TN EDUCATION RESEARCH ALLIANCE

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What We Need to Know to Improve Professional Learning: Questions to Drive a Research Agenda

A Brief on Reimagining State Support for Professional Learning

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About this Brief

This brief explains five topics for research on professional learning identified as priorities by stakeholders convened early in 2017 by the Tennessee Education Research Alliance (TERA).

Part I describes how the topics were agreed to by the policymakers, practitioners, and researchers TERA brought together to discuss the most relevant knowledge gaps related to professional learning.

Part II discusses the topics in depth, and for each outlines a set of questions TERA will work with researchers to consider in the design and implementation of studies meant to build the capacity of the Tennessee Department of Education to promote effective professional learning across the state. Included are selected data from items related to professional learning in the 2017 Tennessee Educator Survey.

PART ONE
DEFINING A RESEARCH AGENDA

Improving professional learning is less about knowing which program to adopt than knowing how to align resources and effort. Such was the underlying message when a group of educators, policymakers, and academics came together early in 2017 to prioritize questions for a new research agenda. Convened by the Tennessee Education Research Alliance (TERA), these stakeholders spent two days discussing what knowledge gaps most need to be filled for the Tennessee Department of Education (TDOE) to promote more effective professional learning across the state.

The group identified five topics of significance. For each, they clarified what they meant, why it mattered, and how new knowledge could support TDOE efforts. Although they posed several questions for each topic, these were not formulated as "research questions" that specify what data are to be analyzed, and how. More work is necessary to operationalize the ideas expressed. Nonetheless, their perspectives represent an important starting place, given TERA's mission of generating useable knowledge that responds to the needs of the field.

As revealed in the following pages, participants view the problem of improving professional learning as having technical, cultural, and political dimensions. For example, productive collaboration likely requires not just effective facilitation, but also a willingness among educators to share their practice, as well as support for giving them time to do so. Another central idea is that professional learning may be more effective when it makes use of multiple sources of information. To be sure, mixed messages are a major problem in the field (as discussed in the section on "Coherent Instructional Systems"). But a solution that depends only on a limited number of sources (e.g., feedback from formal evaluators) may be less powerful than one that coordinates teachers' use of numerous kinds of information in formal and informal activities.

> As was said repeatedly during TERA's convening, what's needed is a clear picture of "what it looks like and sounds like" when professional learning is effective.

Also prominent is the importance of meeting teachers' individual needs, so they can better support their own students' academic success. Though improvement at scale requires systems, those systems must differentiate. That means understanding the variations that currently exist in teachers' access to effective professional learning. By also understanding the causes of those variations, policymakers and education leaders might design more informed solutions.

Responding to the Questions

Exactly how the state department should respond to new knowledge on these topics is impossible to say until that knowledge is generated. The agency lacks the capacity to deliver a significant amount of professional development itself, and doing so may not be warranted given the desire for solutions shaped by local needs and contexts. Instead, those at the TERA convening envisioned other ways the state might support improvements at the local level: providing school and district leaders with indicators of effective professional learning; reconsidering policies found in conflict with professional learning objectives; and sharing examples of research-based models.

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Since the convening, TERA and the TDOE added new items related to professional learning to the 2017 version of the Tennessee Educator Survey, from which selected responses are included in this brief (The TDOE released a report on the survey, "Educator Insights: Takeaways from the 2017 Tennessee Educator Survey," in August.)

In addition, TERA and its affiliate researchers responded to the convening by planning two major new studies to capture a broad view of what constitutes professional learning and what predicts its effectiveness. One will involve direct observation of teachers throughout a school year to learn how professional learning—formal and informal—changes practice. The other will look for conditions and activities associated with schools and districts in which growth is demonstrated by teachers at all stages of their careers. Those findings will, in turn, inform the design of a pilot program aimed at moving more schools toward similar growth trajectories.

These two studies also will play a key role in shaping additional TERA research on professional learning. New studies will be prioritized based on how they build off these initial projects. The intent is to create a coherent body of knowledge, rather than a set of discrete studies with limited opportunities to integrate the lessons learned into a more productive approach toward improving professional learning. As such, the questions in this brief are not meant to launch a multitude of studies that proceed independently until they come back with their own conclusions. Instead, the vision is of future research that's both informed by these questions and that emerges, on an ongoing basis, from earlier TERA work.

How the Questions Were Developed

As a research-practice partnership, TERA engages practitioners throughout the research process. Their involvement in the design, execution, and interpretation of studies increases the odds of producing relevant and useful findings. Hence, when TERA launched a research strand on professional learning, the alliance put educators, policymakers, and academics in the same room for two days of focused conversation. Their charge was to formulate a set of questions to guide the planning of research that builds the capacity of the state department of education to support effective professional learning across Tennessee.

As shown in Figure 1, the process proceeded from brainstorming to prioritization and refinement. An early goal was to understand how those in the broadly representative group thought about the challenges of professional learning, as well as their objectives for professional learning and the biggest barriers they saw as getting in the way of meeting those objectives.

FIGURE 1: THE CONVENING PROCESS

Grounding the Discussion

- As pre-work, participants responded to an open-ended survey of their views on professional learning.
- Also as pre-work, they reviewed a brief on existing research and on the state department's role in supporting professional learning.

See: Tennessee's Professional Learning Challenge: Aspirations, Assumptions, and Knowledge Gaps. Tennessee Education Research Alliance. 2017.

Identifying Needs

- After orientation, participants formed teams of 6-8, each including researchers and practitioners.
- Each team prepared a list of the most pressing challenges, and most important knowledge gaps, related to professional learning.

Prioritizing Needs

- After all the identified challenges were listed in one place, each participant "voted" on the ones seen as most important.
- Votes were tallied to identify the five top challenges.

Formulating Questions

- A team of 6-8 researchers and practitioners was formed for each of the five challenges.
- Teams formulated questions for researchers by discussing the knowledge needed to address each challenge.

They then turned to how new knowledge might better equip the state to overcome those barriers. The push to turn practical imperatives into questions for researchers made for vigorous but ultimately productive discussions.

The five summaries on the following pages are based on those discussions. Each clarifies the key concepts articulated by a team of researchers and practitioners who spent considerable time focused on one topic. How these concepts are defined deserves close attention if future research is to help advance the work of practitioners. Solving problems of practice related to feedback or self-assessment, for example, requires a shared understanding of what those terms mean. More often than not, the definitions in the following pages encompass multiple types of inputs and activities. The five topics also overlap. This shouldn't surprise, as schools are complex systems. Improving them is rarely a matter of changing one or two elements.

THE AMOUNT AND USE OF TIME

What We Mean

That professional learning takes time is of little dispute. But what constitutes time for effective professional learning is less obvious. What counts as time for professional learning for educators cannot be limited to what's blocked off on their schedules for professional development. Ask teachers where and when they learn the most valuable lessons about teaching and learning, and many will point somewhere other than the official "professional development days."[2]

Meanwhile, the fact that time is blocked off on a schedule for professional development is no guarantee that effective professional learning is actually happening during that time. This distinction between scheduled time and effective time is important to keep in mind when seeking to improve the use of time for professional learning. While it may be that more time is needed for teacher professional learning, it also may be that improvement will not come from simply blocking off more time for it on teachers' schedules. How time is used is just as important as how much time is available.

> "Understanding how to plan and build professional learning into the workday is a challenge."
>
> – *Response to Pre-Convening Survey of Participants*

Why It Matters

Research on effective professional learning implies a need for more time, and for different uses of time, than has been the norm in the field. Studies suggest there is value in an ongoing process in which educators discuss new ideas and practices, implement them, observe each other, get feedback, and make refinements.[3] Such activities are at odds with the custom followed in many school systems, which relegate professional development to occasional days throughout the year. Results from the most recent Tennessee Educator Survey suggest that many teachers

have few opportunities to engage in some of the professional learning activities they find to be the most helpful *(See Figure 2)*.

Yet school leaders face a quandary in seeking more time: Absent a compelling argument, many parents and school board members see professional learning time as subtracting from instruction, not enhancing it. Often, to create more time administrators may have to rely on the good will of staff members who agree to arrangements not supported in policy.

In addition, state and local policies to some degree may limit the extent to which time for professional learning may be better utilized. This may be the case with stipulations for when professional learning must take place (e.g., only during school hours). School leaders also are generally held accountable for the hours and topics of the professional learning they provide and not for its effectiveness.

Questions for Researchers

Taking the broader view discussed above, we know little about the amount of time teachers spend on professional learning. We also know little about what actually happens when teachers are engaged in professional learning. Teachers may indicate on surveys they spend time in professional learning communities (PLCs), but that says nothing about quality.

Along with the use of time, we don't know much about how time for professional learning should be allocated. Is it better for teachers to have one long block of time for professional development each week, or to have two shorter ones? Generally how long does it take for teachers to master different skills? Do some teachers need more time for professional learning than others?

To address these gaps in knowledge, TERA will consider the following questions as it plans new studies:

• **What are the variations across the state and across districts in how much time is spent on professional learning?** We are particularly interested in examples

of creative scheduling that resulted in teachers having more time for professional learning than teachers in similar contexts.

- *What are the most significant barriers that limit the allocation of time for professional learning in schools?* When school leaders say they cannot allocate time in more productive ways, we need to understand why.

- *How is time for professional learning used in places where professional learning goals are being achieved?* What differences can we identify in the nature of activities that take place when professional learning is more or less effective? Moreover, what do these differences imply about the capacities a school or district needs for professional learning to be effective?

These questions suggest the need for both qualitative and quantitative analyses. TERA will work with researchers to start with available information that purports to show time use (e.g., published calendars and schedules, and survey responses.) But to know what is actually happening will require close study of educators in a variety of contexts as they go about their work.

Utility of New Knowledge

We see four ways the Tennessee Department of Education could make good use of new knowledge on the amount and use of time for professional learning.
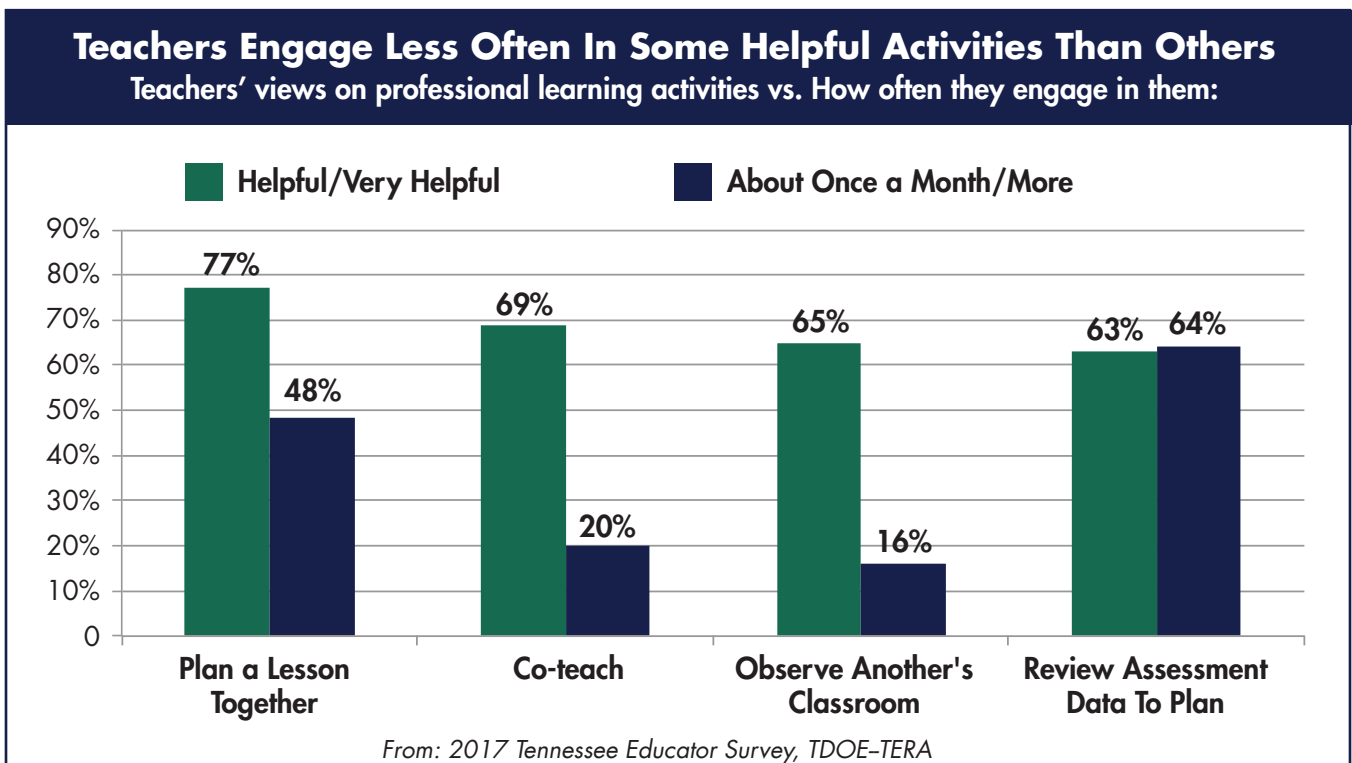
Clarifying the problem. Clarifying the gap between best practice and the actual allocation and use of time for professional learning could galvanize interest in closing that gap.

Highlighting innovative examples. We hear of schools and districts that may have managed to carve out more time for professional learning. If such examples exist, we should learn how they achieved what others have not and share their stories.

Quantifying the value of time well spent. Research showing the returns-on-investment when time is used in particular ways, and with the right conditions, would allow for more informed decision making.

Reconsidering policies. Research may point to a better mix of accountability, support, and flexibility that results in more effective use of time. As one example, the Tennessee State Board of Education recently approved a plan to allow more informal and collaborative activities to count toward teachers' requirements for continuing education. TERA hopes to study the effects of that policy change.

FIGURE 2

Teachers Engage Less Often In Some Helpful Activities Than Others
Teachers' views on professional learning activities vs. How often they engage in them:

■ Helpful/Very Helpful   ■ About Once a Month/More

Activity	Helpful/Very Helpful	About Once a Month/More
Plan a Lesson Together	77%	48%
Co-teach	69%	20%
Observe Another's Classroom	65%	16%
Review Assessment Data To Plan	63%	64%

From: 2017 Tennessee Educator Survey, TDOE–TERA

What We Mean

Feedback is information that helps people understand what they should keep doing, and what they should change. Feedback is effective when it also results in improvements in performance. In the context of teacher professional learning, we most often think of feedback in the form of written evaluations and 1:1 conferences based on classroom observations. But there are many other sources of information that can help teachers better understand and improve their effectiveness (e.g., student work, assessment results, students' verbal responses, videos of teachers' own instruction, etc.).

This broad view of feedback holds a greater potential than a focus solely on feedback from formal performance reviews. As much as evaluation must be better understood and improved, it can be too infrequent, too formal, and too dependent on a limited number of evaluators, to carry nearly all the burden for providing feedback.

> "Creating a culture and environment of risk-taking to change practice is a challenge."
>
> *– Response to Pre-Convening Survey of Participants*

Why It Matters

We have good reason to believe that not all teachers are benefiting from quality feedback.[4] Results from the Tennessee Educator Survey show an increasing number of teachers see evaluation as supporting their improvement. But a nontrivial number of teachers still say they're not getting what they need from the process, and those who say evaluation doesn't help them improve see evaluation very differently from those who say it does help them *(See Figure 3)*. More broadly speaking, evidence that teachers typically assess themselves as more effective than they are suggests a breakdown in their use of feedback.[5]

Whether a teacher takes appropriate action is not just a matter of receiving the right information. How that information is delivered, and in what context, also determines whether feedback is effective. Multiple studies have identified measurable differences in the professional climates of schools that, relative to comparison schools, experience long-term gains in student achievement and teacher effectiveness.[6] Not surprisingly, a recurrent theme in such studies is trust.

Questions for Researchers

We don't have a good understanding of what happens inside schools where teachers make effective use of feedback, and how that differs from what happens in schools where teachers don't. Nor do we know how schools can transform the quality of their feedback, and how state and local leaders might promote such transformation in different contexts across a state.

Any useful understanding of these aspects of feedback needs to build from the assumption that different situations may call for different sources, types, and contextual factors. New or struggling teachers may need something different than experienced teachers; what's optimal for feedback on elementary ELA instruction may not be best for high school math instruction. Given that, TERA will work with researchers to develop research to address the following questions:

- *What are the observable conditions that predict teachers' perceptions of the appropriateness of feedback?* What makes it more or less likely that teachers both receive and make use of feedback? We propose identifying variations in teachers' perceptions of these outcomes, and then looking for contextual factors that may explain them.

- *What are the observable conditions that predict the effectiveness of feedback?* This will require identifying measures that reliably capture changes in important aspects of instruction; before we can investigate whether professional learning is effective, we need to agree on what we think is important for teachers to learn.

- *What are the observable conditions that predict the effectiveness of specific professional learning opportunities?* Specifically, we can imagine a study of growth in teacher performance as it may relate to Tennessee's Read-to-be-Ready program, which has the aim of supporting teachers in learning how to make effective use of complex texts in early literacy instruction.[7] Do you see more consistent growth where you also find certain conditions related to the sources, nature, and context of the information teachers receive?

- *What do teachers' social networks for feedback look like, and what is the quality of these networks?* Are there different patterns in which teachers get such information, and are some patterns more predictive of professional growth? How much feedback do teachers get from their networks, and what is the quality of that feedback?
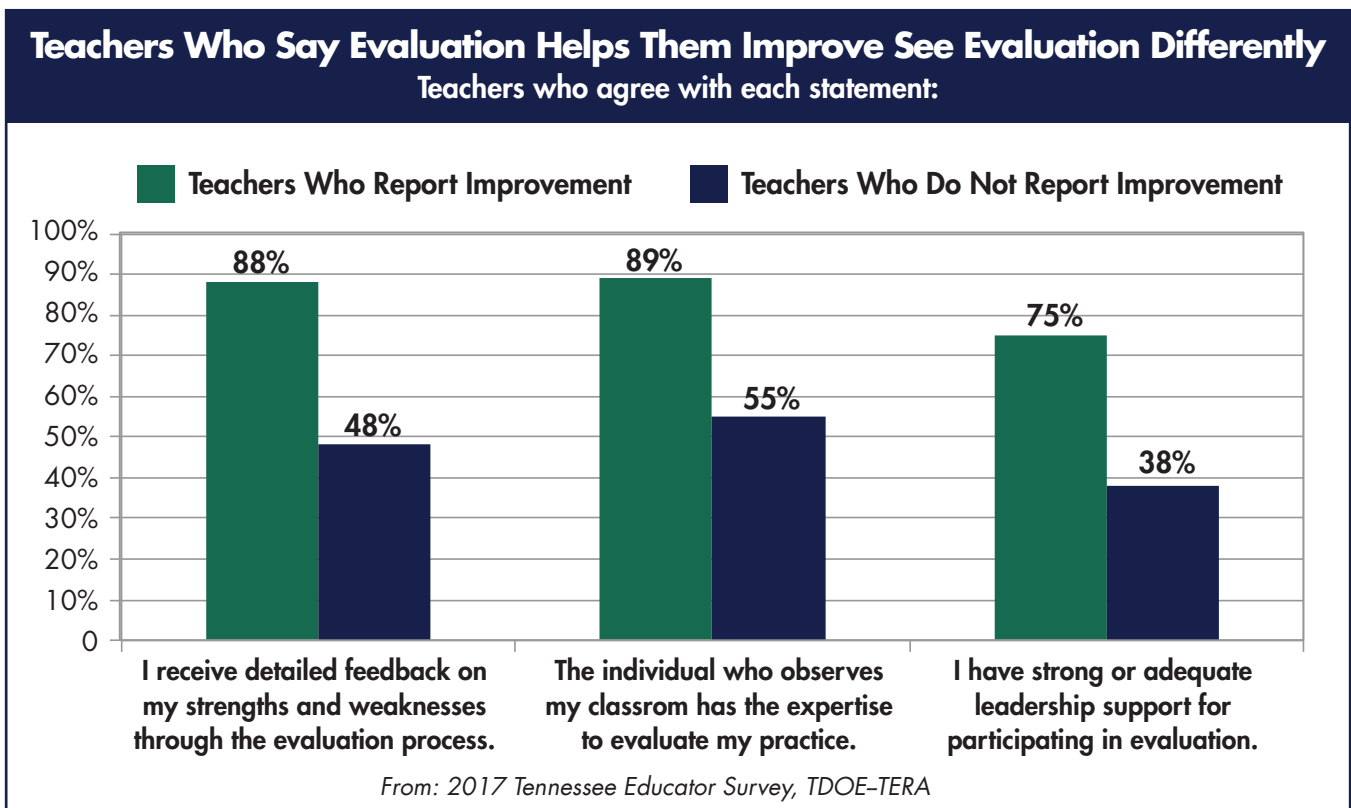
Utility of New Knowledge

We see at least three ways in which addressing these questions could support the state department, districts, and schools in making changes that result in more teachers benefiting from effective feedback:

Sharing Models. The state can play a lead role in sharing with local education leaders what it looks and sounds like when teachers are benefiting from effective feedback.

Sharing Measures. The above research questions envision identifying or developing ways to identify the inputs and outputs of effective feedback. By turning those measures into tools, the state can empower local leaders to assess their own efforts to bring about more conducive conditions.

Changing Policy and Messaging. It will not surprise us to find that some of the school-level conditions that get in the way of effective use of feedback are the result of state policies or local understanding of state policies. Research can help inform where those conditions exist.

FIGURE 3

Teachers Who Say Evaluation Helps Them Improve See Evaluation Differently
Teachers who agree with each statement:

Legend: Teachers Who Report Improvement | Teachers Who Do Not Report Improvement

- I receive detailed feedback on my strengths and weaknesses through the evaluation process. — 88% / 48%
- The individual who observes my classrom has the expertise to evaluate my practice. — 89% / 55%
- I have strong or adequate leadership support for participating in evaluation. — 75% / 38%

From: 2017 Tennessee Educator Survey, TDOE–TERA

What We Mean

Among the elements of effective professional learning most often cited in research are expert guidance, collaboration, and opportunities to apply new learning to one's own practice.[8] A commonly held belief is that some educators have more access to these elements than others.

The most obvious variations in access may be regional. Chemistry teachers in large metropolitan systems have many nearby colleagues working on similar challenges. By contrast, a small rural high school may have just one chemistry teacher, for whom it would take considerable effort to engage in deep professional conversations with peers who teach the same subject. Indeed, we see differences in access to professional learning when we compare responses from teachers in large and smaller districts on the Tennessee Educator Survey *(See Figure 4)*.

But there likely are many other dimensions to variations in access to professional learning. Educators in certain subjects and grades may have more opportunities than those in others to engage in particular activities, to benefit from useful guidance, or to tap domain-specific expertise. New teachers may have more access to professional learning than experienced educators. Alternatively, building leadership may be a determining factor.

> "I see great discrepancy between the quality of professional learning from district to district."
>
> *– Response to Pre-Convening Survey of Participants*

Why It Matters

Variations in access to professional learning likely contribute to differences in the quality of teaching and student learning. Teachers with fewer opportunities to engage in deep conversations about instruction with colleagues may make fewer improvements in their practice—and that, in turn, may result in their students making less academic progress than the students of teachers with more such opportunities.

To minimize these variations in access, we need to better understand their nature. What leads to situations in which different teachers have different levels of access to effective professional learning? Moreover, by collecting data on such variations, we can look for examples of teachers who have more access to effective professional learning than other teachers in similar situations (e.g., a rural teacher who collaborates effectively with peers using virtual means).

Questions for Researchers

We don't have good data on the contexts in which important opportunities are lacking. As a result, we can say little about the size of those gaps, what's creating them, and how they may lead to differences in the quality of teaching and student learning. We also lack an understanding of the effectiveness of different models for making quality professional learning available in different contexts. It won't help practitioners and policymakers to simply describe the problem in greater detail. They need to know how existing resources may be used differently and what additional resources may be needed to achieve better outcomes.

TERA will consider the following questions as it plans new studies:

- ***Where do you find the greatest variability in access to important aspects of professional learning?*** Researchers will first need to operationalize the elements of effective professional learning. This should include measures of teachers' formal and informal professional networks. They then need to

collect data from enough different contexts to look for predictors of access. Analysis should look across regions (including those served by different state education service providers), and across subjects, grade levels, and teacher experience levels—as well as across different circumstances (e.g., the degree of principal turnover).

- *How are patterns of growth in educator effectiveness related to the availability of professional learning opportunities?* Answering this would entail defining the outcomes of effective professional learning (e.g., improvements in teachers' performance reviews or their students' achievement gains). The next questions involve where we see growth in those outcomes (e.g., in which schools, subjects, contexts, etc.) and what types and features of professional learning available to those teachers best predict that growth.

- *What kinds of changes in policy and/or practice could be tested to see if they reduce variations in access to professional learning?* Here we have in mind such methods as Design-Based Implementation Research (DBIR), in which researchers and stakeholders work together to understand the systemic factors leading to current

results, and from that design solutions to be tested in the real world.[9] If access to professional learning is limited for multiple reasons (e.g., inadequate time, insufficient curricular guidance, and lack of expertise in leading professional learning), then a potential solution should address all those factors.

Utility of New Knowledge

We envision at least three ways in which the Tennessee Department of Education could make use of research that addresses the above questions:

Identifying gaps. Currently, many system leaders may not realize the extent to which their teachers lack access to important aspects of professional learning.

Targeting resources. A finer-grained picture of variability than currently exists would help state officials make better decisions about how to invest limited resources.

Facilitating networks. Our assumption is that part of the solution to variability is greater sharing of expertise than already occurs.

FIGURE 4

**Teachers in Bigger Districts
Engage in Many Professional Learning Activities More Often**
Percent of teachers who say they participate in specific activities two or more times a month:

■ 8 Largest Districts ■ Rest of TN Districts

	Plan a Lesson Together	Provide & Receive Feedback on Instruction	Work to Develop Materials/Activities for a Lesson
8 Largest Districts	45%	31%	49%
Rest of TN Districts	31%	23%	38%

From: 2017 Tennessee Educator Survey, TDOE–TERA

What We Mean

Effective self-assessment and reflection occurs when people accurately recognize their own strengths and areas for improvement, and then take appropriate action. It's when a teacher recognizes she needs to improve her use of questioning to check students' understanding, for example, and then implements a strategy for doing so.

By accurate, we mean based on a clear understanding of the qualities of effective practice and how to compare those qualities to one's own practice. But the process doesn't stop with a judgement. Continuing the example above, it proceeds to a hypothesis about the kind of questioning that might work better with her students, to her use of different questioning in the classroom, and to her accurate assessment of the results. Self-assessment involves answering for oneself: "what's my need?"; "what's the fix?", and "did it work?"

> "Teachers need to be able to analyze their teaching practice. They need to think about and understand the relationship between teaching and learning."
>
> *– Response to Pre-Convening Survey of Participants*

Why It Matters

Some research suggests that educators who accurately self-assess may be more likely to improve their effectiveness.[10] We can surmise why this is so. People who think their practice is better than it actually is feel little motivation to change it. Teachers may be less likely to benefit from—or participate in—professional development if they don't see it as addressing an aspect of their teaching they need to work on. In certain situations they also may not benefit as much if they have no choice in what professional learning they take part.[11] On the Tennessee Educator Survey, about 70 percent of teachers said the professional learning they participate in is primarily prescribed by their district or school *(See Figure 5)*.

Effective self-assessment and reflection also would seem to offer an advantage over assessment solely by external evaluators. When you rely entirely on others to tell where you need to improve, that limits the amount of useful information you receive to what someone else is able to convey in a finite number of interactions. When you're in the habit of reflective self-assessment, you are constantly hearing from your internal evaluator.

Questions for Researchers

We should first test whether teachers in Tennessee, like teachers studied elsewhere, are more likely to improve their practice if they can accurately assess their performance. But the bigger gaps in our understanding are about what leads to teachers being more or less accurate in their self-assessment, and what makes it more or less likely that they take appropriate action to improve their practice. We also lack a clear picture of what actually happens in teachers' thinking and behavior when they are effectively diagnosing their practice.

To better understand what distinguishes productive self-assessment and what makes it possible, TERA will consider the following questions as it plans new studies:

- ***To what extent is there alignment between teachers' diagnoses of their own needs, diagnoses by external evaluators, and the needs addressed by the professional learning that is available/provided to those teachers?*** If reflection and self-assessment is most productive when all three are aligned, then where do we find the greatest misalignment? Does the amount of misalignment vary significantly by district or school, subject, or grade level? Or is there more alignment around certain professional learning needs? Investigating alignment with professional learning opportunities would necessitate first doing some inventory of what's available.

- ***What are the characteristics of a self-assessment process that leads to improvements in teaching or student learning?*** The process may be more or less productive depending on such factors as the

use of relevant criteria for making judgements; the specificity of the aspect of practice identified for improvement; and the type of follow-up activities in which the teacher engages. Is reflection and self-assessment enhanced by certain tools or certain interactions with colleagues? If self-assessment works best as part of an ongoing process, then we also should learn how long that process takes and what is an appropriate amount of time for a teacher to work through a problem-solving cycle.

- *To what extent is professional learning optional for educators, why do they choose what they do when it is optional, and when is the ability to opt in beneficial?* Teachers may be more actively engaged in professional development when they choose it. They also may make better choices about their professional learning than their supervisors. But we don't have much evidence with which to make these claims. Nor do we know the circumstances in which educators are likely to make better decisions (e.g., feedback from an evaluator might work better than self-assessment for new or struggling teachers.)

- *What are the school conditions that predict the extent to which reflection and self-assessment leads to improvements in teaching and student learning?* Whether reflection and self-assessment is successful

may depend as much on the environment in which they take place as on the process employed. Teachers may be reluctant to volunteer their areas for improvement if they fear that doing so will result in negative consequences. If there are certain enabling conditions, how do school leaders foster them?

Utility of New Knowledge

Findings that address these questions could support state efforts to improve professional learning in a number of ways:

Sharing practices. The state department of education could share with local leaders descriptions of practices for reflection and self-assessment for which there is evidence of effectiveness.

Sharing indicators. The indicators that researchers use to analyze the effect of practices and conditions may—if found to be valid and reliable—be adapted for use by local education leaders to evaluate the effectiveness of refection and self-assessment in their schools.

Reconsidering policies. Changes also may be in order if current policies are found to inhibit effective reflection and self-assessment.

FIGURE 5

Teachers Say Most Professional Learning is Determined by their School or District

Teachers on who "primarily determines professional learning experiences for teachers":

- Autonomously Selected by the Teacher — 11%
- Based on Feedback from the Teacher's Evaluation — 2%
- Collaboratively Chosen Between the Teacher and Administrators — 19%
- Prescribed by the District — 52%
- Prescribed by the School — 17%

Note: Numbers do not add to 100 due to rounding.

From: 2017 Tennessee Educator Survey, TDOE–TERA

What We Mean

Classroom instruction is shaped by numerous elements over which education leaders hold sway. These include materials (e.g., curriculum guidance), accountability mechanisms (e.g., evaluation), and structures for professional learning (e.g., PLCs).

These elements form a coherent system when they work together to promote a shared understanding of effective instruction.[12] In a coherent system, each part contributes to clarity about student learning goals and how to meet them. In a theory of action for such a system, curricular guidance, ongoing professional learning, and feedback would all pull educators in the same direction, resulting in measurable improvements in teaching practice and student achievement.

Moreover, as parts in the coherent system evolve, they do so in a way that brings even greater clarity about goals and strategies. When the premium is on equity and college and career readiness, as it is now in Tennessee and across the country, a coherent system aligns the effort of educators toward building an ever deeper understanding of how to engage all learners in cognitively demanding activities while at the same time developing their foundational literacies.

> "Each new wave of professional learning seems like a new beginning, not continuous improvement on a few key areas of practice."
>
> *– Response to Pre-Convening Survey of Participants*

Why It Matters

Few teachers would now say they work within a coherent instructional system. At best, the instructional materials, requirements, and guidance they experience seem unrelated. At worst, they appear to conflict.[13] Aspects of new guidance on reading instruction may feel out of sync with what's emphasized in teacher evaluation criteria. What counts toward professional development requirements may not include what teachers find most useful in developing standards-based instructional practices.

More than half of teachers responding to the Tennessee Educator Survey agreed that they "feel pulled in many different directions, in terms of what to teach and how to teach it" *(See Figure 6)*.

While sometimes there is a disconnect, at other times the connection may be so poorly communicated that intentions are garbled by the time they reach the school or the classroom. As a result, new and potentially useful initiatives may be seen as superfluous, prompting educators to either discard them or treat them as matters for mere compliance, rather than enhancements to instructional improvement.

This lack of coherence has multiple roots. It seems likely that different state initiatives are not planned with adequate coordination to ensure that they come together in a way that makes sense to frontline practitioners. Even if we achieved greater coordination in planning, additional steps would be needed to ensure that coordination isn't lost as guidance works its way to the classroom.

Questions for Researchers

We need a way to operationalize coherence in the context of instructional systems. Then we need measures of coherence so we can better identify the problem and know whether solutions may be working. We need to identify the most significant sources of misalignment, and to what extent there may be variations in the extent of coherence across different places and domains (e.g., if teachers in some schools and districts experience the same guidance as promoting greater instructional coherence than in others.)

At the same time, we need to understand how coherence may be promoted effectively in different contexts. The amount and type of capacities available to support instructional change will vary across a state. Moreover, we see reason to believe that one element of successful professional learning is a sense of ownership by those doing the learning. If so, how can we allow customization while still promoting a shared understanding of high quality teaching?

To address these knowledge gaps, TERA will consider the following questions as it plans new studies:

- **How and to what extent is there currently alignment or coherence across the different units of the state education department tasked with helping to develop district capacity for instructional improvement?** How well are these units going about coordinating their efforts in a way that supports districts in building a shared vision of teaching and student learning?

- **How and to what extent are schools and districts currently providing coherent professional learning opportunities for various role groups?** Are different types of teachers and leaders benefiting from district-provided professional learning that aligns with materials and communicated expectations to build a clear understanding of student learning goals and appropriate ways to teach to them? Where do you find the biggest disconnects between the various forms of instructional supports that districts provide?

- **How can the state department of education support districts to develop coherent professional learning systems and cultures?** Are there approaches to cycles of inquiry that—in the right professional environment—can help teachers move toward a deeper understanding of how adjustments in their practice may improve student learning? If so, what tools and strategies can the state best

employ to promote effective implementation of such cycles? (e.g., by identifying and leveraging effective teachers and leaders who can model and facilitate professional learning; by establishing instructional improvement "institutes"; or by working through district leadership.) If teacher leadership plays a role in building coherence, how can the state education department enable more effective teacher leadership across Tennessee?

Utility of New Knowledge

There are at least three ways in which addressing the above questions could support the Tennessee Department of Education promoting greater coherence across the state:

Sharing Models. We see value in disseminating clear descriptions of what it looks and sounds like in systems that seem to promote a high degree of coherence.

Sharing Tools. As researchers hone surveys and other measures of coherence, we expect that some of those instruments may be adapted for use by practitioners to gauge for themselves the extent to which their efforts are likely to promote coherence.

Reconsidering Policies. We are confident that research in this area will reveal examples of different policies and guidance promoting different ideas about student learning goals and how to support students in meeting them.

FIGURE 6

Many Teachers Struggle with a Lack of Instructional Coherence

Percent of teachers who agree/strongly agree that:

57% "I feel pulled in many different directions, in terms of what to teach and how to teach it."

45% "Instructional guidance (standards, pacing guides, assessments, instructional programs) in my district rarely changes and it is easy to keep up."

From: 2017 Tennessee Educator Survey, TDOE–TERA

13
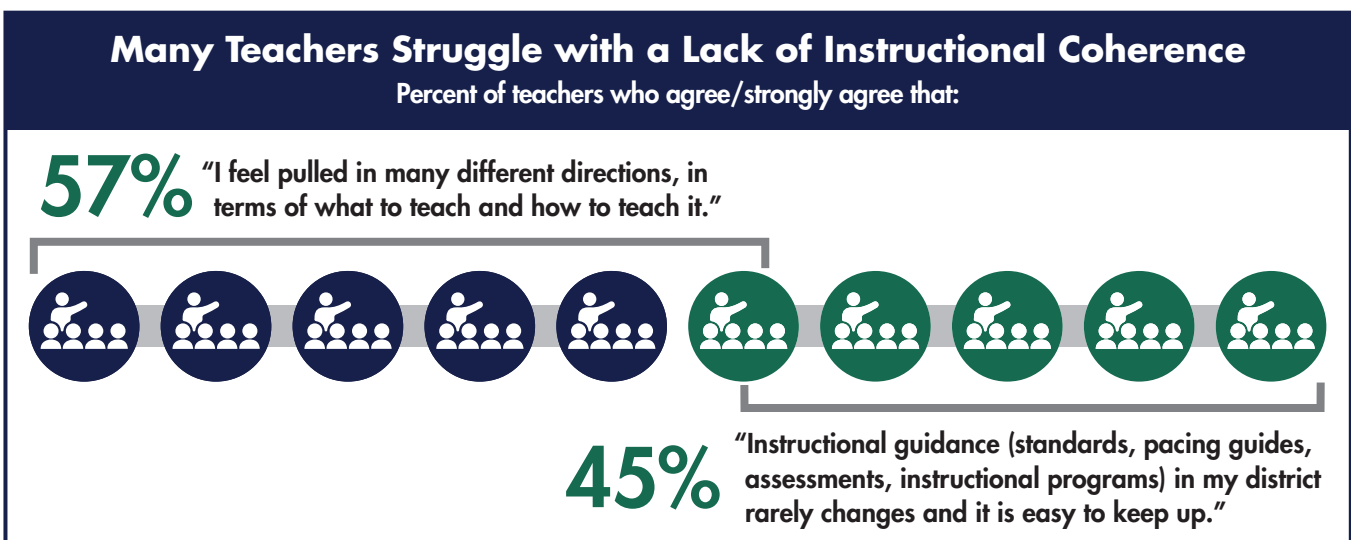
What Happens Now

A traditional research organization might take what's in this brief and assign a group of research teams to design a set of studies to carry out over the next several years. Once completed, those studies might be written up as a set of standalone chapters in an edited volume. Between the launch of those studies and their completion, little would change in their design, and few opportunities would arise for the various works-in-progress to inform each other. Nor would practitioners (e.g., school leaders, teachers, and other key decision makers) be able to respond to, and ask questions of, interim findings.

As a research-practice partnership, the Tennessee Education Research Alliance aspires to employ a more collaborative approach. TERA is deliberate about making sure that ongoing studies inform each other. Practitioners who helped formulate the questions in this brief can expect to be called on repeatedly to react to the ongoing work of those collecting, analyzing, and interpreting data. An emergent, collaborative approach would seem to lend itself well to professional leaning, an activity influenced by so many of the myriad unpredictable factors at work in the complex systems that schools represent.

As noted in the first pages of this brief, TERA researchers already have outlined two major studies based on the discussion at the alliance's convening on professional learning this year: One using direct observation to capture teachers' professional leaning experiences over time, and another using measures of effectiveness to identify conditions that predict growth in the performance of teachers at all stages of their careers. Additional studies will be planned based on how well they add to or compliment these early projects. As these studies come together, the intent is that they contribute to a research-based framework and set of principles to guide state efforts to continually improve professional learning. While this approach makes it hard to foresee the new knowledge to be gained, TERA's hope is that it makes that new knowledge more useful to the field.

ENDNOTES

1   Jeff Archer, a former writer and editor at *Education Week,* is the president of Knowledge Design Partners (www.knowledgedesign.org).

2   TNTP. "The Mirage: Confronting the Hard Truth about Our Quest for Teacher Development." 2015.

3   Jensen, B., et al. "Beyond PD: Teacher Professional Learning in High-Performing Systems", Learning First. 2016.

4   Sartain, L. et al. "Rethinking Teacher Evaluation in Chicago: Lessons Learned from Classroom Observations, Principal-Teacher Conferences, and District Implementation." Consortium on Chicago School Research. 2011.

5   TNTP. 2015.

6   Kraft. M. A., and J. Papay, "Can Supportive Professional Environments Promote Teacher Development? Explaining Heterogeneity in Returns to Teaching Experience". Educational Evaluation and Policy Analysis. In press.

7   "Read to be Ready: Coaching Network Guide." Tennessee Department of Education. 2016

8   Jensen, B. "Beyond PD."

9   Fishman, B. "Design-Based Implementation Research: An Emerging Model for Transforming the Relationship of Research and Practice." National Society for the Study of Education.

10 TNTP. 2015.

11 Kennedy, M. "How Does Professional Development Improve Teaching?" Review of Educational Research. 2016

12 Cobb, P. et al. "Supporting Improvements in the Quality of Mathematics Teaching on a Large Scale," in the book *Making Change Happen.* 2017

13 Kennedy, M. "Inside Teaching: How Classroom Life Undermines Reform." 2011

ACKNOWLEDGMENTS

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