NIET
NATIONAL INSTITUTE FOR
EXCELLENCE IN TEACHING

BEYOND "JOB-EMBEDDED"
Ensuring That Good Professional Development Gets Results

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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.

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.

> 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.

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]

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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.

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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."*

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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

The leadership team analyzes student data to develop school, yearly cluster, and cluster cycle goals.

Master teachers identify research-based strategies to help meet goals, and then "field-test" each strategy to customize to student needs.

Master teachers share results of the field test with the leadership team.

Master and/or mentor teachers introduce field-tested strategies in cluster group and help career teachers practice and plan for their classrooms.

Career teachers implement strategies in their own classrooms with targeted support from master and/or mentor teachers.

Career teachers bring back analyzed student work to cluster to debrief.

Master teachers share results with the leadership team, who analyzes data and makes adjustments.

The leadership team monitors student data across cluster groups and decides when cluster cycle goals have been met and a new cluster cycle can begin.

LEADERSHIP TEAM
Principal, Assistant Principals, Master Teachers, Mentor Teachers

CLUSTER GROUP
Master Teachers, Mentor Teachers, Career Teachers

CLASSROOM
Students, Career Teachers, Leadership Team members as needed

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.

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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

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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.

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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."*

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22. Ibid.

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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]

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

24. Ibid.

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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.

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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.
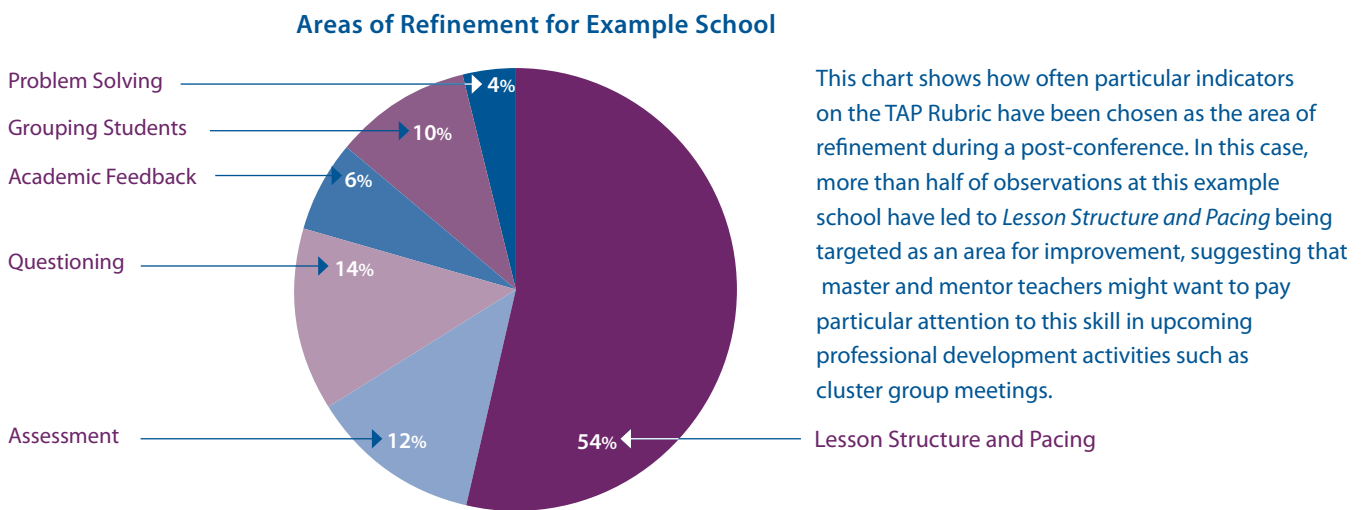
The cluster cycle offers master and mentor teachers many opportunities to reinforce skills from the TAP Rubric and to build on TAP Rubric skills to ensure effective implementation of field-tested strategies. For example, during field-testing, master teachers often find that a particular indicator of 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."

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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

Areas of Refinement for Example School

This chart shows how often particular indicators on the TAP Rubric have been chosen as the area of refinement during a post-conference. In this case, more than half of observations at this example school have led to *Lesson Structure and Pacing* being targeted as an area for improvement, suggesting that master and mentor teachers might want to pay particular attention to this skill in upcoming professional development activities such as cluster group meetings.

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 <u>every</u> 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 <u>use</u> 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.

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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.