality PD?
2) Does the PD increase teachers' knowledge and skills?
3) Does the new knowledge and skills translate into new classroom practices?
4) Do the new classroom practices improve student learning?[16]

14. Saunders, Goldenberg, & Gallimore. (2009).
15. Gallimore, Ermeling, Saunders, & Goldenberg. (2009).
16. Desimone, L.M. (2009, April). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181-199.

How the TAP System Supports Job-Embedded PD

In light of that recent research, the TAP system provides a useful example of how schools can ensure that job-embedded professional development gets results. First, TAP leverages both of the specific PD strategies examined by the research studies described above—instructional coaching and collaborative learning teams. Second, TAP supports, oversees, and reinforces those PD strategies through a range of other mechanisms, including explicit teacher leadership roles, clear but achievable responsibilities for principals, schoolwide instructional leadership teams, and intentional alignment with other human resource strategies.

Professional Development in TAP

The TAP system combines collaborative teams and classroom coaching to maximize the potential impact of both strategies. In TAP schools, teachers receive one-on-one coaching from master teachers and mentor teachers. These same teacher-leaders also lead collaborative teams of teachers called "cluster groups," which meet weekly to learn and develop new classroom strategies and to analyze the impact of those strategies on student learning. After every cluster meeting, master and mentor teachers provide targeted follow-up coaching to help teachers master and effectively implement the strategies they worked on during the meeting, carefully calibrated to meet each teacher's individual needs. Master and mentor teachers also serve on a schoolwide TAP Leadership Team, led by the principal, which sets clear goals for cluster groups and monitors their progress to ensure success.

In order to be effective in these new roles, master teachers, mentor teachers and administrators at TAP campuses have been trained extensively in the TAP system. The initial training occurs during the summer before the first year of implementation and is called TAP CORE training. TAP CORE consists of nine days of interactive training from experts in the process. All members of the leadership team are also supported and coached throughout the year by NIET or state-level TAP teams. The knowledge gained during this initial process and throughout the year allows the leadership team to implement the following steps with a high degree of fidelity to the model.

Here is how the process works step by step:

1 *Targeting Specific Student Needs*

Before school opens in the fall, members of the school's TAP Leadership Team analyze student achievement results and develop a schoolwide plan for improving learning. The plan identifies a set of progressively more specific student learning goals that will guide cluster group activities, along with benchmark and formative assessments to monitor success. A broad "school goal" typically relates to the state assessment; a "yearly cluster goal" typically relates to a benchmark assessment aligned with the state test; and "cluster cycle goals" typically relate to teacher-made formative assessments that align with both. (See Figure 1, page 6, for examples.) Cluster cycle goals address the specific student skill targeted and describe the instructional strategies teachers will learn from master and mentor teachers to enable students to meet each goal.

Identifying specific goals and measures up-front enables cluster groups to focus on solving real problems in student learning rather than simply trying out new teaching activities that might not be well-aligned with student needs. Identifying progressively more focused goals allows cluster teams to zero in on very specific aspects of student work during each cycle—a level of detail that standardized state tests simply cannot provide. Throughout the year, cluster teams know exactly what they are aiming for and have the right tools to monitor whether they are hitting the mark.

For this reason, schools incorporate analysis of short-cycle and formative assessments to monitor progress toward the established goals.

FIGURE 1: EXAMPLES OF STUDENT LEARNING GOALS AND ASSESSMENTS TO GUIDE CLUSTER GROUP ACTIVITIES

Sample School Goal: On state English/Language Arts assessment, students will increase from 3% Advanced to 10% Advanced, 17% Proficient to 25% Proficient, 35% Basic to 50% Basic, and 45% Below Basic will decrease to 15%.

Sample Yearly Cluster Goal: All students will improve performance on the benchmark English/Language Arts test aligned to the state assessment by one proficiency level, and students performing at the highest level will maintain their scores due to teachers demonstrating proficiency in teaching "main idea," "supporting details," and the "writing process."

Sample Cluster Cycle Goal: By the end of the cycle, all students will increase their scores by at least one proficiency point in the area of "voice," and students already scoring Advanced in "voice" will maintain their scores on a teacher-made writing assessment scored using the State Writing Rubric—due to teachers demonstrating proficiency in teaching students "hook," "elaboration," and "transitional word" strategies.

2 *Selecting and Field-Testing Classroom Strategies*

After the leadership team identifies student learning goals, master teachers select research-based strategies that cluster groups use to achieve those goals. For example, in Figure 1, "hook," "elaboration," and "transitional word" represent three particular strategies a master teacher will introduce during cluster meetings. Teachers then implement strategies in their own classrooms to help students develop stronger "voice" in their writing. Master teachers consult a range of resources to identify promising research-based strategies. NIET has developed the TAP System Training Portal, a Web-based resource through which TAP schools can share strategies that worked for their students.

However, before master teachers introduce *any* new strategy in cluster groups, they first rigorously "field-test" the strategy themselves to make certain it will work as intended. They do this by teaching the strategy to students in a range of classrooms within the school, conducting pre- and post-assessments and collecting before-and-after samples of student work. If a given strategy fails to enable the students in the field test to meet their group goals, the master teacher makes adjustments until it works or selects a different strategy.

"Field-testing allows us to take a research-based strategy that worked in another part of the country with another group of children and prove that it can actually work in our own school," says Monique Wild, a former TAP master teacher, now executive master teacher at the Louisiana Department of Education. "It might not work here exactly the same way as it was implemented in, say, Boston or Los Angeles, but it will work for our population given modifications to meet the unique needs of our students."

Field-testing thus enables TAP schools to fill a gaping hole in American education—the lack of a robust research and development infrastructure to inform local improvement efforts. According to Anthony Bryk, president of the Carnegie Foundation for the Advancement of Teaching (and co-author of the coaching study previously cited), "That a program, practice, or service *can* work is of little value unless we discern *how to make it work* at scale in the hands of many different individuals working under diverse circumstances." Bryk has called on policymakers to fund a "Design, Educational Engineering, and Development infrastructure" to fill that gap,[17] but until then TAP schools will remain among the few in the nation with a built-in capacity to meet the need.

In addition to enabling master teachers to "engineer" strategies to work with their own colleagues and students, field-testing also provides them with hard evidence that a given strategy can work for students of high, medium, and low initial proficiency. Thus, teachers in TAP schools enjoy a rare guarantee that the techniques they are spending precious time mastering not only *can* but *will* deliver results. "Without field-testing, cluster is just sharing strategies that may or may not work. It's a shot in the dark," says Wild. "But with field-testing, you know that you're going to hit the bull's-eye." Indeed, while this type of vetting of a strategy is typically different than anything most educators have done before, master and mentor teachers are supported through this process with training and support from NIET and their state TAP teams.

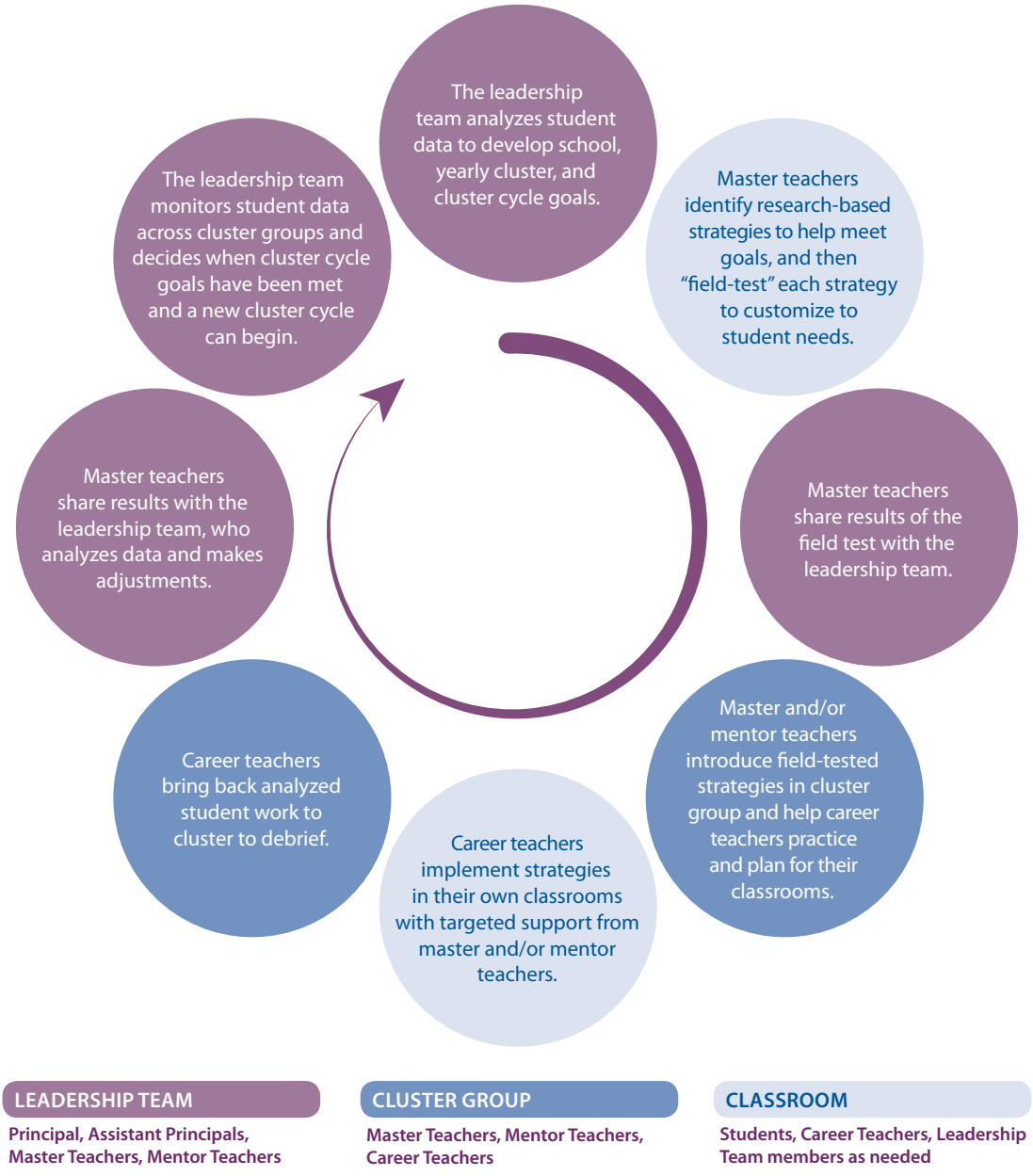
Finally, field-testing builds the master teacher's depth and expertise in the selected strategy and provides hands-on experience to plan how they will help teachers learn the new instructional strategies during cluster group meetings. To that end, they identify an explicit set of "critical attributes"[18] that are necessary to obtain the student learning the strategy garnered during field-testing, and they decide how to sequence and segment cluster group topics into manageable weekly segments. Both decisions require careful consideration of the level and range of current instructional expertise among teachers in their cluster groups.

> ***"This is challenging work because you need to consider two dimensions of strategic planning at once—student needs and teacher needs," explains Vicky Condalary, senior state executive master teacher with the Louisiana Department of Education. "'How can I get the strategy to work for all these students, and how can I break it down so all the teachers in my cluster group can understand and apply it effectively?' And for that, you really need to consider the current proficiency level of the teachers in your cluster group."***

17 Bryk, A.S. (2009, April). Support a Science of Performance Improvement. *Phi Delta Kappan*, 90(8), 597-600.

18. "Critical attributes" are the essential elements of the strategy that make it work effectively. They explain why each step is necessary, how it should be executed, and when it should be implemented within the lesson, along with problems teachers should anticipate at each step of student learning. The critical attributes inform how to teach the steps of the strategy and the metacognition behind each step.

FIGURE 2. OVERVIEW OF PD IN TAP SYSTEM SCHOOLS



3 *Learning New Strategies in Cluster Group Meetings*

When it is time to introduce a field-tested strategy to their cluster groups, master teachers follow a "gradual release" approach that deliberately moves from describing to explaining to modeling to guided practice to independent practice supported by intensive in-class coaching. There is a specific protocol followed during cluster group meetings that aligns to this gradual release model called the five STEPS for Effective Learning. The STEPS for Effective Learning provide the process by which field-tested strategies are presented in cluster group meetings. These steps closely mirror the gradual release approach that happens in classroom instruction. The intent is to ensure that teachers build the expertise necessary to apply what they learn in cluster so their students meet the goals established in the school plan.

Master teachers begin by referencing the school plan and discussing the particular goal, or student learning need, the strategy is meant to address. Often they discuss the theory and empirical research behind the new strategy. Then they describe the student achievement gains the strategy produced during field-testing, sharing examples of student work that clearly illustrate increases in proficiency among students with high, medium, and low skills. At this point, teachers literally can see the impact the strategy had on specific students in the school, not just anonymous groups of students in a far-flung research study.

Next, the master teacher models the new strategy for the group using the critical attributes identified through the field-testing process as the essential elements making the strategy successful.[19] Then the master teacher models how she taught the strategy with a classroom of students. At key points during the modeling, the master teacher "steps out" of the teacher role and back into the role of cluster leader in order to explain an aspect of the strategy or help teachers make a connection to the student need or a critical attribute. This explicit two-tiered approach to modeling builds deep understanding of a new strategy while providing a tangible example of expert instruction worthy of emulation.

After modeling the strategy, the master teacher provides an opportunity for teachers to ask clarifying questions and, in turn, asks them probing questions to identify gaps in understanding. Then cluster members spend time practicing the strategy themselves (by role-playing, peer-coaching, etc.) and developing a plan to apply it in an upcoming lesson.

According to Condalary, such a "development" stage is generally missing from professional development. "Teachers constantly experience training where there's no chance to actively practice and develop new strategies, and without development, there's no transfer to the classroom," she explains. "Also, as a teacher, I need to leave the cluster meeting with a plan for how I am going to transfer this strategy into an actual lesson I plan to teach. I don't need a 'to do' list but rather a 'to-done' list." In fact, Condalary says that beginning master teachers often have a hard time planning the development portion of cluster meetings at first because they have never experienced it themselves.

Another reason the development phase is important is because it provides master teachers with a great opportunity for next-step planning. By observing teachers practicing, peer-coaching, and planning to integrate the strategy into their lessons, master teachers can formatively assess how well each teacher understands the strategy and make notes about the kind and amount of targeted support each teacher will need following the cluster group meeting. By the end of the meeting, master teachers will have made appointments to visit each teacher for one-on-one coaching.

Finally, the master teacher discusses how to assess student mastery and the kind of student work teachers should bring back to the cluster meeting the following week. All teachers will use formative assessment so the group can analyze how well the strategy worked for all students and adapt it further if necessary.

19. For ease of explanation, this description assumes the master teacher leads all aspects of the cluster group meeting. However, that is not always the case. For example, other members of cluster group such as mentor or career teachers might model the strategy if they participated in the field-testing and mastered the strategy sufficiently.

FIGURE 3. STEPS FOR EFFECTIVE LEARNING IN CLUSTER GROUP

Identify problem or need	Obtain new teacher learning aligned to student need and formatted for classroom application	Develop new teacher learning with support in the *classroom*	Apply new teacher learning to the classroom	Evaluate the impact on student performance
• Evidence of need (using pre-test) is clear, specific, high-quality and measurable in student outcomes • Problem or need addresses student content learning with links to teachers strategies and the TAP Rubric[20]	• Use credible sources • Proven application showing student growth	Develop through demonstration, modeling, practice, team teaching and peer coaching with subsequent analysis of student work	Evidence through observation, peer coaching, and self reflection applied to student work as a formative assessment	Evidence includes student assessment (post-test) aligned with data analysis and the new teaching strategies

4 *Providing Follow-Up Coaching to EVERY Teacher*

Unlike PD programs that merely offer teachers instructional coaching, the TAP system expects master and mentor teachers to follow up after cluster meetings to provide every teacher with one-on-one coaching. They are provided training, authority, time, and additional compensation for these roles, and their work with classroom teachers is not voluntary or optional. Master and mentor teachers carefully calibrate the content and form of coaching to meet teachers' individual needs. For example, they might ask:

- How well did the teacher understand the strategy overall, and did he or she struggle with a particular aspect of it?
- What kind of coaching technique would work best for this teacher in this circumstance—observation and feedback, a demonstration lesson, co-teaching?
- Will one of the "critical attributes" be difficult for this teacher, given what I know from the teacher's formal evaluations or what I have observed informally in the teacher's classroom?

Master and mentor teachers learn to employ a wide range of coaching techniques that can be adapted to suit teachers' individual needs. Some teachers might benefit most from "lighter" coaching in which the master or mentor teacher observes the teacher applying the new strategy during a lesson and then follows up with reflective questions and feedback. Other teachers might benefit most from a demonstration lesson during which they get to observe the master teacher modeling the strategy again, this time with an actual classroom of students. Still other teachers might need more intensive "elbow-to-elbow" coaching wherein they co-teach a lesson to a classroom of students—right alongside the master or mentor teacher.

In most PD programs, those more interactive and intensive forms of coaching are much less frequently employed. For example, in a recent study of coaching in Reading First schools, 57 percent of teachers reported that coaches ***never*** co-taught lessons with them, compared with 31 percent who said coaches never modeled for them, and 25 percent who said coaches never observed them.[21] That is not surprising: Highly interactive coaching requires a strong working relationship and a great deal of trust between teachers and coaches.

20. The TAP Rubric, also called the TAP *Teaching Skills, Knowledge, and Responsibilities Performance Standards*, includes empirically validated standards for measuring effective instructional practice.

21. Bean, R.M., Draper, J.A., Hall, V., Vandermolen, J., & Zigmond, N. (2010, September). Coaches and coaching in Reading First schools: A reality check. *The Elementary School Journal,* 111(1), 87-114. (Table 2, p. 105)

According to Jason Culbertson, NIET's senior vice president of school services, the fact that so much instructional coaching "defaults" to observation represents a massive wasted opportunity. "When TAP master and mentor teachers provide demonstration lessons or co-teach, students in those classrooms have a chance to be taught by one of the most effective teachers in the building, all while their teachers get to see excellent instruction modeled in a real setting. So there is a 'double benefit' from that kind of coaching—both for students and for teachers." Moreover, he says, co- or team-teaching effectively reduces the student-teacher ratio by half, enabling teachers to provide more individualized support for students during the lesson.

> ***Culbertson says that NIET identified the tendency of coaches to default to observation early on and has taken steps to address it. "We make very clear to TAP master teachers that it's not their job just to observe teachers. It's their job to roll up their sleeves and jump right in," he says. "Nine times out of ten when a master teacher doesn't work out in a TAP school, it's because they don't do that."***

NIET also works to address another common gap in instructional coaching—following up with teachers after the initial coaching session to be sure they have sufficiently understood everything. In fact, in the previously cited Reading First study, researchers were shocked to find that fewer than half of the coaches held formal follow-up conversations with teachers, even when their coaching took the form of observation. "If feedback was given at all," the researchers concluded, "it was brief and done on the fly."[22]

According to Culbertson, NIET emphasizes that "Once the demonstration lesson is over, there should be a follow-up conversation to go back and talk through the lesson. If modeling occurred, we want the teacher to recognize what the master or mentor teacher was modeling so they can transfer it to their own lessons. Unless you make it explicit, they might not consciously recognize or understand everything that was happening during the lesson, and it's that kind of 'metacognition' that leads to transfer."

In some cases, master or mentor teachers might even need to provide several sequential coaching sessions to support a teacher who is struggling with a new strategy. "If a teacher is really frustrated with a particular strategy, the master teacher might do a demonstration lesson, follow up to debrief about it, and then go back to the classroom to co-teach a lesson with the teacher," explains Condalary.

Finally, in addition to weekly coaching following up on cluster group activities, master and mentor teachers can and often do provide additional one-on-one assistance. For example, a mentor teacher might meet with a teacher who wants help planning a particular lesson or formatively assessing students at the end of a unit or lesson. Or a master teacher might provide an extra coaching session on a particular area in the TAP Rubric, which is the basis for formal teacher evaluations. (See Figure 4 for more on how teacher PD and teacher evaluation are integrated in the TAP system.)

> ***"The most effective thing about the TAP system of professional development is that it meets teachers exactly where they are," says Wild. "No matter where you are on the professional continuum, from very novice to very experienced, you are able to begin there and continuously move forward and improve your practice. And that is unique in the educational system."***

22. Ibid.

FIGURE 4: ADDITIONAL WAYS TAP INDIVIDUALIZES PD FOR TEACHERS

The TAP system incorporates several other mechanisms for providing highly individualized support to teachers in addition to one-on-one instructional coaching following each week's cluster meeting:

1. Supportive Evaluation Policies. The TAP system enables schools to evaluate teachers more validly and reliably than has been possible in the past. But TAP's approach to evaluation is about much more than simply measuring performance; the main goal of evaluation is to help all teachers *improve* their instructional effectiveness over time. Members of the school leadership team observe teachers four to six times per year, evaluating each lesson based on the TAP Rubric. After every observation, the instructional leader who observed the lesson (the principal, master teacher, or mentor teacher) meets with the teacher for an in-depth "post-conference" conversation lasting approximately 40 minutes.

During the post-conference, the instructional leader uses questions to guide the teacher in identifying one "area of reinforcement" and one "area of refinement," each of which is tied to a specific indicator on the TAP Rubric. The instructional leader and the teacher analyze how a particular strength of the lesson contributed to student learning and discuss how the teacher can continue to build on that area of strength in future lessons ("reinforcement"). Then they analyze an element of the lesson that could have been improved, thus better contributing to student learning, and discuss how the teacher can work to improve that area in future lessons ("refinement").*

Before they may evaluate any teacher, all members of a school's leadership team must complete formal evaluator training and certification (as well as annual recertification), one element of which is ensuring they know how to plan an effective post-conference. As a result, post-conferences provide teachers with truly formative feedback, enabling them to develop a concrete plan of action for improvement on targeted areas of the TAP Rubric. After the post-conference, master and mentor teachers continue to provide teachers with one-on-one follow-up coaching to help them address their targeted areas.

2. Individual Growth Plans (IGPs). In the TAP system, each teacher has a customized "Individual Growth Plan" (IGP) that serves as a tool for guiding his or her professional growth. Each IGP includes an individual goal aligned with the school goal, the yearly cluster goal, and the cluster cycle goal previously identified by the school's leadership team. The individual goal is based on student assessment results from the teacher's *own* classroom. Thus, the IGP enables teachers to personalize the cluster process even further. The IGP also incorporates the teacher's targeted area of refinement on the TAP Rubric, allowing the teacher to connect measurable goals for *student* learning with measurable goals for *teacher* learning.

Finally, the IGP provides teachers with a way to keep an ongoing record of the steps they have taken to improve their teaching and their students' learning, the specific kinds of support they have received from master and mentor teachers, and the progress they are making in meeting their goals. Thus, the IGP enables teachers to monitor and—most importantly—reflect deeply on their own personal journey of improvement.

* For a partial transcript of a post-conference between a teacher and a master teacher, see pages 27-30 of *More than Measurement: The TAP System's Lessons Learned for Designing Better Teacher Evaluation Systems*, available at www.tapsystem.org/publications/eval_lessons.pdf.

5 *Collecting and Analyzing Student Results*

In the TAP system, all teachers are expected to return to the next cluster meeting with *analyzed* student work representing various proficiency levels. Teachers present the results, and the group identifies common characteristics of student work at high, medium, and low levels of proficiency. The group clearly communicates that it is the student work that they are categorizing as high, medium and low, not the students themselves. As a result of the analysis, the strategy might be further adapted or the group might move on to a new strategy altogether.

Master teachers guide the conversation, asking probing questions and ensuring that the discussion remains focused on the explicit student need at the heart of the current cluster cycle. They also take opportunities to engage in "cognitive modeling," asking questions aloud as they examine student work the teachers have brought to the meeting and referring to their own analysis of evidence during the field-testing.

Critically, the process for examining student work during cluster meetings begins well before master teachers even introduce a new strategy during cluster. The school leadership team has already determined in advance what type of assessment will be used during each cluster cycle as well as the scoring criteria for judging student achievement. And, because master teachers rely on the same formative assessments and scoring criteria during field-testing, the formative assessments have more or less been "field-tested" as well, so many of the kinks have already been worked out.

Consistency is key for analyzing student work in cluster meetings. If teachers used different assessments or different scoring criteria, cluster groups could not *systematically* examine student learning to determine whether, to what extent, and for which groups of students new strategies are working. Master teachers would have no way to know whether to continue adapting the strategy and supporting teachers to use it or whether the group can move on to the next strategy.

But the consistency also offers teachers a great deal of support to learn about formative assessment techniques themselves. While some schools and districts spend lots of money for PD workshops on formative assessment strategies that teachers might never use, TAP teachers are learning about, administering, scoring, and collaboratively analyzing formative assessments every week.

Finally, as the researchers who conducted the recent study of collaborative learning teams discovered, getting this step right is absolutely essential for teachers to make the all-important "causal connection" between teaching practices and student learning. According to those researchers, "Seeing causal connections fosters acquisition of key teaching skills and knowledge, such as identifying student needs, formulating instructional plans, and using evidence to refine instruction."[23]

In addition, those researchers found that when collaborative teams enabled teachers to see clear causal links between teaching strategies and improvements on formative assessments, teachers began to attribute student learning more to instruction than to outside factors. But when collaborative teams failed to make the causal connection, "...teachers were more likely to attribute achievement growth to external factors or student traits, such as socioeconomic conditions, inexperience with the English language, academic inability, or lack of parental involvement."[24]

23. Gallimore, Ermeling, Saunders, & Goldenberg. (2009).
24. Ibid.

Says Wild, "The TAP process proves that the variable that matters is the quality of teaching in the classroom. Instead of working on a strategy for six hours during a workshop one day, we're taking it all the way to fruition to the point where we can *see* that it has helped us close a learning gap we identified."

Building Teacher Leadership for Successful PD

TAP teachers would not be surprised to find that teacher leadership turned out to be a critical ingredient for effective job-embedded PD in both of the groundbreaking new research studies described above. The TAP system recruits highly effective teachers called master teachers and mentor teachers to take on instructional leadership roles in a school, including planning, managing, and delivering job-embedded PD.

Master teachers spend all or most of their time fulfilling instructional leadership responsibilities, while mentor teachers spend several hours a week on instructional leadership and remain the "teacher-of-record" for one or more classrooms of students. This allows TAP schools to achieve a ratio of about 15 career teachers per master teacher and eight per mentor teacher. Cluster groups typically include one master teacher and one or two mentor teachers. Such ratios ensure that master and mentor teachers are not spread too thinly and can provide *at least* one coaching session per teacher per week, far more than most coaching strategies manage to provide.[25]

The TAP system ensures that master and mentor teachers are not simply "coaches" or "team facilitators," although they do perform both functions, but true instructional *leaders* in their schools. They are active members of a schoolwide TAP Leadership Team that includes the principal and other administrators and provides general oversight so that all aspects of the TAP system, including cluster groups and coaching, work effectively. Again, coaching is not voluntary in TAP schools. As part of their formal job descriptions, all mentor and master teachers take responsibility for providing coaching sessions to teachers every week and ensuring that all teachers receive coaching tailored to their individual needs.

One frequent concern about creating such formal teacher-leader roles is that they will take the most effective teachers out of classrooms and away from teaching students. In TAP schools, that couldn't be further from the truth. Because they engage in frequent field-testing, demonstration lessons, and co-teaching, master teachers spend a large percentage of their time directly teaching students even though they are not the teacher-of-record for any particular courses or classroom. "I actually teach a lot more students in this school now than I did when I was a fourth-grade teacher," says Shannon Fraser, a master teacher at West Hartsville Elementary School in South Carolina.

Overseeing PD to Monitor Progress and Ensure Success

Perhaps the biggest problem with most PD is the lack of any system for overseeing and monitoring it to ensure that it actually positively impacts both teaching and learning. Many policy reports and even some laws call for PD to include an evaluation of whether it was successful, but districts and schools lack the tools and expertise to conduct rigorous evaluations, and, in the rare cases they occur, the results come way too late to make a difference. Education leaders need systematic ways to oversee the quality and impact of PD at every stage throughout the school year.

25. For comparison, in the coaching program that Biancarosa, Bryk, and Dexter found to produce significant increases in value-added scores, teachers averaged only 3.12 one-on-one coaching sessions per semester. Assuming a typical 18-week semester, that averages to 0.173 coaching sessions per teacher per week. In fact, only one teacher across the 18 participating schools received anywhere near as many coaching sessions as teachers in TAP schools typically do. For detailed information on amount and variation in coaching during that study, see Atteberry, Bryk, Walker, & Biancarosa.

The TAP system addresses this gap in several ways. First, TAP carves out a robust yet realistic role for principals to play in ensuring effective PD. Second, TAP establishes a schoolwide leadership team to enable the principal, master teachers, and mentor teachers to *work together*, week by week, to guide and monitor PD and to make course corrections where necessary.

Clear Role for Principals to Support PD

At first blush, the two major studies described might seem to have come to different conclusions about the role of principals in job-embedded PD. In the first study, lack of principal support undermined the implementation and impact of instructional coaching in some schools. Yet in the second, the program failed entirely when principals were put in charge of implementing collaborative teams, even though they received significant training and support. But the findings are not contradictory: Principals need a clear and robust role to play so they can be supportive of teacher PD, but one that is feasible given all of their other job responsibilities.

The TAP system emphasizes that principals are the primary instructional leader in a school and gives them tangible yet feasible responsibilities for overseeing the implementation and impact of job-embedded PD. For example:

- As the head of the school leadership team, the principal leads the collaborative process of analyzing student data and determining the goals that will guide cluster work, including the school goal, yearly cluster goal, and cluster cycle goals.
- Working with other members of the school leadership team, the principal examines formative assessment results during each cluster cycle, drilling down to the cluster, classroom, and even student level to identify any gaps that need to be addressed.
- Principals observe at least one cluster group meeting per week, following up with the master or mentor teacher to debrief and provide formative feedback based on a *Cluster Observation Rubric*. The *Cluster Observation Rubric* allows principals to provide detailed and specific feedback in five areas: leader as presenter, leader as facilitator, member participation/preparation, quality of content, and cluster/classroom connection.

As the primary instructional leader, the principal can use the TAP System Training Portal to recommend resources for their professional growth. The TAP System Training Portal's resources include lesson videos, professional development training modules, templates, articles, documents, strategies, recertification, and evaluation materials.

Schoolwide TAP Leadership Team Monitors Implementation and Results

Every TAP school must have a TAP Leadership Team that includes the principal, master teachers, and mentor teachers who meet weekly to oversee TAP system implementation—including job-embedded PD. As one of its explicit responsibilities, the leadership team actively plans for and monitors cluster group activities to ensure that they lead to increased teacher proficiency and student achievement in the targeted areas.

Leadership teams engage in various activities to meet that responsibility, including, as previously mentioned, analyzing data to set the school goals, yearly cluster goals, and cluster cycle goals. But leadership teams don't wait for the results of a formal evaluation to find whether PD is helping teachers and students meet those goals. Leadership teams know at the end of every cluster cycle based on the formative assessment results teachers bring back and share with their colleagues.

"At the leadership team level, you're bringing in that cluster data to look at whether you need to rethink the level of support provided for teachers and students," explains Condalary. "You can break down the data classroom by classroom to make sure the data is moving for each teacher. And if it's not moving in one classroom, what's not happening for that teacher? Is there a problem with follow-up support? It might even be that they're implementing the strategy, but they're not pacing the strategy consistently over time to give students enough opportunities to practice it. So if the results are not moving in a classroom, the leadership team can see that and ask questions and address it." In her work with TAP schools across Louisiana, Condalary emphasizes the importance of the leadership team for effective PD.

> ***"Traveling around to support TAP schools, I found that the leadership team is the key," she says. "If the leadership team doesn't play its role in the cluster cycle, then you don't get the transfer to the classroom and you won't get the improvement for students. It's all about guaranteeing that professional development has the impact it should."***

Reinforcing PD through Aligned Human Resource Policies

In most school systems, teachers experience professional development that has no connection with how they are evaluated and compensated. Sometimes all of those policies are so disconnected that they end up sending conflicting signals to teachers about what matters most and where they should invest their valuable time and energy. The TAP system aligns human resource policies so that they support and reinforce one another. Thus, teacher evaluation and compensation policies reinforce job-embedded PD and help schools hold all staff members accountable for successful PD.

Aligned Evaluation Policies

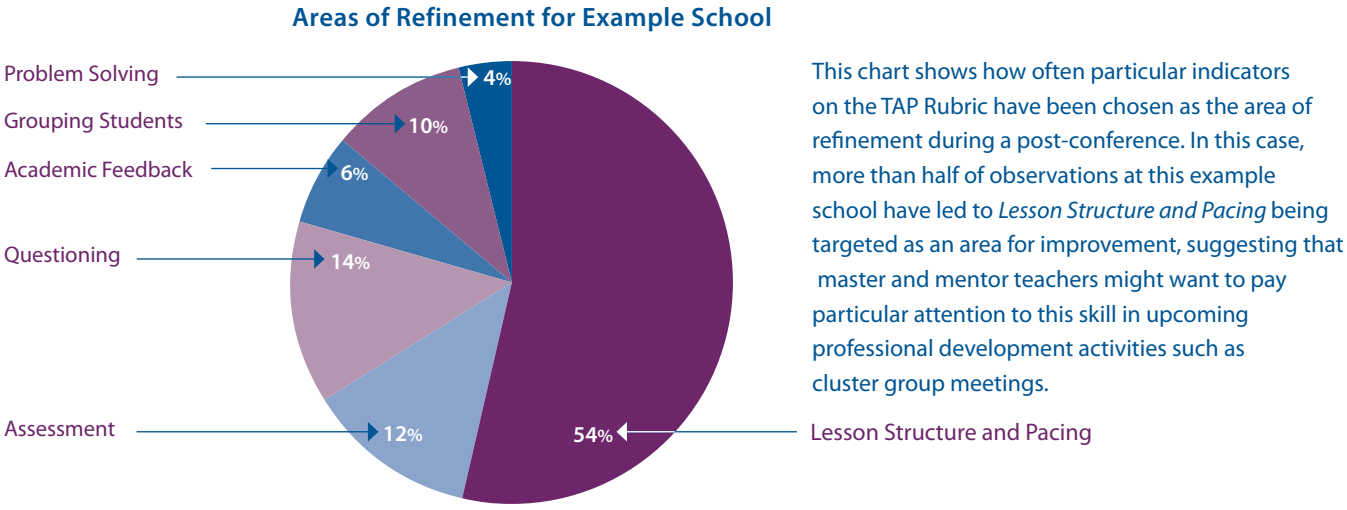
In the TAP system, teachers are evaluated based on multiple measures, including both rubric-based classroom observations and student learning gains (often called "value-added scores").[26] Members of the leadership team observe teachers four to six times per year based on a vision for effective teaching described in the TAP Rubric. After every observation, the observer meets with the teacher to provide detailed feedback on the lesson, including one area of reinforcement and one area of refinement, each of which is tied to a specific indicator on the TAP Rubric.

The cluster cycle offers master and mentor teachers many opportunities to reinforce skills from the TAP Rubric and to build on TAP Rubric skills to ensure effective implementation of field-tested strategies. For example, during field-testing, master teachers often find that a particular indicator of the TAP Rubric (for example, *Presenting Instructional Content* or providing *Academic Feedback* to students) is so important for successful implementation that it needs to be a critical attribute for that strategy.

Leadership teams also can analyze data through the Comprehensive Online Data Entry (CODE) system, to identify common areas for refinement among teachers in the school or in a particular cluster group. Monica Knauer, a master teacher at the Dwight D. Eisenhower Academy of Global Studies in New Orleans notes, "Early on, the CODE data told us we needed to hone in on teachers' lessons being better aligned with standards and objectives, but after that we moved on to the student *Questioning* element of the Rubric because the CODE data told us that area was not really strong. So we embedded *Questioning* into our weekly cluster meetings, pointing it out and modeling it for teachers, even as they were learning a new instructional strategy."

26. For a detailed description of the TAP's approach to teacher evaluation, see *More than Measurement: The TAP System's Lessons Learned for Designing Better Teacher Evaluation Systems*, available at www.tapsystem.org/publications/eval_lessons.pdf.

FIGURE 5: SUPPORTING PROFESSIONAL DEVELOPMENT PLANNING



Master and mentor teachers also embed modeling of TAP Rubric skills into their one-on-one coaching sessions with teachers. "When master teachers go in to provide a demonstration lesson or co-teach in a classroom, they know which areas of the TAP Rubric that teacher is working on since they are likely to have evaluated that teacher, as well as reviewed their evaluation data so they can very intentionally embed modeling those skills, too," explains Culbertson. "That kind of multi-layered modeling is really sophisticated coaching that's unheard of outside of TAP schools, so it takes some time to learn how to do."

TAP policies for formally evaluating master and mentor teachers also reinforce and support effective PD. For example, at the end of the year, both the principal and the career and mentor teachers in a master teacher's cluster group fill out a "Responsibilities Survey" in which they rate the master teacher on 22 indicators. Many of the questions, such as "The master teacher works closely with cluster team members to plan instruction and assessments during cluster development time," relate to cluster groups and classroom coaching.

Aligned Compensation Policies

The TAP system allows teachers to earn financial awards based on multiple measures, including their four to six TAP Rubric-scored lessons and students' value-added growth on state assessments. Because the cluster cycle relies on formative and benchmark assessments carefully aligned with state tests, teachers know that hitting yearly cluster goals and cluster cycle goals should translate into gains on state tests and higher value-added scores. As a result, teachers know that the field-tested strategies they are learning in cluster groups can help enhance their pay.

Obviously, performance-based compensation is not meant to be the only or even a primary motivator for teachers to invest time and energy in PD. Teachers are motivated when they see that their efforts pay off in greater student learning. But when compensation is aligned with PD, the two policies support and reinforce each other rather than sending conflicting signals about what matters most.

The TAP system also includes performance-based compensation for master and mentor teachers, who can earn financial rewards based on their additional roles and responsibilities as well as schoolwide student learning gains. (In other words, both the delivery and the results of the PD they provide.) Therefore, compensation policies also align for the school's PD "providers," the teacher-leaders who serve as collaborative team leaders and instructional coaches.

FIGURE 6. HOW THE TAP SYSTEM ENSURES PD IS EFFECTIVE ON FOUR KEY DIMENSIONS

Prominent expert Laura Desimone has identified a four-tiered framework for evaluating professional development based on emerging consensus among researchers.[27] This table identifies the specific mechanisms the TAP system leverages to ensure a "yes" on all four key questions about the impact of PD *during* implementation of PD rather than months after the PD has ended.

Key Questions for Evaluating PD	How the TAP System Ensures a "Yes" on Each
1. Do all teachers experience high-quality PD?	» TAP builds in-house capacity for providing high-quality PD by recruiting a school-based team of master and mentor teachers who lead collaborative cluster teams and provide instructional coaching » Principals and other instructional leaders observe and evaluate cluster meetings based on a detailed *Cluster Observation Rubric* » Master teachers ensure that every teacher receives individualized instructional coaching following every cluster team meeting
2. Does the PD increase teachers' knowledge and skills?	» Cluster meetings include development time for teachers to practice new strategies and plan to implement them in the classroom » During cluster development time, master teachers formatively assess whether and to what extent each teacher has understood new strategies » During follow-up coaching, master and mentor teachers continue to formatively assess teachers' understanding, providing as much additional support as necessary
3. Do teachers use their new knowledge and skills to implement new strategies in the classroom?	» Cluster meetings include time for teachers to plan exactly how they will use new strategies during specific upcoming lessons » Master and mentor teachers follow up with each teacher to assess and support implementation of new strategies in every classroom » All teachers must formatively assess students after implementing the strategy and bring scored student work to the next cluster meeting
4. Do the new classroom strategies improve students' learning?	» No new classroom strategy is introduced to teachers in cluster meetings until master teachers have "field-tested" it to ensure that it improves learning for all groups of students in the school » All teachers formatively assess students after implementing a new strategy and bring analyzed student work back to the next cluster meeting » Cluster groups do not move on to a new student skill until formative assessments reveal that student learning goals have been met » School leadership teams analyze formative assessment results across cluster groups to ensure all teachers and students are benefitting from PD

27. Desimone, L.M. (2009). See also Desimone, L.M. (2011, March). A primer on effective professional development. *Kappan*, 92(6), 68-71.

Conclusion

Some experts estimate that the U.S. spends as much as $14 billion[28] on various forms of teacher professional development each year. Yet teachers say that most professional development experiences do little to help them improve their instruction, and most research studies agree. The problem is not just an economic one, though every penny matters in tough budget times. Every single dollar wasted on ineffective professional development robs teachers of the chance to improve, which in turn robs students of better opportunities to learn.

Districts and schools are gradually shifting resources toward better models of "sustained, job-embedded professional development." That is a positive trend. New research has proven that job-embedded PD can indeed improve teacher instruction and student learning. But "can" is not good enough. Policymakers and education leaders must ensure that PD *does* improve teaching and learning, consistently and reliably. Research tells us that even the best-designed PD will not work consistently and reliably unless schools find ways to create a structure and assign specific authority and responsibility to those charged with supporting it, overseeing it, and reinforcing it at every turn.

28. Toch, Thomas. (2008, October). Fixing Teacher Evaluation. *Educational Leadership*, 66(2), 32-37.

About NIET

Equipped with a diverse staff from education and business—combined with a broad coalition of school practitioners—the National Institute for Excellence in Teaching (NIET) is a 501(c)(3) nonprofit organization that pursues its mission to increase educator effectiveness through two signature initiatives: TAP: The System for Teacher and Student Advancement and the NIET Best Practices Center.

NIET | NATIONAL INSTITUTE FOR EXCELLENCE IN TEACHING

1250 Fourth Street
Santa Monica, CA 90401
310-570-4860
www.niet.org

This analysis was funded in part by a projected, multi-year federal Teacher Incentive Fund (TIF) grant awarded to the National Institute for Excellence in Teaching (NIET).

Ver. 3/12