

# THE LEARNING PROFESSIONAL

THE LEARNING FORWARD JOURNAL

**Materials + professional learning = impact**

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**California teachers learn to evaluate curriculum**

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**Open source transforms science education**

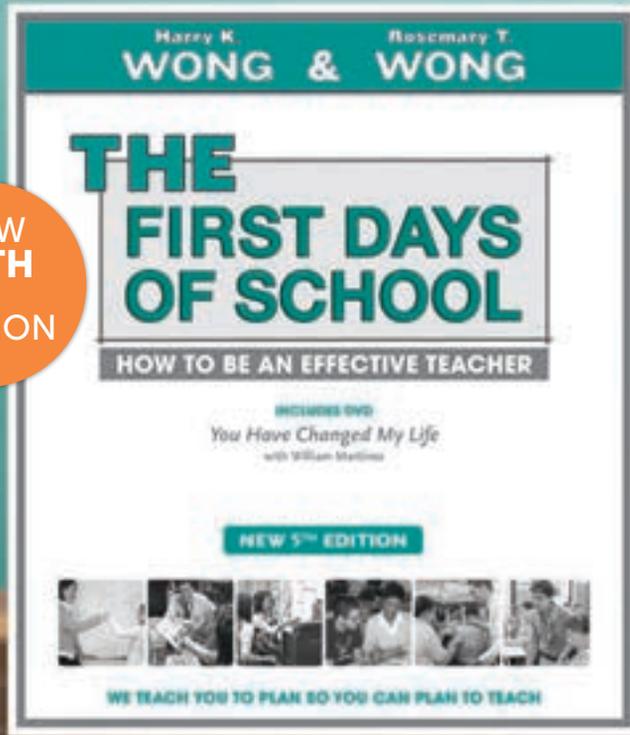
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**How leaders can build trust**

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## INSTRUCTIONAL MATERIALS

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## I SAY

## Sonja Santelises

Superintendent, Baltimore City Public Schools, Maryland



“If we want to ensure that all students — no matter their ZIP code, family income, or background — get what they need to be successful, we must take a far more thoughtful approach to curriculum: the actual content kids learn in school. Uneven, scattered curriculum isn't just boring or confusing; it can widen the gaps between students from affluent backgrounds and their peers from low-income families. Those who are well-off can fill in the blanks left by disjointed curriculum through parental guidance, outside tutoring, and the rich experiences that are the hallmarks of privilege ... [but] the problem is especially acute in schools with concentrations of poverty, where families aren't able to supplement the lack of rigor.”

**Source:** Santelises, S. (2018, July 17). “The importance of asking hard questions about what students learn in school.” *The Washington Post*. Available at [www.washingtonpost.com/news/education/wp/2018/07/17/the-importance-of-asking-hard-questions-about-what-students-learn-in-school](http://www.washingtonpost.com/news/education/wp/2018/07/17/the-importance-of-asking-hard-questions-about-what-students-learn-in-school).



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HERE WE GO

# Suzanne Bouffard

## Teaching is an art — and a science

Is teaching an art or a science? It's a little of both. There is artistry in the way teachers connect with students and foster their understanding. At the same time, there is a science to teaching and learning, an evidence base on which to build our approaches to developing students' knowledge, skills, and competencies.

We know more than ever about students' learning trajectories and how new learning builds on prior knowledge. Learning is cumulative. Gaps in knowledge and skills become cracks in the foundation of lifelong success.

Sadly, only some students in the U.S. have access to rigorous, grade-appropriate content and assignments. A recent study from TNTP found that students from low-income families spent half as much time on grade-appropriate assignments as those from higher-income families, and 38% of classes serving mostly students of color did not use a single grade-level assignment over the course of one week (TNTP, 2018).

Across five diverse districts, students got good grades on assignments 71% of the time, but met grade-level standards on those same assignments only 17% of the time, according to TNTP's ratings. This pattern sets up a gap in college readiness that may not be immediately obvious. But when students get to college, the cracks spread.

High-quality curricula and instructional materials can help close these gaps, particularly when they are

aligned with learning standards for what students should know and be able to do. They can level the playing field — if teachers have the support to implement them well. Truly effective application requires opportunities for deep thinking about materials and practice using them.

That's why this issue of *The Learning Professional* — and much of Learning Forward's current work — focuses on the intersection of high-quality materials and high-quality professional learning. As educational consultant Emily Freitag points out in her article on p. 40, "the implementation of quality curricular tools isn't as easy as completing a purchase order."

For this issue's Focus section, guest editor Lynn Olson curated a set of articles on professional learning throughout the stages of adopting, implementing, and reflecting on instructional materials. David Steiner kicks off the section with a review of the research on why instructional materials matter. Jody Guarino and her colleagues from the Newport-Mesa (California) district then share their innovative process for fostering teacher ownership of curriculum decisions via professional learning.

Articles by Emily Freitag of Instruction Partners and Barbara Davidson and Susan Pimentel from StandardsWork highlight elements of effective support in districts that are prioritizing high-quality materials. Katherine McNeill and Brian Reiser

illustrate the benefits of encouraging teachers to learn about new science materials in a participatory way that mirrors the way they are expected to engage students.

Does the science of evaluating and implementing high-quality curriculum diminish the art of teaching? As Learning Forward member Whitney Oakley says on p. 10, "Even though teachers have the curriculum resources in their hands, they still have to think through and reflect on their instructional delivery. This is where the autonomy is, the art of teaching."

Throughout the Focus section, we highlight the voices of teachers about how they are benefitting from a focus on high-quality materials in high-quality professional learning.

We wrap up the issue with an infographic, a visual reminder of both the benefits and challenges that lie at the intersection of instructional materials and professional learning. The numbers make a compelling case that there is room for improvement. We at Learning Forward are ready to tackle the challenges with you.

### REFERENCE

TNTP. (2018). *The opportunity myth*. New York, NY: Author.

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**LEARNING FORWARD'S VISION:**  
Equity and excellence in teaching and learning.

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# VOICES

## SUPPORT ALL TEACHERS

**I**n fulfilling our obligation to support all teachers in having the capacity to teach content to every student, selecting high-quality instructional materials is an easy step to take.”

“Focus adult learning on high-quality instructional materials”

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## CALL TO ACTION

# Stephanie Hirsh and Tracy Crow



## Focus adult learning on high-quality instructional materials

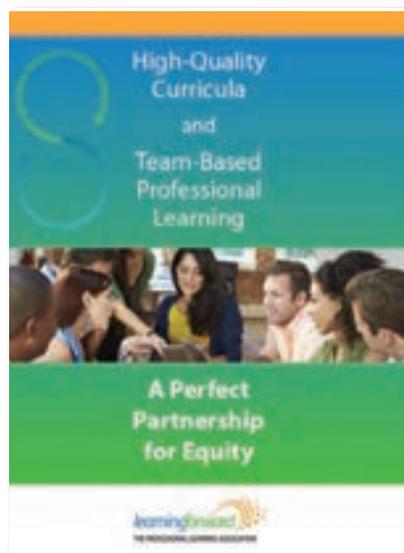
**A**t Learning Forward, we are embracing an emphasis on the implementation of high-quality instructional materials.

As always, our work centers on building the capacity of all educators to ensure all students experience excellent teaching and learning. Because research has helped to clarify precisely *where* teachers need to increase their capacity for maximum impact, we are making an emphasis on instructional materials more explicit in our work.

We are making this commitment for the same reason we are making equity more explicit in our work: We want to prioritize and be explicit about the strategies and values that have the most potential to help students.

Two compelling concepts drive Learning Forward's emphasis on the importance of high-quality instructional materials as the most critical content for professional learning.

First, a growing body of evidence underscores the importance of teachers using highly rated instructional materials. You'll see various impact studies highlighted throughout this issue. We were excited to showcase



the evidence in our recent paper, *High-Quality Curricula and Team-Based Professional Learning: A Perfect Partnership for Equity*. (To access the paper, visit [www.learningforward.org/perfectpartnership](http://www.learningforward.org/perfectpartnership).)

Second, effective professional learning is classroom-focused, job-embedded, sustained, and collaborative.

### NEED FOR DEEP LEARNING

While we sometimes call our emphasis on instructional materials

a pivot, there is nothing new about focusing educator professional learning on content knowledge or aligning learning with a district's instructional framework, scope and sequence, or college- and career-ready standards. Learning Forward has published volumes of tools and practical insights on how to support educators in the implementation of student standards.

In fact, the Standards for Professional Learning (Learning Forward, 2011) include an entire standard — the Outcomes standard — centered around the belief that educator professional learning, to be effective, needs to focus on the content students are learning and the materials in use in a system.

However, this kind of meaningful focus on what teachers teach still isn't the norm in every district. In our recent work with mentor teachers, we found educators hungry to offer deep learning tied to the instructional materials teachers are charged with teaching.

School systems expect new teachers to have content expertise and convey it effectively, yet the knowledge and skills can take time to develop. In fulfilling

our obligation to support all teachers in having the capacity to teach content to every student, selecting high-quality instructional materials is an easy step to take.

High-quality educative materials offer built-in support. Not only do they provide teachers with guidance for semester and yearlong planning, but they also provide the sequence for teaching key standards, concepts, and skills. Such materials provide the rationale as well as the explanations behind those content areas where writers anticipate students may struggle or educators may benefit.

The support built into great materials is by no means sufficient, however. Our vision for the processes that educators use to study and discuss the materials and content they use with students has similarities to Japanese lesson study. This process of deep and collective study and revision takes weeks.

Over the course of a year, educators may complete a small number of these cycles, leaving plenty on the agenda for the following year. Data and student needs guide educators in deciding where to invest learning time. It could conceivably take five to six years to work through every unit or lesson and, at that point, staff change, context shifts, and expectations may be adjusted and the cycle repeats itself.

This is why we can't imagine a time when the instructional materials would not be the focus for educator learning. Leaders who embrace this process — and support it with sufficient resources — recognize how incredibly complex teaching is and the expertise it requires.

There are certainly other priorities that surface when systems and schools prioritize learning needs. Some schools seeking to leverage research on social



and emotional learning may decide that investing in restorative practices is essential as part of their curriculum implementation efforts. Others may identify differentiated instruction as a high priority.

If mastery of standards and content is the goal, a sole focus on instructional materials isn't the only ground to cover. Districts may recognize the need, for example, to address culturally responsive teaching with educators in order to meaningfully select and implement materials and offer support to educators.

### TAKE ACTION

As you and your colleagues consider in what ways your team or district might need to shift how you prioritize adult learning in your context to focus more explicitly on instructional materials, here are three suggested actions:

**Learn more.** If this information is new to you, familiarize yourself with the research — this issue of *The Learning*

*Professional* and the sources referenced give you a great start to develop your knowledge base.

**Assess.** Examine the professional learning you plan or choose and assess the degree to which it aligns with these recommendations. Also, explore the materials you use with students and how they align with quality criteria available from multiple sources, such as EdReports ([www.edreports.org](http://www.edreports.org)) and EQuIP (<https://achieve.org/our-initiatives/equip/equip>).

**Discuss.** The integration of curriculum and professional learning is an optimal opportunity for educators in what are often separate departments to join hands to strengthen the coherence of teaching and learning. Together, look at your system, school, and classroom impact data to decide if there are smart moves you can make to address your most pressing student learning challenges.

When teachers invest ongoing, dedicated time to studying high-quality materials, they establish the foundation for transferring their learning into powerful lessons that can be differentiated and personalized to address individual student success. High-quality lessons that motivate, engage, and challenge students enable them to achieve the success we desire for them.

### REFERENCE

**Learning Forward. (2011).** *Standards for Professional Learning*. Oxford, OH: Author.

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## MEMBER SPOTLIGHT

# Whitney Oakley

## Educators can pave the path to equity

**Position:** Assistant superintendent, teaching, learning & professional development

**Location:** Guilford County Schools, Greensboro, North Carolina

**Number of years in education:** 16

**Why she became an educator:**

To make school a better experience for students than it had been for her. Although a handful of teachers inspired her, they were not the norm. She eventually became so disengaged that she “finally dropped out of high school with a 4.3 grade point average at the end of my junior year.” Within two weeks, she had completed the credits she needed to go on to a four-year university at the age of 16 to become a teacher. She later became a principal and district administrator.

**Most unexpected skill developed in her job:**

Driving a forklift. Since the district shifted to open educational resources, she says, “The management of materials has been a little crazy” and requires all hands on deck.

**Research finding she cites most frequently:**

“Researchers have found that it can take 50 or more hours of sustained professional learning to realize results for students” (Learning Forward, 2011).

**W**hitney Oakley has worn many hats during her career in education, including some she didn’t expect. After her district began to focus on high-quality instructional materials and adopted new resources, she found herself not only overseeing curriculum decisions and professional learning, but driving a forklift loaded with lesson materials and serving as what she jokingly calls a “literacy therapist.”

Because adopting a reading curriculum was a big shift for teachers and parents, she has devoted hours to building their knowledge and reassuring them that students will continue to read high-quality texts and develop core knowledge. She talked with Suzanne Bouffard, editor of *The Learning Professional*, about why these shifts were necessary and how they are starting to pay off.

**Q: In 2016, your district began a major effort to adopt and support the use of high-quality curriculum. How did that come about?**

A: The biggest factor driving this effort was the persistent data that showed only about half of students were meeting grade-level expectations by the end of 3rd grade. It is very important to get students from developing foundational reading skills in 2nd grade to being strong comprehenders in 3rd grade. Not enough students were making this transition smoothly.

**We had also been talking a lot about racial gaps in student performance, and we realized that access to high-quality grade-level instruction is the pathway to equity. We owe it to teachers, parents, and students to make sure the resources are there.**

We realized that we were focusing so much time and money on intervention resources, and we were really putting Band-Aids on the problem. We recognized that we needed to start focusing more on core instruction and making sure all students had access to aligned instructional materials.

We had also been talking a lot about racial gaps in student performance, and we realized that access to high-quality grade-level instruction is the pathway to equity. We owe it to teachers, parents, and students to make sure the resources are there.

It is a disservice to students to not have some streamlined resources and expectations. We have 126 schools, and we have some students who attend more than three schools in one academic year [because of family mobility].

We also owe it to teachers and students to make sure that job-embedded, sustained professional learning is right there with the materials. This is particularly important

because we have more new teachers than veteran teachers. North Carolina is in a teacher shortage crisis, and in Guilford County, when we compare the teachers needed and those who are graduating from university teacher education programs, we are about 250 teachers short.

**Q: How did you decide which curriculum resources to choose?**

A: We started with EdReports [a nonprofit organization that provides reviews of curricula that are conducted by expert educators], and that's when we were able to narrow our focus. We realized we don't need to sit here for weeks with the standards rubric. We can start with the programs EdReports has already vetted.

With that process, we landed on American Reading Company. Initially, we designed the implementation to be in grades 4 to 9 with 3rd grade coming on the following year.

But when Title II funding was in doubt, we were worried about how we were going to plan and carry out professional learning. After the reduction in Title II funding scare at the federal level, we decided that, in order to be fiscally responsible and make sustainable change, we need to go with open ed [open educational resources, which are free of cost outside of printing and professional learning]. So we brought on Core Knowledge for literacy in kindergarten through grade 2.

This year we have added math. Over the course of last year, we had about 250 teachers come together to review math curricula, starting with EdReports



The math team spends weeks in the warehouse counting and redistributing materials to ensure schools have what they need.

From left: Chris Carter, Martha Ray, Adjoa Botwe-Rankin, Jen Arberg, and Alyson Boone.

as the first layer. We adopted Eureka Math for K-5 and Open Up Illustrative Math for grades 6-8.

Now, for the first time, we have solid, vetted instructional materials from K-8 that are aligned to the standards. Embedded in those materials are major instructional shifts. For example, guided reading is not in the curriculum. We don't want instruction to be defined by the level of the book a student is reading but instead by a skill gap — for example, how well students understand concepts like phonemic awareness or summarizing.

In math, we are getting away from algorithms. When you and I were kids, we learned math with mnemonics or memorized tricks, but we didn't know why the concepts worked. In the new curricula, there are no more tricks. You have to have the complete conceptual understanding of, for example, why the order of operations works. These shifts are really hard for teachers, which is part of the reason professional learning is so important.

**Q: What professional learning approaches is your district using to support these shifts?**

A: In all of our district staff meetings, we emphasize the importance of professional learning. We talk about the research cited in Learning Forward's Standards for Professional Learning that teachers need about 50 hours of professional learning before even getting started implementing new curricula. Then we ask, what do we have resources to provide beyond initial training?

We make sure that teachers get 16 hours of professional learning over the course of the school year in their own classrooms with their students. We focus on coaching and professional learning communities (PLCs).

When implementing PLCs, we started with the work already established by researchers such as Richard and Rebecca DuFour. Their work emphasizes that PLCs should always seek to answer four essential

questions: What do we expect students to learn? How will we know when they've learned it? What will we do for students who don't learn it? What do we do for students who already know this content?

But there's a fifth essential question that PLCs don't always address that we felt we needed to add: How will we teach this content? The PLC model is agnostic about curriculum. It doesn't necessarily address nuts-and-bolts questions like "What should the warm-up to my lesson look like?" or "What is the common product students create?"

Even though teachers have the curriculum resources in their hands, they still have to think through and reflect on their instructional delivery. This is where the autonomy is, the art of teaching. We don't want to take away the power teachers have. The best PLCs help teachers develop the art of teaching, especially by giving them the chance to watch each other teach.

Coaching is very important for this, too. Coaches go into classrooms and work with teachers on the "how." They provide feedback and model specific strategies. In Guilford County, we contract out the coaching to the different curriculum partners. For example, American Reading Company staff coach teachers on their materials, and Eureka Math coaches support their own resources.

**Q: How do you create coherence when teachers have multiple coaches?**

A: Having multiple coaches is not a model that teachers are used to, and we don't want the parts to feel disconnected, so we are intentional about the coordination. The most important thing is the relationship coaches develop with teachers.

People are OK with multiple coaches as long as they like the coaches, feel they are experts, and see the process

**Even though teachers have the curriculum resources in their hands, they still have to think through and reflect on their instructional delivery. This is where the autonomy is, the art of teaching. We don't want to take away the power teachers have. The best PLCs help teachers develop the art of teaching, especially by giving them the chance to watch each other teach.**

as supportive and not evaluative. In fact, teachers love the coaching support and not being pulled out to a professional development meeting. This model is finally treating teachers like professionals. It acknowledges that everybody needs a coach. Everybody.

We also create consistency by using similar frameworks from the coaching with PLCs. For example, American Reading Company has a framework that effective implementation requires eight decisions and five prerequisites to successful work. We have adopted that.

One lesson we have learned about coordination is that it is important to have consistency in the way coaches report after the visits. Initially, each partner had reports that looked completely different. We have worked to make them more consistent, because it makes it easier for us to analyze and use them. I wish we had made that consistent at the beginning.

**Q: What changes are you seeing so far?**

A: We are seeing that teachers appreciate the professional learning and are using it to shift their practices. Based on a teacher survey at the end of the second year of curriculum implementation, teachers rated the

effectiveness of job-embedded literacy coaching as a 4 on a scale of 1 to 5.

They particularly appreciated the model lessons and planning sessions during the coaching visits. We are encouraged by the fact that 94% of them requested that coaching support continue in the next school year.

Looking further out, we expect to see improvements in students' reading performance. As part of the Guilford 2022 Strategic Plan, Goal I states that the percentage of students who will read proficiently by the end of 3rd grade will increase to 63% (it's currently 53.4%).

We don't expect to see quantifiable changes for three to five years. But we are looking at key performance indicators as checkpoints along the way and reporting them to the school board, community, and parents.

**Q: What are your recommendations for other districts embarking on curriculum adoption and implementation?**

A: It is important to have the ability to calibrate goals and expectations. Once you partner externally — or even if you are sending district staff into schools for coaching or observation — you have to be really calibrated on what you are looking for so that all staff and coaches are on the same page about the goal for the first year, for example.

Managing expectations is important, too. We can't just jump straight to modeling new lessons for teachers and expect they will be able to do it the next day. It all goes back to the 50 hours of professional learning needed to implement well. That's a lot of hours. It has to happen over time, and with some grace.

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## BEING FORWARD Alan Ingram

# Stephanie Hirsh offers an example of leadership in action

**A**s I've served on the board of trustees for Learning Forward, and particularly over the last 12 months as president, I've had a wonderful opportunity to work side by side with our executive director. As you know, Stephanie Hirsh will soon be taking a transition step, so I'd like to share my gratitude for her leadership and recognize just three of the components of leadership that she demonstrates every day.

### BEING EXPLICIT ABOUT YOUR BELIEFS MATTERS.

I'm proud that it was during my time as president of Learning Forward that the organization changed its vision statement to include equity: *Equity and excellence in teaching and learning*. While the board and staff have long assumed that ensuring equitable access to meaningful learning for each and every student was the overarching goal of all our efforts, Hirsh clarified that unstated assumptions aren't good enough. When she asked us to make explicit our equity intentions, we fully supported her request.

### CONTINUOUS IMPROVEMENT APPLIES TO EVERYONE.

Leaders who reach the top of their fields have the chance to take a breath and enjoy the view. While I know Hirsh enjoys her work each day, she is not one to rest on her laurels. She takes seriously the concept of continuous improvement, both for herself and for

### EXECUTIVE DIRECTOR SEARCH UPDATE

McIntyre Executive Search, the firm conducting the search for a new executive director, is deep into its recruitment process. In partnership with Stephanie Hirsh and the executive committee of the board of trustees, the firm has reached out to several hundred stakeholders, supporters, and potential candidates nationally in an effort to identify the best person to lead us into the future.

The search is progressing as planned to deliver a highly qualified slate of candidates, and we trust McIntyre to drive this process as we move into 2019. In the meantime, the board fully supports Hirsh as we all remain dedicated to the critical work of the organization. We'll let you know when we have news to share.



those she supports. She solicits feedback on everything she does and welcomes the perspectives of others in helping to improve anything she has in progress.

Under her leadership, the organization continually seeks feedback and outside expertise to examine and reshape as necessary business processes, membership or consulting offerings, or other aspects of the work. The recent focus on amplifying the importance of focusing professional learning on implementing instructional materials is but one example of how Hirsh takes something the organization has always believed and finds ways to bring critical strategies to the fore.

### LEADERS COLLABORATE AND DEVELOP OTHER LEADERS.

The board of trustees has the utmost confidence in the organization's

strong future in large part because of the collective responsibility and expertise Hirsh has helped to build amongst every employee, consultant, board member, and close ally of Learning Forward. She's ensured that processes and structures are in place so that Learning Forward will sustain and grow and embrace new innovations and opportunities with our strategic goals and vision to guide us.

I could share a long list of Stephanie Hirsh's accomplishments and contributions in thanking her, and I know everyone reading this has his or her own list. Please extend your congratulations to her and join me in wishing her well as she finds her next avenue for service.

**Alan Ingram is president of Learning Forward. ■**



## WHAT I'VE LEARNED

# Jon Saphier

## Let's get specific about how leaders can build trust

**S**chool leadership literature repeatedly identifies trust as essential for creating high-gain schools — schools where student gain scores are more than one year's worth of achievement at a given grade level. These are schools that get results beyond what their demographics would have predicted (e.g. Bryk & Schneider, 2002; Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010).

When educators trust their leaders and each other, academic achievement rises.

Not coincidentally, students also develop trust and a sense of safety in the school community (LaCour, York, Welner, Valladares, & Kelley, 2017).

Trust, however, doesn't develop on its own. Leaders must engage in practices that build it. But what school leaders *do* to build trust has been something of a mystery.

Two decades ago, Paul Black and Dylan Wiliam (1998) wrote about what they called the "black box" of teaching practices in their work on the need for formative assessment. Their point was to reveal the hidden details of what made formative assessment effective. A similar black box obscures the relationship among trust, adult professional culture, and high-quality teaching and learning that we need to open.

We need to understand what relational trust looks and sounds like when it exists and what effective leaders do to create it.

### TRUST IS THE FOUNDATION

Trust gives school leaders the respect and credibility they need for educators to listen to, collaborate with, and follow them. School leaders do not have the range of authority of industry CEOs. CEOs can declare new operating routines and schedules, quickly hire and fire, offer incentives, and give promotions and raises. Principals are also not at the head of a pyramid where supervisors oversee small teams that are easily managed.

Instead, principals are in charge of teachers who mostly work individually and often see themselves as artistic, solo practitioners rather than working side-by-side in teams and being members of an organization. It is no wonder that success as a principal hinges on the ability to unite and focus rather than command and control.

When leaders build trust among their faculty, this trust enables them to advance among faculty members key beliefs that motivate and justify the role of professional learning in schools (Saphier, Haley-Speca, & Gower 2018). Three such key beliefs are:

1. Smart is something you can get. The growth mindset is powerful. We can accelerate the learning of students who are behind. It's my job to get students to believe this and act from that belief. I can learn the tools to do so.
2. The knowledge and skills base for high-expertise teaching is very large. No matter how experienced



**I trust you will show me respect by using active listening skills.**

or competent I am, I haven't been prepared in significant parts of it. And some items in this knowledge base are more important than others.

3. I can learn more and get better. (I can. I must.)

The first belief gives us a sense of urgency and obligation to reach all students, not just some. The second and third beliefs create a craving to learn more and a rationale for collaboration because of the feeling of "I can't do all this learning alone."

These beliefs generate the drive, humility, confidence, and moral obligation to engage in all the practices we already know successful faculties do. That includes but is not limited to frequent formative assessments, excellent use of data, reteaching to students who don't get it the first time around, deep collaboration, a rigorous curriculum, and the relentless pursuit of learning for *all* students.

Staff members won't be willing to

do all these things unless they trust that they should, that they can, and that they can get results. They also need to believe it will be safe to learn these practices and make mistakes along the way.

### TRUST THAT ... WHAT?

One of the things missing from the trust literature is this: Educators succeed when they trust that ... what?

My colleagues and I at Research for Better Teaching often conduct an exercise with school leaders in which we ask them to fill in that sentence. Working in groups, they list what they expect a trusted leader to show. The following list is summarized from the literature (Bryk & Schneider, 2002; Covey, 2006; Saphier, 2018) and is our recommendation for a comprehensive operational definition of the layers of trust. Educators who do the exercise mentioned above will usually come up with many of these same items.

1. **I trust that you are competent and can keep the wheels turning by:**
  - Staying on top of essential operations.
  - Handling crises.
2. **I trust that you think I am a worthwhile person because you:**
  - Consistently notice and comment on the things I am doing well.
  - Are interested in my life outside of school.
3. **I trust that you will make it safe for us to make mistakes by:**
  - Making yourself vulnerable.
  - Acknowledging what you don't know and where you need help.
  - Righting wrongs, apologizing, making restitution.
  - Acknowledging mistakes.

- Showing loyalty by giving credit freely, acknowledging others, and not bad-mouthing anyone behind their backs.
  - Holding yourself accountable and sharing how you'll communicate how you're doing.
  - Being a constant learner with us and visibly so.
4. **I trust that you will be honest, meaning you:**
    - Give me honest feedback about my performance.
    - Talk straight, let people know where you stand, use simple language, call things as they are, and not leave false impressions.
    - Create transparency, err on the side of disclosure.
    - Confront reality, take issues head on, lead courageously in conversations.
    - Clarify expectations, discuss, validate, don't assume they are clear, renegotiate if necessary.
  5. **I trust your integrity — that is, that your motives are for the interest of the children, not your own career advancement because you:**
    - Stand up for important values.
    - Keep your moral compass.
    - Maintain urgency for what needs to be done.
    - Keep your promises and follow-through on your commitments.
  6. **I trust that you will act courageously by:**
    - Protecting us from initiative overload.
    - Keeping us safe from toxic behavior internally.
  7. **I trust that you make legitimate decisions because you:**
    - Showing loyalty by giving credit freely, acknowledging others, and not bad-mouthing anyone behind their backs.
    - Holding yourself accountable and sharing how you'll communicate how you're doing.
    - Being a constant learner with us and visibly so.

- Solicit input.
  - Explain how our input was used and why.
  - Can set limits and say no.
  - Make decisions for the good of the school.
8. **I trust that you will deliver results:**
    - By highlighting small victories.
    - By getting the right things done.
  9. **I trust you will show me respect by:**
    - Listening first and not assuming you know what matters most to others.
    - Using active listening skills.
    - Hearing out different points of view.
    - Valuing my time.
    - Having my back.
    - Sharing difficult information because you think I can get better and deserve the chance.
  10. **I trust that you will act in a caring and compassionate way by:**
    - Showing kindness in little things.
    - Being generous.
    - Going the extra mile to show consideration to individuals beyond formal requirements.

### WHAT DOES TRUST LOOK AND SOUND LIKE?

The list above is, by nature, a set of abstractions. We also conduct an exercise that brings those into concrete focus and thus brings them alive.

We ask participants to take one of these bullet points and write a vignette about something they would see, hear, or experience that would serve as evidence that a leader is embodying that

element of trust.

These vignettes can become a playbook for any leader who wants to build trust and respect. By that, I mean that the vignettes are imaginary actions or interactions that can then be made real, not imaginary.

Leaders can track their progress in building trust by turning the “trust that ... what” list into a rating instrument (e.g. with a scale from 1 to 5 for each statement) and giving staff the opportunity to complete it anonymously.

It's important to explain to them that your ability to build trust is a key variable in generating the kind of adult professional culture that leads to better student results. In the spirit of transparency and trust building, it is also important to share the results with the faculty, perhaps in a histogram format.

When you present to faculty, describe what was surprising, what was pleasing, and what goals you are going to set as a result. Thank them for being honest and pledge to improve where it is needed. By doing that, you have modeled making yourself vulnerable and the first step in being strong (Saphier, n.d.).

All over the country, we see leadership academies and certification programs forming. Most every major city has one for growing its next generation of leaders. What is absent from these programs, however, is a serious study of how leaders make every school a reliable engine for constant improvement of teaching and learning.

That is what will move our public schools forward. To accomplish that, leaders need skills at building strong adult professional culture. We have known for decades what the attributes of strong adult cultures are (see sidebar above). But we have not identified the practices of leaders who were successful in building those strong cultures.

The visible practices of strong

## VISIBLE PRACTICES OF A STRONG ADULT PROFESSIONAL CULTURE

### Learning organization

1. Frequent teaching in the presence of other adults.
2. Safety to take risks, be vulnerable in front of colleagues.
3. Constant learning about high-expertise teaching.

### Teams and data

4. Deep collaboration and deliberate design for interdependent work and joint responsibility for student results.
5. Nondefensive self-examination of teaching practice in relation to student results.
6. Constant use of data to refocus teaching.

### Passion and press

7. Urgency and press to reach

all students and do better for disadvantaged students.

8. Commitment to implement “Smart is something you can get” in classroom practice, class structures, and school policies and procedures.

### Humane, caring environment

9. Humane environment of caring, appreciation, and recognition, getting to know one another, traditions we look forward to.

### Critical feedback

10. Demanding and high standards for development toward high-expertise teaching for all teachers.
11. Honest, open communication and the ability to have difficult conversations.
12. Environment of reflection with habits of mindful inquiry.

Source: Saphier, 2018.

culture are the end products. They liberate staff members to collaborate deeply and improve their teaching. But the work to grow these practices is grounded in trust. A leader's ability to build trust is the necessary catalyst for growing that culture. Let's select people who want to do that and give them skills to be successful.

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# RESEARCH

**“ENGAGING  
IN SCIENCE  
RESEARCH  
CHANGES  
TEACHERS’  
BELIEFS AND  
PRACTICE”**

## LESSONS ON TEACHER LEARNING

p. **18**

**“R**esearch experiences that drew on teachers’ own questions were the most powerful learning — just like what we know about student learning. In addition, the researchers found that sustained social interactions with peer teachers and scientists during the research experience had a positive impact on teachers’ beliefs about science teaching. Having opportunities to discuss and reflect collaboratively in research-focused groups with other teachers and with scientists was shown to be essential to learning.”



## RESEARCH REVIEW

# Elizabeth Foster

## Engaging in science research changes teachers' beliefs and practice

### ► THE STUDY

**Southerland, S.A., Granger, E.M., Hughes, R., Enderle, P., Ke, F., Roseler, K., ... Tekkumru-Kisa, M. (2016, October).** Essential aspects of science teacher professional development: Making research participation instructionally effective. *AERA Open*, 2(4), 1-16.

### LET US HEAR FROM YOU

Do you have thoughts about this study or have recommendations of other research you'd like to see us cover? Email me at [elizabeth.foster@learningforward.org](mailto:elizabeth.foster@learningforward.org).

•  
**Elizabeth Foster ([elizabeth.foster@learningforward.org](mailto:elizabeth.foster@learningforward.org)) is associate director of standards, research, and strategy at Learning Forward. In each issue of *The Learning Professional*, Foster explores a recent research study to help practitioners understand the impact of particular professional learning practices on student outcomes. ■**

**M**eaningful and relevant learning is just as critical for adults as it is for students.

This is a central tenet of Learning Forward's work and undergirds the Standards for Professional Learning.

This is especially important when standards for student learning change and there is a gap between how teachers have been teaching and how they are expected to teach given new standards. Professional learning is essential for bridging that gap and supporting that shift in teaching.

The Next Generation Science Standards call for a shift in the teaching and learning of science, from a focus on acquiring a body of knowledge to making sense of concepts and developing cross-cutting understanding. This requires active, constructivist approaches to learning. Engaging in scientific research practices and processes is a key part of this kind of learning.

Unfortunately, "few science teachers have had such research experiences, and much of the undergraduate preparation for science teachers precludes authentic research experiences," according to researcher Sherry Southerland from Florida State University.

In a 2016 study, Southerland and colleagues examined the impact of professional learning programs designed to address this lack of experience, known as Research Experiences for Teachers. These programs range in purpose, from increasing teachers' content knowledge in a specific subject

to increasing their level of comfort with scientific research methods. They most often occur in the form of six- to 10-week summer institutes, during which teachers are immersed in an experience with scientists in a setting such as a university or government laboratory.

Such experiences have been part of the professional development sphere for decades, but they are particularly relevant to the current emphasis on inquiry-based learning and meaning-making that invites deep understanding. This alignment between student content standards and professional learning is a good example of what the **Outcomes** standard from Learning Forward's Standards for Professional Learning looks like in practice, as it focuses on the link that needs to be made between professional learning and student learning.

Research Experiences for Teachers programs are also important to consider today because they have the potential to exemplify the interconnected and interdependent qualities of effective professional learning.

In their study, Southerland and her co-authors examined the elements of these programs that contribute to shifts in teachers' thinking and practices that align with the Next Generation Science Standards. Those particular elements are consistent with the Standards for Professional Learning, particularly the **Learning Communities** and **Learning Designs** standards, and the findings also underscore the importance



of considering the standards in a comprehensive way.

## RESEARCH QUESTIONS

The study looked at the experiences of 106 science teachers participating in Research Experiences for Teachers. It investigated two questions to determine how aspects of teachers' thinking as well as features of the professional learning impacted teachers' learning and practice:

- In what ways does teachers' thinking — specifically, teaching self-efficacy,

pedagogical discontentment, and beliefs about teaching — interact with research experience in a Research Experiences for Teachers program to shape their practice?

- What are the features of the Research Experiences for Teachers professional learning that are the most influential in teachers' learning, including changes in their thinking and practice?

Specifically, they examined teachers':

- Sense of their ability to teach science in general;
- Perceptions of their ability to teach specifically using science inquiry approaches;
- Fundamental beliefs about science teaching and learning; and
- Level of dissatisfaction with their own teaching practices.

They also examined these features of a Research Experiences for Teachers program:

- Amount of social interaction;
- Primary intent of the research, whether to develop a body of knowledge versus teachers' understanding and application;
- Number of investigations completed; and
- Type of teachers' products, whether focused on a research project or on the teaching of science.

How does this research relate to Learning Forward's Standards for Professional Learning? Considering teachers' level of content and pedagogical content knowledge as an element of professional learning design is central to the **Outcomes** standard because it is a step to better understanding how educator learning links to and impacts student learning.

In addition, the way the study examines the features and goals of the two programs illustrates how having different intents (and relying on different theories of action) impact

what teachers learn and apply — an essential tenet of the **Learning Designs** standard.

### METHODOLOGY

To answer these research questions, the authors looked at five years (2007-12) of quantitative data related to changes in teacher thinking and practice after participation in two programs, the Science Research and the Science Pedagogy programs. Both opportunities immersed teachers in real-world science environments and ongoing relationships with scientists.

The two programs differed mainly in that the Science Research program focused on giving teachers opportunities to participate in authentic scientific research in a laboratory with a mentor scientist, whereas the Science Pedagogy program engaged teachers

in scientific research and an in-depth study of the learning that occurred.

Science Pedagogy centered around the questions that emerge from teachers engaged in the research and featured ongoing systemic reflection in order to make the learning relevant to classroom practice.

The researchers collected data before, during, and after the summer engagements via surveys, interviews, observations of the research engagements, and videos of classroom practice. (The post data were collected six to eight weeks after teachers had returned to their classrooms.) These data allowed them to examine whether and how teachers' beliefs and practices changed.

### FINDINGS

Does engaging in extended science

research experience change teachers' beliefs about teaching as well as their own efficacy and classroom practice?

Yes, according to this study:

- Program participation impacted teachers' beliefs about teaching, which in turn improved classroom practice.
- Certain components also impacted practice directly by improving content and pedagogical content knowledge.
- Opportunities to engage with others about science, science practices, and science teaching shifted beliefs to a more student-centered approach to practice.

In addition, the authors found that teachers' incoming states impacted the kind of professional learning they sought out and the way they



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experienced learning. Teachers who were more confident in their abilities with inquiry teaching chose the less social and collaborative opportunities than teachers who were less confident in their inquiry teaching.

Teachers who were discontented with past teaching efforts but felt they were actually effective science teachers were more likely to choose the experience that would enhance their personal understanding rather than expose them to cutting-edge science research.

These findings suggest that professional learning designers and providers should consider how teachers are invited to such learning opportunities and be cognizant that the choices they make may extend to how willing teachers are to engage with new strategies and new information.

The study also found, perhaps unsurprisingly, that teachers who were not confident about their past or current abilities to teach science were worried about their future abilities. The authors suggest that asking about and understanding what teachers are bringing to the professional learning experience is a critical design element — an idea that is underscored in the **Learning Designs** standard, which calls for the goal of the learning to be clear so that it will have an impact on how the learning is designed.

This encourages designers and implementers of professional learning to think about whether changing teachers' confidence or efficacy is an explicit goal of professional learning and, if so, how that will be addressed in the learning experience.

The researchers found that the sustained experience focused on teachers' personal understandings about science had a direct positive impact on practice. Research experiences designed with the intent of enhancing teacher learning, rather than introducing new

research, were more effective.

Research experiences that drew on teachers' own questions were the most powerful learning — just like what we know about student learning. In addition, the researchers found that sustained social interactions with peer teachers and scientists during the research experience had a positive impact on teachers' beliefs about science teaching. Having opportunities to discuss and reflect collaboratively in research-focused groups with other teachers and with scientists was shown to be essential to learning.

In fact, the researchers write, "Our results suggest that research participation in itself is not sufficient to shape teachers' use of scientific practices in the classroom, although carefully crafted research experiences can do so. Teachers must have an opportunity to make sense of their research experiences with others if they are to undergo the necessary changes in affect and belief to result in changes in practice."

This finding that a high degree of social interaction has a positive impact on teaching is consistent with the **Learning Communities** standard, which underscores the value of learning in relationships and in collaboration with others. Designers and facilitators of professional learning should provide protected time and opportunity for teachers to learn, discuss, and process content together.

The degree of social interactions had the most impact of all the program variables on *teacher thinking*, which ultimately affected teacher practice. However, it was the intent of the research engagement that had the most direct impact on *teachers' classroom practice*.

The study found that the research experience was more successful when it took into account the personal relevance to teachers' understanding of science and its relation to their

practice and their classrooms. Programs designed to encourage teachers to engage with the research and reflect on its application and their own learning impacted practice more than those without that intent.

## IMPLICATIONS

The study may be particularly interesting to science teachers, coaches, and science supervisors as the details about the shifts in teaching practices related to the Next Generation Science Standards offer examples and guidance.

However, the findings about how teachers' thinking impacts their learning and the examination of supportive features of the program are relevant to other content areas as well. This study supports other research about how teachers' practice can be positively influenced by professional learning both directly through learning about content and application and indirectly by changing participants' thinking about teaching.

This seemingly simple statement can be challenging to unpack, which suggests that studies that can make teachers' thinking transparent and case studies that highlight teachers' own thoughts and voices will be important sources of information when designing professional learning.

Keeping in mind that the study sample size is small (n=106) and that the sample is made up of teachers who volunteered for the experience, the findings have implications for current teachers, professional development designers and providers, future practitioners, and educator preparation programs. Better understanding where teachers are in relation to their own practice and to the goals of the professional learning should impact the design and content of the professional learning, as well as the measures of effectiveness. ■

# ESSENTIALS

## ■ CURRICULUM REFORM

Curriculum Reform in the Nation's Largest School Districts  
*Center for American Progress, August 2018*



A troubling number of U.S. school districts are failing to use highly rated instructional materials, according to this report. Researchers identified math and English language arts materials used by the nation's 30 largest districts, then examined how those materials stacked up on two well-regarded rating systems.

Of the 25 districts that responded to a survey, 10 were not using any highly rated materials. Even more concerning, 23

of the 25 were using or recommending materials with low ratings. Moreover, only 18 of the 30 districts made available on their websites information about their instructional materials, limiting the ability of parents and policymakers to be informed and to advocate for change.

The researchers did find a handful of districts they considered exemplary in the selection and use of materials, but they call on states to provide more supports and incentives so that districts will adopt such materials and engage in the professional learning central to realizing their potential.

<https://ampr.gs/2RkXrYD>

## ■ LEARNING OPPORTUNITIES

The Opportunity Myth:  
What Students Can Show Us  
About How School Is Letting  
Them Down — and How To Fix It  
*TNTP, September 2018*

Why are so many high school graduates unprepared to succeed in college? That was the question driving TNTP's investigation of what students in five diverse districts are learning and experiencing in school.

After observing nearly 1,000 hours of classes, 5,000 assignments, and 30,000 "in-the-moment" student survey responses, the researchers concluded that students had inconsistent access



to learning opportunities. Many assignments were not grade-level appropriate, and only 16% of the lessons observed were rated as high quality.

These patterns were particularly pronounced for low-income students. Yet when low-income students had more access to grade-appropriate teaching, their learning grew by several months. Teacher surveys further supported the finding that low-income students' teachers were more likely than others to hold low expectations.

<https://opportunitymyth.tntp.org/>

## ■ NEW TEACHER MENTORING

Federal Grant Analysis Shows  
Promising Impact of NTC Trained  
Mentors on Teacher Practice  
and Student Achievement  
*New Teacher Center, September 2018*

Research continues to mount about the value of mentoring, especially for teachers early in their careers. With support from a U.S. Department of Education Investing in Innovation (i3) grant, the New Teacher Center is examining a large-scale expansion of its mentoring supports for new teachers.



A preliminary report found that students in grades 4-8 gained up to six additional months of learning in math when their teachers were engaged in the mentoring model, as compared to students whose teachers participated in traditional professional support.

It also showed that new teachers who participated for two years were more effective at engaging students and using assessments as part of instruction than those who did not.

<http://bit.ly/2CD8aJI>

## ■ DIGITAL RESOURCES

Navigating the Digital Shift 2018:  
Broadening Student Learning  
Opportunities  
*State Educational Technology  
Directors Association, 2018*

Digital resources are playing an ever-increasing role in instruction, but schools often lack guidance about how to choose them wisely. This study found that the number of states with policies and guidance is growing: 26 states have digital learning repositories, 15 have dedicated funding for digital resources, 19 provide guidance to publishers interested in selling digital materials, and between 23 and 31 have some guidance about accessible digital materials. Among the study recommendations is professional learning for districts and schools to select and implement digital resources well.



<http://bit.ly/2D7PC5a>

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# FOCUS

INSTRUCTIONAL MATERIALS



## PROFESSIONAL LEARNING SUPPORTS THE INSTRUCTIONAL CORE

“**T**eachers deserve great instructional materials to help their students succeed. Harvard professor Richard Elmore described this instructional core — the essential interaction between teacher, student, and content — as the basis of learning,” explains Lynn Olson, an expert in education, strategic planning, communications, and philanthropy. “That’s why I was so happy to guest edit this section of *The Learning Professional*, focused on what happens when teachers have the collaborative learning opportunities and great materials to help their students soar,” she says.

Learning Forward invited Olson to curate the following articles based on her deep knowledge about instruction and her experience writing Learning Forward’s publication, *High-Quality Curricula and Team-Based Professional Learning: A Perfect Partnership for Equity*. Olson worked for nearly a decade with the Bill & Melinda Gates Foundation’s K-12 program and, before joining the foundation, was an award-winning writer and editor at *Education Week*. With this set of articles, she highlights the role of professional learning in multiple phases of implementing high-quality materials, from selection and adoption to evaluation and continuous improvement.



Lynn Olson



# MATERIALS

INSTRUCTIONAL MATERIALS + PROFESSIONAL LEARNING = STUDENT ACHIEVEMENT

BY DAVID STEINER

**A** number of research summaries over the last few years have brought attention to the impact that high-quality instructional materials have on student learning. The U.S. Department of Education's What Works Clearinghouse, which produces

summaries of rigorous research, has identified a number of effective curricula with large effect sizes on students' reading, math, and science learning (e.g. Borman, Dowling, & Schneck, 2008; Hirschhorn, 1993; Smith et al., 1993; Zucker, Tinker, Staudt, Mansfield, & Metcalf, 2008).

In fact, studies show that selecting a high-quality curriculum can have a bigger impact than a number of

other popular interventions such as decreasing class size and offering merit pay to teachers (Boser, Chingos, & Straus, 2015; Koedel & Polikoff, 2017; Whitehurst, 2009). One study found a spread between the impact of two different math textbooks that amounted to a 10-percentile point gain in achievement (Kane, Owens, Marinell, Thal, & Staiger, 2016).

The cumulative impact of high-



# MATTER

quality curriculum can be significant. Most research studies focus on the impact of a curriculum over one or two years. But over time, even a small annual effect can compound to make a big impact. Daniel Hirschhorn's longitudinal study (1993) found that students who were taught using a high-quality math curriculum for four consecutive years (grades 7-10) outpaced comparison students by a margin of 23 percentile points — an effect that amounts to four additional

years of learning. When extrapolated across an entire class, grade, or school, such impacts could prove transformative.

## INTERNATIONAL EVIDENCE

Because most state standards, including the Common Core, and most state assessments, including PARCC and Smarter Balanced, are largely skills-focused, many curricular materials in the United States, especially in English language arts, focus on skills rather than



**"The positive effects of high-quality curriculum shouldn't perhaps surprise us."**

— Ashley Berner,  
*Johns Hopkins University*

on knowledge.

This is unsurprising, given that it has been difficult to agree on which key texts students should read or which areas of knowledge they should master, particularly in middle and high school.

But studies of educationally top-performing countries across the globe indicate that one of the very few characteristics they share is a high-quality, content-rich curriculum. The most extensive study, performed by a research team at Common Core Inc., found that a comprehensive, content-rich curriculum was the salient feature in nine of the world's highest-performing school systems as measured by the Programme for International Student Assessment (PISA).

Despite the vast cultural, demographic, political, and geographic diversity of Finland, Hong Kong, South Korea, Canada, Japan, New Zealand, Australia, the Netherlands, and Switzerland, their educational systems

all shared an emphasis on content-rich curriculum and commensurate standards and assessments (Common Core, 2009).

Ashley Berner, deputy director of the Johns Hopkins Institute for Education Policy and assistant professor in the School of Education at Johns Hopkins University, has investigated international best practices. “The positive effects of high-quality curricula shouldn’t perhaps surprise us,” she writes. “Most democracies around the world require all schools to teach a common body of knowledge, and a comprehensive, content-rich curriculum is a signature feature of high performers” (Berner, 2018).

Berner references OECD’s 2013 report on excellence and equity, which found that the most equitable countries instruct all students, not merely those deemed “gifted,” in high-level mathematics. It is instructive to look at two systems in particular: the Netherlands and Alberta, Canada. These systems fund a wide variety and number of schools, require them all to follow the same sequenced curricula, and are among the world’s most equitable and high-performing school systems (OECD, 2013).

We also have evidence of what happens when a nation moves in the opposite direction, giving up its national curriculum. In *Knowledge Matters*, E.D. Hirsch reports data from France that show the steep decline of academic results from children of every economic background in the years after that country abandoned its national, content-rich curriculum (Hirsch, 2016).

### **COST DOES NOT PREDICT QUALITY**

Surprisingly, effective curricula cost, on average, no more than weak curricula. When it comes to math curricula in the early grades, there is



**Studies of educationally top-performing countries across the globe indicate that one of the very few characteristics they share is a high-quality, content-rich curriculum.**

little relationship between cost and quality of instructional products.

Boser and colleagues (2015) examined six pairs of elementary math curricula, each of which had a lower- and a higher-quality version. They found that switching from the lower- to the higher-quality product would cause districts to incur “not much of a cost.”

In fact, prices do not vary widely across products, with the most expensive product in the same government-sponsored study costing only \$13 per student more than the least-expensive product. If anything, the higher-quality products tend to cost less, and, in some instances, the most expensive curriculum was among the least effective and the least expensive was among the most effective (Boser et al., 2015).

Among the less-expensive curricula are those made available online in an open educational resources format. In this instance, the basic curriculum is available for free downloading, with the costs restricted to printing and, in some cases, to supplemental material.

Engage NY, for instance, is a widely used open educational resource

available for free (New York State Education Department, n.d.). In 2015, Duval County, Florida, began to use Engage NY districtwide. An internal audit shows that the district saved more than \$10 million over three years by using open educational resources and printing the materials rather than using published curricula (Hoskinson, 2015).

At the same time, the academic results from Duval County since the introduction of the Engage NY curricula have been promising. As of 2018, student proficiency in many academic areas has risen (Duval County Public Schools, 2018).

### **TEACHERS FREQUENTLY DEVELOP THEIR OWN MATERIALS**

Yet despite all this research, individual teachers self-select many of their instructional materials, and, as a result, most students are taught — at least in part — through idiosyncratic curricula that are not defined by school districts or states.

As I report in my own review of the evidence, teachers report using a variety of instructional materials from a wide array of sources: formal, published curricula and informal, online lessons; self-developed and district-selected materials; and those aligned to standards or not (Steiner, 2017).

One study of teachers in five states found that 80% of English language arts teachers and 72% of math teachers reported using materials they or their colleagues developed on at least a weekly basis, and they used other materials less frequently than once a week (Kane et al., 2016).

Another similar study found even higher rates for teachers using materials they developed or found themselves: 83% of elementary math teachers, 87% of secondary school math teachers, 90% of elementary English language arts teachers, and 85% of secondary school English language arts teachers

(Kaufman et al., 2017).

Teachers clearly rely on a wide variety of online resources, with Google, Pinterest, and Teachers Pay Teachers leading a list compiled by research organization RAND (Opfer, Kaufman, & Thompson, 2016). The issue is not with the fact that the resources are online — such materials can be strong, and even downloading materials for a single lesson can add supplemental value (Jackson & Makarin, 2018). Rather, the issue is that when teachers create their own lessons too much of the time, students may not get the benefits of a fully sequenced, coherent learning experience.

A recent study found that materials created or selected by teachers were generally less likely than those provided by their district to meet academic standards appropriate to the grade level in English language arts and math (TNTP, 2018).

On average, teacher-created or selected materials aligned to academic standards 20% of the time, while district-adopted materials aligned 34% of the time. When teachers reported that their assignments came from high-quality district offerings, student assignments were grade-appropriate 53% of the time.

Schools of education across the United States do not prepare future teachers for the many skills required to become effective curricula designers. Teachers and their students deserve access to effective, high-quality curriculum materials, rather than asking teachers to cobble together lessons largely without any professional training or support.

## PROFESSIONAL LEARNING IS ESSENTIAL FOR IMPLEMENTING CURRICULA

Providing high-quality materials to teachers is not enough, however. While stronger instructional materials



**A recent study found that materials created or selected by teachers were generally less likely than those provided by their district to meet academic standards appropriate to the grade level in English language arts and math.**

make a real difference, that difference is magnified by matching it with professional learning.

Indeed, research suggests that over half of the possible impact of shifting to a stronger curriculum is lost if the transition does not include a shift in teacher practice that specifically supports the new materials (Taylor et al., 2015).

One can make a clear inference that professional development that guides teachers to optimize their use of new curricula must be an essential part of any instructional materials-oriented school-level transitions.

What would it mean for teacher preparation programs to properly prepare teachers to use high-quality curricula? A University of Washington professor quoted in a report from Learning First explained how the university's teacher preparation program is starting to address this issue directly:

“The teachers we work with as preservice teachers are working with anywhere from seven to eight different curriculum materials in their placement schools. So we have to very concertedly

help them learn how to read the curriculum materials they get and how to adapt them to be in line with what they learned through the university. ... It's not true that just because you've learned how to elicit and respond to student thinking in the field-based methods course that you'll do that in your student teaching if you haven't learned how to use the curriculum materials that you're given” (Toon & Jensen, 2017).

This is a positive step, but professional learning on curriculum implementation shouldn't end when a teacher begins his or her first classroom job. Teachers already on the job need the same skills so they can become smart users of the curriculum materials provided by their districts or schools, especially because it's not uncommon for schools to change curricula.

Using the curriculum materials effectively includes being able to distinguish high- and low-quality materials, knowing how to analyze whether the materials align with achievement standards, and practicing how to use and adapt materials in the classroom (Toon & Jensen, 2017).

It is encouraging that U.S. education policymakers are starting to take steps in the right direction. Under John White's leadership, Louisiana's Department of Education has partnered with its teachers successfully to support and incentivize the use of high-quality materials (Kaufman, Thompson, & Opfer, 2016; Pondiscio, 2017).

National leadership organizations such as Chiefs for Change (2017, 2018) are now on the record as advocating for the shift to strong curricula. And we are seeing more reports and respected education publications bringing attention to best practices (e.g. The Aspen Institute, 2018; Instruction Partners, 2017). All of these efforts point to a simple but powerful message: Curriculum quality matters.

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Vanessa Galey, director of special projects, and Gabriel Del Real, coordinator of TK-12 curriculum and instruction, review data with colleagues from the Newport-Mesa Unified School District in California to inform decisions about adopting new curriculum materials.

# BEYOND BUY-IN

TEACHERS LEARN TO EVALUATE AND ADOPT MATERIALS

BY JODY GUARINO,  
VANESSA CERRAHOGLU,  
JOHN DRAKE,  
AND LAUREN WEISSKIRK

In 2016, the Newport-Mesa Unified School District in southern California began the process of adopting a new math curriculum. Teachers and community members were dissatisfied with the existing program because it wasn't meeting teachers' instructional needs or students' learning needs.

Public dissatisfaction made it imperative to involve teachers and the community in the process. We determined that teachers would make the decisions and own both the process and the curriculum, with ongoing support



from the district.

From the start, we knew that instructional materials matter. Our primary goal was to select high-quality, standards-aligned instructional materials. However, we understood that materials adoption was only one component in reaching our ultimate vision of a K-12 math experience through which all students graduate college- and-career ready, understanding and enjoying mathematics at deep levels.

Fulfilling that vision would also mean building a strong foundation to support the implementation of these quality materials with our diverse population of 9,000 K-5 students.

High-quality curriculum and high-quality implementation go hand-in-hand.

To make this happen, we set out to develop a responsive adoption process that would accomplish more than just the selection of high-quality instructional materials. It would also build teacher and leader capacity to leverage the opportunity to create a coherent K-12 student experience and refine instructional practice.

A major element of this approach involved building teachers' capacity to evaluate and select curricula as part of collaborative teams. We engaged teachers in professional learning about both alignment of curriculum and instructional practices. Teacher learning was built into every part of the process.

We hope our approach can support other districts as they embark on adopting new instructional materials — a process that is often difficult and politically charged. This article outlines our approach and illustrates how incorporating professional learning into the adoption process has positioned our teachers, and ultimately our students, for success.

### THE STARTING POINT

Our process valued transparency, teacher agency, participatory decision-making, and professional learning. To embody those characteristics, we



**“Discussing the main standards addressed in Unit 4 as well as how these standards are presented to the students [was helpful]. It was great to start the session looking at the unit test and figuring out how to get students to develop those math skills.”**

— *Teacher participating in a voluntary professional learning session*

launched a new kind of curriculum adoption process. We would analyze alignment between our standards and potential curricula, using shared criteria and evidence to guide decisions.

Rather than have a publisher fair and look through the materials at the onset of the process, we would use objective third-party data to winnow materials. Then we would conduct a question-and-answer session with publishers, using teacher-generated questions from the data review, rather than attending a typical sales presentation.

This process could only work if all stakeholders were represented. It could not be built by just district staff or a few lead teachers. Increasing capacity would mean leveling a perceived hierarchical structure so that staff at all levels felt comfortable participating. It would also mean deepening the learning and content knowledge of as many K-5 teachers and administrators as possible

so they could engage in informed decision-making.

We identified roles and responsibilities that would maximize teacher voice and encourage representation from the entire district while streamlining and organizing the process. We created four groups:

- **A steering committee**, which guided the process and provided input and feedback for decisions;
- **Lead teachers**, who represented and collaborated with a broader group of teachers who were piloting the materials;
- **Pilot teachers**, who used the materials with students and worked with lead teachers to document evidence of alignment through weekly feedback; and
- **District administrators**, who attended trainings and facilitated discussions.

Within these groups, we ensured teacher representation of every grade level, every school site, and expertise in working with each student group, including gifted and talented, English language learners, and special education.

**ADOPTION PROCESS  
LEARNING PHASES**

The adoption process consisted of three main phases, with professional learning infused into each of these phases. In particular, we focused on building understanding of the “why” behind the standards. We had worked with the standards before this adoption effort and recognized the need for everyone to have deep knowledge of the shifts embedded in the standards: focus, coherence, and rigor.

**Phase 1: Ground the work in shared understanding of the standards.**

The first step was to develop a shared

DEVELOPING A SHARED UNDERSTANDING OF FOCUS		
<b>Grounding</b>	<b>Focus:</b> How is it defined by Common Core State Standards?	
↓		
<b>Pilot</b>	<b>Looking for focus:</b> What are the indicators?	<b>Evidence:</b> What counts as evidence?
↓		
<b>Evaluation</b>	<b>Calibration:</b> Are we looking at it the same way?	<b>Evaluation:</b> How well does selected text take it up?

lens through which to select curricular materials to pilot in classrooms. During the first phase, county and district staff provided professional development on the math standards and shifts, engaging the steering committee in conversations about the intent of the standards and how curricular materials could embody them.

This grounding in the standards equipped the committee to analyze impartial third-party evaluations of instructional materials reviewed by EdReports.org. As teams made their way through evaluation reports of several math curricula, we heard teachers reflect about how programs met or didn’t meet the characteristics of high-quality, aligned curriculum, and we saw them begin to winnow choices, until they identified two sets of materials that would be piloted in classrooms: Bridges and GO Math.

**Phase 2: Apply the learning to two cycles of materials evaluation and selection.**

Next, we needed to share the learnings of the steering committee with a broader group of teachers who would be piloting the materials. Our focus was now on developing a district tool with which to evaluate the materials.

Lead teachers, including members of the steering committee, worked alongside principals to define the indicators of standards alignment, including how standards manifest

in lessons, units, grade levels, and assessments. After establishing a preliminary understanding of a key feature of alignment, such as focus, the team developed a list of indicators by which evidence of focus would be determined (see graphic above).

Teachers piloted Bridges and GO Math materials in their classrooms with students through seven-week windows, gathering and documenting evidence of alignment to the standards in a weekly survey for each set of materials. Throughout the pilot, county and district leaders analyzed data from the weekly survey to understand how pilot teachers interpreted the alignment indicators and to determine the strength of the evidence.

This data analysis honed the shared understanding about what constitutes quality evidence and directly contributed to strengthening the caliber of the evidence gathered. At the close of the first analysis, teachers indicated that their learning had deepened so much that they wanted to revisit their own evidence and revise it. In response to this feedback, district personnel built in time for more analysis, reflection, and revision during the second round of evaluation.

**Phase 3: Build consensus.**

The emphasis on careful analysis of the review criteria during the previous stage ensured that the steering and pilot committees arrived prepared on consensus day. Having clear priorities

in the review tool and throughout the professional development sessions shifted the conversation away from individual classroom concerns and toward big questions such as which program has the content and design that would best meet students' academic needs.

At one point during the consensus process, committee members physically represented their vote by standing along an imaginary line, with Program A on one endpoint and Program B on the other. The group was split nearly 50-50.

After assembling a list of strengths and concerns about each program, the facilitator invited committee members to consider the knowledge they had developed throughout the adoption process. He asked them to take a stand for the program they felt would best support students.

As teachers reflected on their learning throughout the year, the line began to move toward one of the programs. With student needs front and center, the consensus conversation shifted to a discussion about the moral imperative of what's best for kids, even if it means choosing a program that demands greater cognitive load for teachers.

### SUPPORTING TEACHERS

After choosing the new materials, a new chapter of learning began. The first step was to continue our collaborative process and invite the pilot teachers to generate ideas for how the district could best support implementation.

Three major requests emerged. We anticipated the first two: time and support. Teachers wanted time to dive into the materials, work collaboratively, plan cognitively, and prepare for the program's many moving parts. They also requested professional learning support from the district, administrators, and other educators who have experience using the newly



Stacy deBoom-Howard, left, principal of Adams Elementary, and Stephanie Laquin, a teacher at Newport Heights Elementary, discuss what constitutes evidence of effective instructional materials.

### GUIDING PRINCIPLES

- Build teacher ownership instead of just buy-in.
- Foster and strengthen an unbreakable trust among all stakeholders.
- Create transparency and remain open to staff and public input and critique.
- Make decisions based on quantitative and qualitative data and evidence.
- Deepen teacher knowledge by developing a collective lens based on focus, coherence, and rigor.
- Make teacher learning visible to enhance collaboration, inform decisions, and identify professional learning to support implementation.

adopted program.

What we hadn't expected to emerge — and what we take as a credit to the district process — was the request for ongoing transparency about the process and decision-making and opportunities to learn and lead.

Teachers requested the continuation of meetings like the collaboration meeting where their voices were heard and respected. Frequent, clear

communication was important to them. District commitments to transparency, agency, deep learning, and participatory decision-making continued through the voices of the pilot teachers.

As we planned for professional learning on the curriculum, we investigated what others outside the district experienced so we could anticipate challenges and plan for success. District teachers attended a two-day grade-level training led by a teacher user, during which we sought teacher input on the design of ongoing professional learning.

From that feedback, we developed “Moonlight Sessions” — monthly grade-level professional learning opportunities. Each session is grounded in the upcoming unit teachers are focusing on in their classrooms. These two-hour after-school sessions are voluntary, and teachers are compensated for their time. The teacher-led sessions are structured to include four key elements:

1. Complete the math of the post-unit assessment by taking it as if they were students, allowing teachers to understand explicitly what students would need to know, understand, and be able to do.
2. Unpack the big ideas.

3. Identify concepts, representations, and strategies.
4. Engage in each game within the unit.

The district, county, and teaching staff learn from each other in these Moonlight Sessions. We learn from the reflections of the participating teachers, and it helps to plan site-specific and ongoing support for the next units and next years.

We know that this intentionality is leading to higher-quality implementation because teachers are studying the material in a deeper way and can make pedagogical moves and adjustments with knowledge of how these may affect the goals of the lesson or unit.

Teachers are also sharing positive feedback such as, “Discussing the main standards addressed in Unit 4 as well as how these standards are presented to the students [was helpful]. It was great to start the session looking at the unit test and figuring out how to get students to develop those math skills.”

We are now turning our attention to better understanding of how participation is impacting teacher practice and, more importantly, student learning. We are already planning the second year of Moonlight Sessions, considering how we can increase attendance at these sessions and use them to further develop teacher content knowledge, pedagogical knowledge, and knowledge of student thinking.

### RECOMMENDATIONS

We have learned a lot about professional learning and instructional materials through this process and are confident that other districts can experience similar success. Our top recommendations are:

**Respect, trust, and elevate teacher voice.** Teacher ownership contributes to a successful rollout and stronger implementation of the materials,

### RESOURCES

#### Student Achievement Partners

Understand the Shifts: <https://achievethecore.org/category/677/understand-the-shifts>

#### EdReports.org

[www.edreports.org](http://www.edreports.org)

#### A Case Study from Newport-Mesa Unified School District

[www.edreports.org/files/Newport%20Mesa%20Case%20Study\\_FINAL\\_web.pdf](http://www.edreports.org/files/Newport%20Mesa%20Case%20Study_FINAL_web.pdf)

particularly because teacher advocates can speak knowledgeably about the program and why it supports students.

**Remember that the adoption and implementation process is about the students.** Most of the conversations about materials end up being about the adults buying and teaching the curriculum. We recommend flipping this conversation to be about what students deserve: How will these materials support student learning? What professional development or resources will we need to ensure our students receive the very best?

**Prioritize what matters most.** Not all aspects of high-quality materials are of equal importance. Our materials and instruction must represent the shifts and standards our students need to be college- and career-ready. We weighted alignment more heavily in our rubric and in professional learning sessions than characteristics such as online features. Prioritize the quality of the content itself. Not only will this support your material selection, it will help you to align the professional learning that is required to improve instruction.

**Structure your decision-making and plan for consensus-building early.** For us, this meant supporting our team through consensus-building

exercises. A simple up/down vote would not value the depth of the work and learning of the team, potentially leading to a lack of ownership around the final decision. Our consensus process included multiple rounds of evidence analysis and ultimately led to a decision that all committee members could advocate for back at their schools.

**Plan for and model responsive professional learning.** Learning Forward states that “professional learning must engage each educator in timely, high-quality learning that meets his or her particular learning needs” (Learning Forward, n.d.). Throughout this work, we realized that we needed to adjust our plan to best reach our steering committee and piloting teachers. This included slowing down, revisiting topics, and identifying new areas of learning from the data we collected. We see the impact of this deeper learning in the program that was selected and the further development of teachers’ pedagogy.

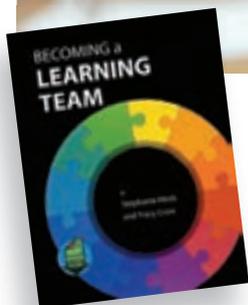
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the book *What  
Do You Do  
With a Tail Like  
This?*, a core  
text used in the  
Wit & Wisdom  
1st-grade  
curriculum.

# STRONG MATERIALS IN THE HANDS OF GREAT TEACHERS

A YEAR  
OF SCHOOL  
VISITS  
HIGHLIGHTS  
WHAT MAKES  
CURRICULUM  
WORK

BY BARBARA DAVIDSON AND SUSAN PIMENTEL

**K**-12 education has witnessed a sea change in attitudes about curriculum as a serious reform strategy. The movement gained traction in the wake of the Common Core State Standards, when newly created curriculum products emerged.

Robert Pondiscio, senior fellow and vice president for external affairs at the Thomas B. Fordham Institute, called curriculum “the last, best, juiciest piece of low-hanging fruit left in our efforts to improve student outcomes” (Pondiscio, 2015).

While there are an increasing number of high-quality, content-rich curriculum products available, as well as venues to assist schools and districts in evaluating them, selecting a high-quality curriculum is only the first step. How teachers make the curriculum their own in the classroom is every bit as critical.

The Knowledge Matters Campaign is a coalition of education leaders encouraging schools to focus on developing students’ foundation of content knowledge. Earlier this year, Knowledge Matters members visited

seven elementary schools that embrace high-quality, content-rich English language arts curricula.

The schools use a variety of instructional approaches and represent different geographic locations, demographic diversity, and governance structures. Their common feature is a commitment to knowledge-rich schooling and belief in comprehensive, high-quality curriculum, implemented schoolwide, as a means of achieving it.

As we toured these seven elementary schools, we sought to discover what kinds of professional learning teachers found most helpful in transitioning to a new curriculum. Four primary lessons for administrators and teachers emerged about what it takes to implement a high-quality, content-rich curriculum well.

### LESSONS FOR ADMINISTRATORS

#### Embrace a “we’re-in-this-together” school leadership stance.

Teachers and coaches stressed the vital role of school leaders in driving robust implementation. Most important to staff was the passion that leaders conveyed about the learning the school was undertaking.



**“One of the things I love about this is that I don’t have to keep looking for different things to work on specific skills [with students].”**

— Amanda Berger,  
4th-grade teacher at Saville Elementary School  
in Riverside, Ohio

Teachers at Monticello-Brown Summit Elementary School in Greensboro, North Carolina, remember the tears of gratitude shed in a staff meeting when the principal, Christopher Scott, pulled everyone together at the start of the school year to prepare them to implement the new American Reading Company English language arts curriculum, ARC Core, in their classrooms.

Addressing teachers’ anxiety about the change, Scott made it clear they would be in it together and that continuous improvement mattered, not perfection. By lowering the cost of making mistakes and providing safe spaces for teachers to experiment, Scott and his team created an environment in which teachers relaxed and expressed openness to learning new ways of instruction.

**THE KNOWLEDGE MATTERS SCHOOL TOUR**

**K**nowledge Matters is a campaign to make building knowledge a priority for American education. Nearly every major educational goal — from improving reading comprehension and critical thinking to problem solving and creativity — is knowledge-based. Without a solid foundation of content knowledge built from the first days of school, students can't achieve higher academic standards and better outcomes.

Knowledge-rich schools focus on imparting knowledge of the world. They seek to restore wonder and excitement in the classroom by deepening students' understanding on a wide range of topics.

Our goal for the Knowledge Matters School Tour was to gather stories of schools that use the power of knowledge-rich schooling to promote excellence, provide equity, and inspire passion. We were particularly interested in drawing attention to schools that are closing the gap between students who grow up in poverty and their more privileged peers.

The role played by high-quality English language arts curriculum — and the professional learning educators experienced to make this possible in their school — was our focus. Given the paucity of time devoted to social studies, science, and the arts in elementary schools across the country, if children don't encounter these topics in their reading and don't engage with them at home, they likely won't be learned.

The significant role that background knowledge and command of academic vocabulary plays in reading comprehension is not a new discovery, but curiosity has recently piqued about what "knowledge-rich schooling" really means and how it can be advanced through English language arts.

Principals in the schools we visited were constantly in and out of classrooms, as much to learn and grow themselves as to observe how teachers were doing. Teachers expressed their deep appreciation for the presence in their classroom of leader learners, rather than leader evaluators.

Adrian Monge, principal of Detroit Achievement Academy in Detroit, Michigan, said it was important that she "norm perseverance and taking risks" by doing the planning and teaching alongside her teachers. The school had recently transitioned to a new, more structured version of the EL Education K-5 Language Arts curriculum. "It sends an essential message to the faculty that I chose to spend my time learning the curriculum, too," Monge said.

**Tend to the hearts and minds of teachers by sharing the philosophy and research behind the new curriculum.**

Teaching to the rigor in the Common Core State Standards involves significant instructional shifts. There is a not-to-be-ignored hearts and minds aspect to setting aside old ways of instruction so that faculty can move forward together to make real progress for their students.

In the case of English language arts, which was our focus during the school tour, the instructional shifts include regular practice with complex texts and their academic language; reading, writing, and speaking grounded in evidence from texts; and building knowledge through content-rich curriculum. The teachers and coaches with whom we spoke considered it monumentally important to ground teachers in the research behind these shifts and study the new curriculum to see how the shifts show up.

The experience of building authentic faculty buy-in and

enthusiasm, based on a shared understanding of the philosophical underpinnings and research base for the curriculum, contrasts sharply with how new curriculum is typically rolled out.

Most new curriculum professional learning tends to focus on orienting teachers to the products, perhaps highlighting some of the design features. Quite often, teachers don't even have materials in front of them. But as Shannon Vaka, instructional coach at Monticello-Brown Summit Elementary, said, "That's not how teachers learn."

**Make professional learning curriculum-specific.**

What characterizes the professional learning opportunities described to us by teachers and coaches in the schools we visited is that they're messy. By this, we mean they're experiential. The process is similar to the Japanese concept of lesson study.

Shannon Vaka characterizes it this way: "With Kelly (ARC coach), we never did sit-and-get. If we were going to roll it out in 3rd grade, she'd say, 'Let's start there.' She'd take the framework and walk through the lesson with us. She'd demonstrate a lesson, and we'd talk about it together. Or we'd all sit around and plan a lesson together and then draw straws and someone would have to teach the lesson."

What's most compelling — and we would argue very different — about this kind of professional learning is that it's collaborative and often co-led by teachers or early adopters of the curriculum. Grade-level and cross grade-level teams are rolling up their sleeves and working together, engaging in the content of what they're teaching in the classroom and figuring out the best way to deliver it, leaning heavily on the curriculum.

Amanda Barger, a 4th-grade teacher at Saville Elementary School

in Riverside, Ohio, talked about the impact on her practice: “We didn’t have a systematic way of teaching K-4 and were seeing lots of holes. . . . One of the things I love about this is that I don’t have to keep looking for different things to work on specific skills.”

### Invest in your teachers through yearlong professional learning systems.

In the schools we visited, gone were the one- or two-day, right-before-school curriculum dives that are hardly worth the time. In their place was significant time for ongoing, sustained professional learning. For example:

- Teachers at Kinder Elementary in Kinder, Louisiana, who are using the new state-developed Louisiana ELA Guidebooks 2.0, said they plan lessons together with their grade level team *every day*.
- Coverage is provided at Detroit Achievement Academy for teachers to use recess and lunchtimes for planning, and students are released early *every Friday* for teacher collaboration time.
- Staff from the Bryant School of Arts & Innovation in Riverside, California, participate in a districtwide teacher collaboration time *every Wednesday afternoon* when students are released early.
- In addition to site-based professional learning opportunities, the Great Hearts network of classical charter schools, which includes Maryvale Preparatory Academy in Phoenix, Arizona, asks faculty to read books (“anything from Plato to Pinocchio”) and offers *year-round institutes* that deepen the teams’ understanding of a range of

### SCHOOLS INCLUDED IN THE KNOWLEDGE MATTERS SCHOOL TOUR

- Bryant School of Arts & Innovation, Riverside, California.
- Kinder Elementary School, Kinder, Louisiana.
- Monticello-Brown Summit Elementary School, Greensboro, North Carolina.
- Maryvale Preparatory Academy, Phoenix, Arizona.
- Saville Elementary School, Riverside (Dayton), Ohio.
- Detroit Prep and Detroit Achievement Academy, Detroit, Michigan.

curriculum and content-specific topics.

- During the coming school year, all schools in Guilford County, North Carolina, will get *10 to 12 coaching days* to work on curriculum implementation.
- Teachers in Mad River Local Schools in Dayton, Ohio, implementing the Wit & Wisdom humanities curriculum, get *a full day to work together* in teams to prepare for each new module in the curriculum.

Of course, the elephant in the room of successful implementation is the need for resources required for this kind of professional learning. But there is a payoff for such an investment: Researchers report that teachers who participated in sustained, discipline-specific professional learning that dealt concretely with what they were teaching in the classroom — professional learning that averaged 49 hours across nine separate studies — saw student achievement increases of about 21 percentile points.

### ADVICE FROM TEACHERS TO TEACHERS

Teachers and coaches we talked to shared their biggest challenges implementing a new high-quality curriculum as well as some advice.

#### Be gentle with yourself about pacing.

Teachers revealed some real difficulties with pacing in the first year of implementation. Valerie Sanchez is a 4th-grade teacher at Bryant School of Arts & Innovation, which uses the Core Knowledge Language Arts program. Sanchez said, “I cried so much that first year because it was hard to fit in all the content, and I felt I couldn’t do it all. . . . The first year is about trial and error. You can’t expect perfection — try everything. The next year is about adjustment and fine-tuning.”

Saville Elementary was in its second year of implementation when we visited in March, and one of the teachers said she was 17 weeks ahead of where she was in the curriculum at the same time the previous year. As Amanda Barger said, “I’m better this year than last, and I’ll be better next year than I am this year.”

#### Rely on the wisdom of the group when deciding whether (and how) to adapt the curriculum.

Not knowing when to modify the curriculum to fit classroom circumstances, and when to resist the temptation to do so by following faithfully what was written, was a question that dogged teachers in their first year of implementation.

Similar questions confounded coaches as well — for example, how to balance the desire to encourage teacher ownership with a confidence in the elegance and scaffolds built into the curricular design. There are no clear right and wrong answers to these questions, and, in the end, it was the discussion of the questions during professional

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Content coach Tracy Smith, far right, works with teachers in Murfreesboro, Tennessee, as they unpack 2nd-grade math, numbers, and operations in base 10 at Instruction Partners' standards boot camp.

# STEP BY STEP

PREPARATION AND PROFESSIONAL LEARNING SUPPORT  
IMPLEMENTATION OF QUALITY MATERIALS

BY EMILY FREITAG

**P**icture a school district where the majority of students read below grade level. The district adopted a new English language arts curriculum anchored in complex texts and analytical writing tasks, chose a curriculum, ordered the materials, and hosted a half-day training for teachers.

As they began to teach with the new

curriculum, teachers adapted materials in an effort to meet their students at their current reading level. Teachers often read sections aloud or switched out texts for versions that students could read on their own more easily.

If students struggled to answer questions, teachers frequently stepped in with a response or made up new questions, many of which asked students to recall information from the text rather than analyze it.

At the end of the year, students' test scores showed no increase, and teachers felt frustrated that they'd worked through the curriculum change without results. The principals and community knew how hard teachers were working and blamed the curriculum as the problem.

## **A FAMILIAR STORY**

The hypothetical case above is all too familiar to scores of school and

system leaders who have attempted to improve student learning by adopting a new curriculum.

Through our work consulting and supporting teachers in hundreds of schools and more than 3,000 classrooms, we know that the situation we've described is not an anomaly. Everywhere we work, leaders and educators struggle to implement new curriculum effectively.

As this illustration demonstrates, the implementation of quality curricular tools isn't as easy as completing a purchase order. As we have learned from the educators we work with, teachers need frequent and ongoing professional development to understand, internalize, and effectively use curriculum.

Implementing new curriculum will likely result in shifting time and focus for both teachers and leaders. Teachers move from writing their own plans to preparing, internalizing, and adjusting materials. Leaders change what they monitor and where they focus.

Knowing that these shifts are often challenging, my colleagues and I launched an action research project to study the curriculum implementation stories of districts across the United States. (See below.) We wanted to understand the common stumbling blocks to effective curriculum implementation so we could create tools for schools to anticipate and overcome them.

Through this research project, we found that when curriculum implementation fails to live up to expectations, there are four common culprits:

- Teachers and principals have different ideas about what good instruction looks like, which leads to mixed messages about the curriculum.
- Leaders are engaged in curriculum adoption, but teachers are left out.
- Leaders and teachers are so strict in their fidelity to the curriculum that they fail to



**“Spending time during professional development to look at professional materials is crucial. This practice allows teachers to become critical consumers of the curriculum. Being a critical consumer empowers you to tailor lessons so that they fit the needs of all scholars.”**

— *Katina Allen, Aspire Public Schools*

meet students' needs; students struggle; and, ultimately, everyone rejects the materials.

- Teachers' well-intended adaptations get out of hand and dilute the rigor of the materials.

The good news is that there are replicable actions districts can take to avoid these common hazards.

## CURRICULUM SUPPORT

In an effort to support our partner districts in navigating around curriculum stumbling blocks, we have codified the best practices we have seen and developed a set of tools to help

## ACTION RESEARCH PROJECT

**A**fter interviewing more than 50 school and system leaders (representing 70 schools across 16 states) who had recently switched to high-quality curriculum materials, we gathered input about what worked, what was hard, and what they wished they had done differently. We also reviewed existing research on curriculum implementation.

Then, we connected with a group of leaders in the middle of selection and/or implementation and pooled their collective learning. This helped us craft a road map of key decisions and hot spots, which we tested with districts. Finally, we shared our work with peer organizations and education policy leaders with a broader view of the curriculum landscape to get their input.

schools intentionally use those best practices. The compilation of these tools is a curriculum support guide, which provides a collection of key actions and decision points.

The curriculum support guide is organized in three key phases, each of which has a specific set of steps.

### **Phase 1: Select great materials.**

Not surprisingly, schools need to have high-quality materials if they are to benefit from curricula. To make good choices, school leaders need to build knowledge of state standards to ensure alignment, determine specific curriculum needs, manage the selection process in an organized and effective way, and procure the materials.

### **Phase 2: Prepare to launch.**

Successful schools don't simply jump into new curricula. Effective implementation requires taking the time to plan. More specifically, schools should set clear goals for teachers and students; determine key roles and responsibilities in the roll-out process; plan for the scheduling, pacing, and use of materials; plan for assessment and grading; establish systems for supporting leaders; and establish systems for supporting teachers.

**Phase 3: Teach and learn.** The goal of this phase is to reflect on the support teachers and leaders need in using the curriculum to inspire great instruction and increase student learning. It focuses on using a deliberate approach to getting feedback from teachers and leaders as well as looking at student performance data to identify what's working and what's not. This phase continues over time as teams review daily and quarterly indicators as well as planning for the summer and next school year.

## **SPECIFIC STEPS**

Within each phase, there are a number of different steps for leaders to consider. To support school systems in taking those steps and using the

framework, we are building a set of tool kits that match each of the steps.

The Instruction Partners' Curriculum Support Guide, an online repository of these tool kits, will launch in January. It will include:

- Key actions to plan for each step;
- Guiding questions to help drive decision-making;
- Critical advice from districts who have done this;
- Indicators of success and common pitfalls at each step; and
- Resources to support the work of each step, including sample meeting agendas, written communications, professional development materials, and checklists.

We shared one of these tool kits in our recent white paper about the importance of curriculum implementation and the development of our framework (see <https://instructionpartners.org/resources/curriculum-white-paper>). This first tool kit focuses on the step in Phase 2 called Determining Key Roles and Responsibilities.

During our interviews, district leaders frequently discussed the challenges of discerning the most important work to be done and who is best positioned to do it. For example, if the district doesn't identify who can approve requests for curriculum modifications, then either no one will approve requests or everyone will approve requests — neither of which is ideal when trying to ensure consistency across a system. The tool kit helps schools make these decisions so that such circumstances do not occur.

## **ELEMENTS OF SUCCESS**

The most successful districts we interviewed described some common themes about their work.

**These districts use data to find, celebrate, learn from, and replicate successful practices across classrooms and schools.** They also use data to identify curriculum goals that are not being met. Throughout the curriculum implementation process, districts refine their goals, their approaches to supporting teachers and leaders, and their policies and systems (e.g. grading and assessment).

**To be successful, teachers must have practice doing the math and reading the texts themselves.** Although it may be overwhelming to get through that sheer volume of content, to internalize and execute it effectively, educators must invest the time.

**Frequent and ongoing professional learning is essential for strong implementation,** as is having an experienced teacher-leader collaborating with and supporting staff on the content and pedagogy. Interviewees also prioritized consistent support from the school and district administration that reflects a vision of success.

**Having strong materials allows educators to invest their time on relevant content work** and analyzing student data to inform intervention approaches, as opposed to searching the internet for unvetted resources.

## **REALIZING BEST INTENTIONS**

High-quality instruction doesn't happen without intense commitment and thoughtful deliberation from educators. Districts can support teachers by showing that same commitment and thoughtfulness as they implement a new curriculum. When they do, great things can happen for teachers and students.

•  
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learning communities time that teachers found informative and empowering.

It was when they engaged in this collaborative discussion that teachers had insights into why they (often unnecessarily) felt a modification was needed, found support in staying the course, and got reinforcement that something really wasn't going to work and help in figuring out a solution.

### **Shift the lift of the work to students.**

A few coaches told us that teachers tended to compensate for their unfamiliarity with the curriculum by talking much more than needed while teaching the lesson. They surmised that teachers were, in part, anxious about students' readiness for the material.

Eventually, the teachers realized they were working harder than they were asking the kids to work. A number of the teachers we met with on the school tour were candid about saying they had initially doubted their students could handle the rigor of the new high-quality curriculum. "The hardest thing, if I'm really honest, is believing my kids can do this — that they can tackle these topics," said one 4th-grade teacher. Many teachers told us they had doubts the students could handle the texts and they had to learn to back off and let students struggle.

Norming risk-taking and perseverance, to include a willingness to be videotaped or have a colleague observe a lesson, can pay enormous dividends and help identify delivery hiccups — like talking and doing too much in lessons — before they catch hold.

By putting their faith in the curriculum and that it will all come together, teachers have enjoyed the kind of experience every teacher hopes for, as expressed by this Mad River Local Schools teacher: "You put them out there with a partner to struggle, and

they're so engaged when they come back together."

### **Take the long view.**

As instructional coaches Amy Holbrook, Becky Parker, and Mandy Polen from Mad River are fond of saying, you better be in it for the long haul. "We view implementation as a journey, not a destination," said Holbrook. "A huge part of that journey involves honest reflective dialogue as a way to foster growth. We celebrate small victories."

### **STRUGGLES AND SATISFACTION**

Every teacher and administrator we spoke to at the seven schools felt the struggle to learn the new curriculum was worth the effort. When asked to describe the changes they'd seen in their classrooms, respondents often became emotional. Why? It is our conviction that success in implementing a high-quality, content-rich curriculum has permitted these dedicated professionals to experience the professional satisfaction of seeing their students engaged and learning.

- "I feel like I experience more of those 'lights on' moments." — Amanda Barger, 4th-grade teacher, Saville Elementary School.
- "Every teacher in the building would have a different answer. For some, it's that kids now love to read. For others, it's the way they're writing. In 5th grade, it's the way they're able to argue and disagree and back it with information from their reading." — Shannon Vaka, instructional coach, Guilford County, North Carolina.
- "The work is so conceptually beautiful in idea and execution. When we think about what we value as adults, it's the quality of one's work. They're proving

they're capable of so much more." — Adrian Monge, principal, Detroit Achievement Academy.

- "I could never go back to what we did before because now I've seen how beautifully it can be pulled together." — Crystal Gleason, 8th-grade teacher, Mad River Middle School.
- "They [students] will have this for the rest of their lives." — Katie Luedtke, 3rd-grade teacher, Saville Elementary School.

Talking with these teachers about their experiences was deeply affirming. While everyone said the shift to a new high-quality, content-rich curriculum was one of the hardest things they had tackled in their teaching careers, they also said it was among the most rewarding.

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# OPEN SOURCE FOR OPENING MINDS

NEW OpenSciEd MATERIALS SUPPORT  
SCIENCE STANDARDS

BY KATHERINE L. McNEILL AND BRIAN J. REISER

It is an exciting time for science education. Many states have adopted new standards guided by the National Research Council's Framework for K-12 Science (National Research Council, 2012),

either the Next Generation Science Standards (Next Generation Science Standards Lead States, 2013) or standards developed according to these National Research Council guidelines. More than 60% of U.S. school

children are being educated in states in which Next Generation Science Standards or other framework-derived standards have been adopted. This vision demands a central role for students to engage in science and

engineering practices to build and use science ideas, rather than solely learning about the science others have done (Schwarz, Passmore, & Reiser, 2017).

These new standards cannot be achieved by a teacher telling students science vocabulary and providing facts and explanations that students need to memorize. Instead, teachers need to guide students as they actively engage in rich science investigations and discourse as they reason about the world around them.

Furthermore, this new vision supports an equity vision for science instruction in which all students are known, heard, and supported with access and opportunities for rich science learning.

For these shifts to occur in K-12 science classrooms, teachers need to use new kinds of instructional materials that can support the new approaches. Instructional materials that align with the vision of the Next Generation Science Standards can better support student learning of core science ideas and science practices (Harris et al., 2015). However, instructional materials alone, without sufficient teacher professional learning, do not result in significant changes in classroom instruction (National Research Council, 2015).

Teachers enact instructional materials in a variety of ways and need support for instructional transformation in their classrooms

that aligns with recent reform efforts (McNeill, González-Howard, Katsh-Singer, & Loper, 2017). High-quality instructional materials combined with professional learning, embedded and sustained in teaching practice, are both needed to support the ambitious vision in recent science standards.

### A STORYLINE APPROACH

OpenSciEd is a partnership of 10 states, a consortium of curriculum developers, and science education leaders and experts working to create a complete set of robust, research-based, open-source, K-12 science instructional materials and professional learning supports to increase accessibility for all teachers and students ([www.opensci.ed.org](http://www.opensci.ed.org)). The instructional materials are being designed not as stand-alone units but as a full coherent sequence that builds across units and across years.

A field test for the first three units, one each in 6th, 7th, and 8th grade, began in summer 2018. To support the enactment of these units, OpenSciEd led in-person professional learning for 339 educators from 98 school districts, conducted in 10 locations, one in each of the 10 partner states participating in the field test.

The professional development occurred as four consecutive days of seven hours of instructional time per day, focused on experiencing, analyzing, and preparing to teach with



**“What I learned from this curriculum — and what will ultimately make my teaching better — is that the kids really can guide where they are going. ... [They] will be more invested as a result, and they will really come to realize how science works.”**

— *Middle school science teacher*

OpenSciEd instructional materials. After the professional learning, 93% of the teachers reported that the OpenSciEd instructional materials are more likely to help their students meet their state standards compared to their current units.

OpenSciEd units are based on the idea of a science storyline (Reiser, Novak, & McGill, 2017). A storyline is a coherent sequence of lessons in which each step is driven by students' questions that arise from their interactions with phenomena.

At each step, students make progress on the classroom's questions through science and engineering practices to figure out a piece of a science idea. Each piece they figure out adds to the developing explanation, model, or designed solution. Each step may also generate questions that lead to the next step in the storyline.

Together, what students figure out helps explain the unit's phenomena or solve the problems they have identified. A storyline provides a coherent path

toward building science ideas, piece by piece, anchored in students' own questions.

This approach highlights two key instructional shifts in the Next Generation Science Standards that are typically absent from traditional science instruction: phenomena-based teaching and the importance of coherence.

**Begin with an anchoring phenomenon.** Each OpenSciEd unit kicks off with an anchoring phenomenon that motivates student learning throughout the unit. The anchoring phenomenon provides a common experience for every student that leads to questions or challenges. Even everyday phenomena, like the ice in a cold drink melting, can be seen as puzzling when teachers help students see what they cannot explain about how and why this happens.

This approach differs from traditional science units, which start with teachers introducing the science idea, often with scientific terminology: "We are about to start a unit on thermal energy" or "The focus in this unit is on metabolic reactions."

Instead, students experience the phenomenon of a cold drink warming up and realize they cannot explain scientifically why this happens. This grounds a lesson about thermal energy, in which students are asked to design a cup to keep a drink cold.

Similarly, in a metabolic reactions unit, students are introduced to the case of a 13-year-old girl who is experiencing a strange combination of symptoms, including losing weight, stomach problems, and low energy. As the unit proceeds, students conduct investigations to try to figure out what is causing these symptoms. These investigations require first understanding what normally happens to food and how people get energy.

Part of working with anchoring phenomena also involves asking

students to draw on their own personal experiences that seem relevant. In thermal energy, students often bring up other experiences that either keep things cold (e.g. cooler, insulations in walls of a house) or warm (e.g. winter coat, pizza box, sleeping bag).

In metabolic reactions, students can bring up other experiences with the human body (e.g. food poisoning, Lyme disease, asthma). This helps students see science as something related to their lives and experiences, not just disconnected (and sometimes intimidating) academic language like "thermal energy" and "metabolic reactions."

**Support coherence from the students' perspective.** Coherence in OpenSciEd instructional materials is grounded in the initial anchoring phenomenon and driven by students' ideas and questions. In experiencing the anchoring phenomenon, students develop questions that are displayed on a driving question board and returned to throughout the unit. These questions ultimately result in students developing deep science ideas, but they are driven by their own interests and questions.

For example, to understand how to design a cup to keep a drink cold, students need to understand that thermal energy transfers faster through moving particles that are more dense (e.g. solids) compared to less dense materials (e.g. gases) or vacuums with no particles or collisions. But this idea is not introduced as an abstract science concept. Rather, it is contextualized and builds from a sequence of lessons designed to help students figure out the anchoring phenomenon.

This type of coherence can feel very different than previous science teaching approaches. Often, science instructional materials focus on how science concepts fit together from an expert's perspective, but fail to consider the students' perspective. The teacher or textbook author knows why the various topics

in a chapter are organized together, but often students do not see why they are learning what they are learning.

In OpenSciEd instructional materials, students are making sense of a phenomenon or problem, which helps connect each lesson across time as well as provide meaning during a lesson. Reflecting on how the OpenSciEd units are different from what he has used in the past, an 8th-grade science teacher said, "What I learned from this curriculum — and what will ultimately make my teaching better — is that the kids really can guide where they are going. ...To me, that is going to be an added strength, and the kids will be more invested as a result. And they will really come to realize how science works."

## LEARNING ALIGNED TO STANDARDS

To support key instructional shifts in the Next Generation Science Standards, we have developed professional learning experiences to accompany the instructional materials. These experiences take into consideration important findings about best practices in supporting teacher learning (National Academies of Sciences, Engineering, and Medicine, 2015; National Research Council, 2015). Effective professional learning focused on content and specific instructional approaches are embedded in teachers' instructional practice and are sustained over time (National Research Council, 2015).

As we designed the OpenSciEd professional learning model, we kept in mind principles of supporting teacher learning that mirrored the instructional model for student learning in the units such that professional learning and instructional materials were synergistic and complemented each other.

After participating in professional learning, one 8th-grade science teacher

said: “The activity itself, as we were ‘students,’ modeled good teaching where we do it together [in] small groups and then we share out. ... And I think that was helpful. Because there is often professional development where [the facilitator says], ‘OK, here are the awesome things you can do, but listen to me lecture all day,’ which this professional development did not do.”

We designed the professional learning both to support teachers in enacting the instructional materials and to support changes in their vision of science instruction to focus on sense-making about the natural world. Specifically, in designing the OpenSciEd professional learning model, we focused on three key elements.

**Offer the student perspective.**

The professional learning model provides teachers with opportunities

to experience three-dimensional science instruction from the student perspective. We refer to this as “student hat” during the professional learning and encourage teachers to consider what their middle school students might do, say, and feel when experiencing the OpenSciEd units.

Engaging in student hat can feel uncomfortable for teachers as they can be used to knowing the right answers and where the curriculum is headed. Experiencing this uneasiness, but also engagement and curiosity about the anchoring phenomenon, can highlight for them how this might feel for their students.

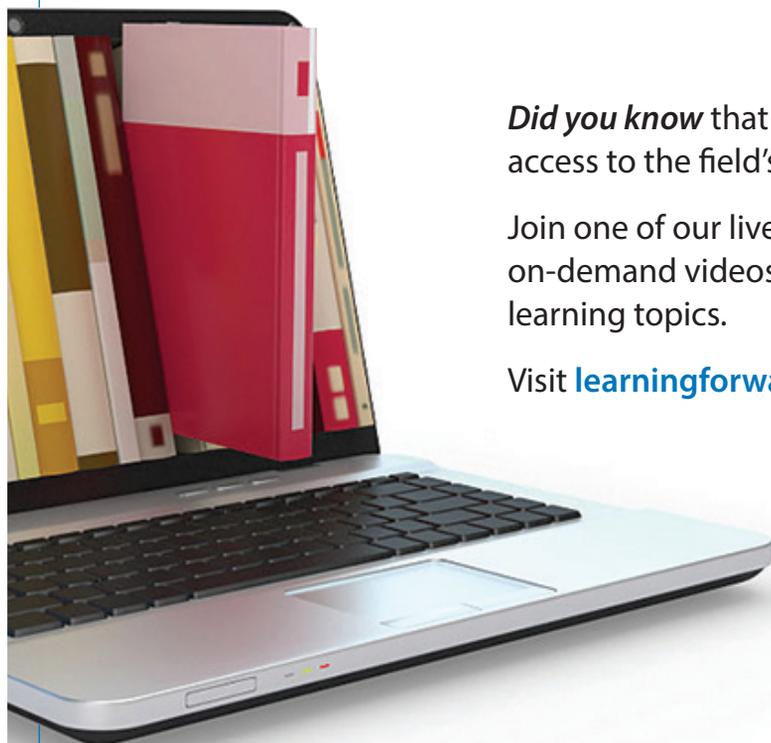
One 7th-grade science teacher said, “I think that, while it is always uncomfortable for me to pretend to be a student, ... it is so important. ...You forget or don’t realize all of the

little things that are going over your students’ heads.”

Beginning the professional learning in the student hat for the anchoring phenomenon can set the stage for shifting teachers’ science instruction as they puzzle through the science and experience roadblocks that their students might also encounter during the unit.

**Provide images of classroom instruction.** We also include “teacher hat” opportunities, in which we design experiences that use classroom videos and artifacts to illustrate what the curriculum looks like when used with a range of students. These images highlight key aspects of the curriculum, such as the introduction of the anchoring phenomenon, where students share what they notice and wonder.

The images can also include aspects that can be challenging for classroom



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instruction, such as supporting students in discussion in which they listen to, build on, and critique each other’s science ideas using evidence.

These images of instruction allow teachers to visualize what the curriculum looks like in a classroom and think about how to use the materials to meet the needs of every student.

For example, some teachers really appreciated modeling of the “talk moves” (Michaels & O’Connor, 2017), specific strategies to support classroom discourse. A 7th-grade science teacher said, “I think it was really important to see how another teacher did it — to see it in action.

And to fully understand how students could take ownership of their conversation and of the discussion. ... It is helping me be more thoughtful and intentional in the questioning process ... seeing how she [the teacher in the video] grounds it in concrete practice.”

**Encourage teacher reflection and application.** The professional learning encourages and facilitates teachers’ reflection on previous teaching experiences and how they differ from those being modeled; application of the new materials to the needs of their students; and consideration of how the work fits into their own professional learning trajectory.

Teachers are encouraged to think about the unique needs of their specific students and how to apply the curriculum to leverage students’ cultural funds of knowledge. For example, a teacher with a large percentage of English language learners in the classroom may include additional language supports such as modeling language expectations and encouraging peer talk before students begin writing individual scientific explanations.

**A SHIFT IN VISION**

OpenSciEd is designed to shift teachers’ and students’ vision of science

instruction and science learning. The professional learning approaches are not just about learning to use the instructional materials, but about supporting teachers to learn new instructional strategies that will better support every student in learning science.

One 7th-grade science teacher explained how OpenSciEd helped her make important shifts in her practice: “Before that [professional learning session], I had it in my mind that Monday is going to be our vocabulary day. Monday is going to be the day that they learn all of the [science unit] vocabulary, and they will apply it during the week. But I am not doing that anymore.”

Reflecting on the whole experience, she said, “You can learn in different ways. ... You can learn through discussion. You can learn through research. You can learn through asking questions.”

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Reach. Investigate. Discover.

# IDEAS



“FROM  
THEORY TO  
PRACTICE”

p. **50**

Photo by MARK WAKELEY

High school student Katrina Robinson of Ontario, Canada, participates in the Regional Ontario Technical Skill Competition at Fanshawe College in 2017. Robinson was a student in the Greater Essex County District School Board's Specialist High Skills Major program with a concentration in hospitality and culinary arts.

## A RECIPE FOR SUCCESSFUL IMPLEMENTATION

**A**t the Greater Essex County District School Board in Ontario, Canada, the Specialist High Skills Major program offers free work-related training and certifications, sector-specific knowledge, and work experience. Careful planning and focused professional learning led to successful implementation of the program.



From left: Tuong Siu, Kassidy Desmond, Avery Grey, and Zackery Hayes are students in the Manufacturing Specialist High Skills Major program of the Greater Essex County District School Board in Ontario, Canada. The program offers students the ability to focus on skills relevant to the world of work.

Photo by BRAD McINTOSH

BY LAUREN SEGEDIN

It is midyear. A high school principal calls a teaching staff meeting. The agenda has one thing on it: a new initiative the district has mandated. Knowing few details about the program and with no implementation plan from the district, the principal is brief. In reaction to the news, one hand raises in protest, then another. A dull murmur fills the room. The principal can feel and see the hostility on teachers' faces.

Neither the principal nor the staff should fear change, however. Without a plan or much interest from those responsible for the program, the initiative will likely limp along before fizzling out in the not-too-distant future. A new initiative will replace it, and the cycle of change (or lack thereof) will continue.

### A COMPLEX UNDERTAKING

Many educators and education leaders have found implementing districtwide programming at the secondary level challenging. High schools are more organizationally complex than elementary schools (Grubb, 2010). High school teachers are deeply entrenched in subject

specialties and tend to be resistant to change (Sisken, 1997).

Compared to elementary schools, high schools are larger, and student achievement and student diversity are more pronounced (Levin, 2012). While districtwide change is always hard, at the secondary level it is often even harder. Does it have to be?

A promising initiative in the Greater Essex County District School Board in Ontario, Canada, suggests that, with five key components in place, change can happen smoothly and successfully in secondary schools.

In fall 2013, the Greater Essex County District School Board was struggling to implement a program called the Specialist High Skills Major, which offers students the ability to customize their high school experience and focus on skills relevant to the world of work. Students can specialize in 19 different sectors, ranging from arts and culture to transportation.

The program requires students to complete five components. These include a bundle of eight to 10 courses, six to eight sector-specific certifications, career exploration activities in industry, and trips to post-secondary institutions,

all while learning essential skills and work habits. All existing programs have undergone an extensive application process vetted by Ontario's Ministry of Education.

The Greater Essex County District School Board has a large number of these programs compared to the provincial average. In 2013, there were 43 programs in the district's 16 high schools, yet student enrollment in the program was average to low. Only 8% of the district's 11th- and 12th-grade students were enrolled and, of those, only 4% completed the program — one of the worst completion rates in the province.

In four short years, that changed completely. The district gained 11 new Specialist High Skills Major programs, enrollment rose from 8% to 20%, and the program's completion rate rose from 4% to 81%.

This change did not happen overnight, nor was it by accident. Strategic planning and focus, a modification of Michael Fullan's (2007) framework for program implementation, and lessons learned from an evaluation of the program province-wide (Segedin, 2013) were the

# IDEAS

catalysts for this growth.

From this extensive research base, five key components arose to outline how to implement this high school program successfully. While Specialist High Skills Major is only one program and Greater Essex is only one school board, the foundation for this program's implementation is strong.

Following a similar framework, other school districts may experience similar success from applying the five components:

1. Create a need.
2. Provide clarity.
3. Minimize complexity.
4. Emphasize quality.
5. Prioritize shared leadership.

## CREATE A NEED

Creating a need for any program in education is important. If educators see a clear need between a program and its school or students, they are more likely to support it (Fullan, 2007). In the Greater Essex County District School Board, it was easy to explain the need for the program.

The Specialist High Skills Major is a labor market-based career program, and this school district is in an area that had the highest unemployment rate in the country for over seven years. Adult unemployment was 16%, and youth unemployment was 25%.

At a time when employment was difficult to find, the program offered free work-related training and certifications, sector-specific knowledge, and work experience, regardless of whether students were headed to university, vocational college, apprenticeships, or the workplace after they graduated.

Specialist High Skills Major is also a heavily resourced program. Enrollment in the program means more money flowing into schools. When the district coordinator linked the program with the region's economic profile,

**While each of the five components is significant alone, the steady growth of this program required a consistent and simultaneous focus on them all.**

educators, students, and parents could see the relevance of the program to their lives and community. The program became an easy sell to everyone involved, and, in turn, enrollment rose.

## PROVIDE CLARITY

When goals are unclear, a policy may be adopted in principle, but the implementation will likely fall short of the policymakers' intentions. At the Greater Essex County District School Board, program completion was initially poor because educators were not aware of all the requirements and teachers did not have the resources to meet the ones they did understand. For example, students are required to gain six to eight sector-specific certifications, but many teachers did not have contact information for job-specific training in different sectors.

As leaders in Greater Essex learned, clearly outlining a goal and providing flexible ways to implement it can improve implementation (Bascia & Hargreaves, 2000; Datnow & Park, 2009). First, the district-level program coordinator simplified the 300-page implementation binder from the Ministry of Education. Educators could also choose to participate in half-day professional learning sessions.

The abridged binder and professional learning session made the requirements clear and created more centrally organized teacher resources. As a result, program completion increased.

## MINIMIZE COMPLEXITY

According to Michael Fullan (2007), three factors make a policy

complex: new materials, new teaching, and new beliefs. If an individual only has to adjust his or her thinking in one way (e.g. new materials), change can be relatively easy.

For an individual who needs to adjust in all three components, however, change is harder (Fullan, 2007). It is helpful to figure out where and why a policy is complex for its users in order to minimize complexity and tailor support.

In the Specialist High Skills Major program, one component seemed particularly complex for teachers: curriculum delivery in core subject areas (e.g. math, English, science) while integrating sector-specific knowledge into assignments (such as writing an English essay). For some teachers and some subject areas, this task was relatively easy, but for others, it was challenging.

To minimize complexity at the Greater Essex County District School Board, the program coordinator hosted lunchtime learning sessions for teachers. Sharing the need for the program elicited teacher support. Offering an implementation plan and resources, including lesson plans, created ease in implementing program requirements. Providing free lunch enticed them to attend.

Almost every invited teacher attended the meetings and, as a result, the complexity level decreased.

## EMPHASIZE QUALITY

For successful program implementation to occur, the program itself must have a high level of quality. Quality arises from front-end capacity building or the support a district provides. This can include additional funding, targeted and sustained professional learning, high-quality resources, and networks of teachers across schools. Providing relevant educational opportunities that motivate

and engage students also speaks to the quality of a program (Fullan, 2007; Levin, 2008).

The Greater Essex County District School Board's high-quality resources and teacher professional learning supported implementation of its Specialist High Skills Major program. To increase the program's quality, the district developed teacher networks.

One or more teachers led each of the 43 school-based programs. This created a network of teacher leaders who supported one another across the system while eliciting support from administration, teachers, and students within their own schools.

While teacher support was important, students were included in the vision for the program's quality, too. Providing students with relevant and interesting training and field trip opportunities increased the program's quality, which boosted student attendance at events, leading to more students completing the program's requirements.

## PRIORITIZE SHARED LEADERSHIP

Leadership is essential and enables all of the components describes previously. Strong leadership includes providing direction, setting high but attainable goals, and sharing roles and responsibilities with teachers (Leithwood, Louis, Anderson, & Wahlstrom, 2005).

In the Greater Essex County District School Board, district leadership set the direction by clearly outlining the program's requirements and providing group and individual teacher support to meet them. The program's success directly correlated to teacher leaders sharing the program's requirements.

For example, transparently co-planning the use of the program's extensive finances and including teachers' ideas in the program's vision

created a practical and collaborative team approach to meeting the program's overarching goals. This team approach was necessary for teachers to be willing to invest their time and effort into a goal.

## SLOW DOWN AND PLAN CAREFULLY

While each of the five components is significant alone, the steady growth of this program required a consistent and simultaneous focus on them all. This may seem daunting at first. However, implementation in education is often rushed. It does not have to be.

Slowing down to consider the research and align it with a specific program in a specific geographical region makes sense. A few months of detailed and careful planning is what it takes initially. After that, all that is required is frequent monitoring, providing support, and tweaking the plan when needed.

While this may seem a lot to ask of underresourced school boards, consider the potential waste of money, time, and negative staff and student morale that results from a failed initiative.

Change is inevitable. School districts implement change every year. No matter what the change, implementation is typically a challenge. It often fails, but success is possible with thoughtful, research-based planning and consistent execution.

By creating a need, providing clarity, minimizing complexity, emphasizing quality, and prioritizing shared leadership, successful program implementation is possible. It is a lot of work, but the benefits to staff and students demonstrate that it is time well spent.

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# BUILDING BLOCKS

A VARIETY OF COACHING ROLES CAN STRENGTHEN TEAMS

BY CHRIS BRYAN AND BRENDA KAYLOR

In our work with schools and districts across the country, we find there is a strong expectation that collaborative teams will improve student learning. Many districts also expect instructional coaches to be a part of these teams, although there is much confusion about what roles they should play within a team.

We hear questions like: I wonder why my principal asks me to attend team meetings? What do I bring to this team? If I am not the facilitator, what should I be doing? Do teachers wonder why I am here? Do they see me as an evaluator or an outsider? Are they looking at me as someone who adds extra work or slows the team down? What exactly is my role?

Approaching collaborative work from a perspective of collective efficacy can help address these questions and clarify

the coach's role in teams. Collective efficacy is defined as a team's belief in its capability to successfully accomplish specific goals and joint work (Bandura, 1997; Kreitner & Kinicki, 2007).

John Hattie, who regularly compares the effects of multiple educational policies and practices with a rigorous statistical method, ranks collective efficacy as a top factor in positively influencing student achievement (Hattie, 2015).

Developing collective efficacy takes concerted attention and leadership. Coaches are well-positioned to provide such leadership because of their skill sets and their responsibility to support teachers' success. Furthermore, a frame of collective efficacy can focus coaches' work with collaborative teams and provide entry points for action.



# OF COLLABORATION

## A COACHING FRAMEWORK FOR BUILDING COLLECTIVE EFFICACY

To guide coaches in building collective efficacy, we find very useful the work of Michael Fullan, who has identified five conditions that must be developed to foster collective efficacy (Fullan, personal communication, November 25, 2016; Hirsh, 2016):

- The team must create a culture based on trust.
- The team must commit to transparency in practice and results.
- The team must create a climate of nonjudgmentalism.
- The team must be specific in terms of the practices it will employ and actually employ them.
- The team must be clear on the specific evidence it will collect to document growth, and it must collect and use the evidence to improve professional practices.

Coaches can encourage and support all of these components of collective efficacy. How they do so will depend on their roles, in the school as a whole and in the

team specifically, as well as on the team's and the school's needs. Coaches play many different roles.

There are times that an instructional coach must be the expert and operate in the role of consultant. Other times, an instructional coach works side by side with a team of teachers collaboratively. Often, a coach provides the team opportunities for reflective thinking, which can most deeply support the development of the team's efficacy.

Each role is instrumental to building the elements of collective efficacy. Being specific about which role is needed and when can help coaches choose specific strategies.

In the sections that follow, we share examples of professional learning approaches that can be effective within each of the different roles. Adapting from the work of Lipton and Wellman (2001), we use the language of consultant, collaborator, and coach of reflective thinking to describe how an instructional coach might interact with collaborative teams focused on improving the five conditions for collective efficacy.

1 TYPES OF COACHING SUPPORT TO BUILD A CULTURE OF TRUST	
Role	Professional learning approach
Coach as consultant	Explicitly teach and model the importance of creating and monitoring team norms. (See sidebar at right.)
	Provide tools for team members to learn about the assets and strengths of one another.
	Teach the team about models of change, such as the Concerns-Based Adoption Model (Hall & Hord, 2001).
Coach as collaborator	Be fully present by listening completely and limiting personal multitasking.
	Co-design with team members and then implement a process to monitor team norms.
	Receive and provide feedback regarding development of the five conditions.
Coach of reflective thinking	Coach the team facilitator around his or her professional goals related to facilitation.
	Through inquiry-based questions, engage the team in reflection that develops all members' ability to speak honestly, take responsibility for their actions, and reflect on team progress.
	Coach team members to develop individual self-awareness of their contributions to the health and accomplishments of the team.

## EXAMPLES OF TEAM NORMS

As members of this team, we will:

- Begin and end meetings on time.
  - Be present physically and mentally.
  - Reflect on our progress regularly.
  - Be congruent with words and actions.
  - Be intentional about knowing each other and honoring and respecting each other's feelings and perspectives.
  - Support publicly the decisions of the group.
  - Speak directly to the person with whom you have an issue and reach agreement on next steps.
- We will hold ourselves and each other accountable. We will review the norms at the beginning of each meeting, choose one to focus on, and evaluate progress.

coaches do in teams. Fortunately, there are many ways they can build trust, including those listed in the table at left.

## 5 CONDITIONS FOR COLLECTIVE EFFICACY

### 1. The team must create a culture based on trust.

*“The truth is that trust rules. Trust rules your personal credibility. Trust rules your ability to get things done. Trust rules your team’s cohesiveness. Trust rules your organization’s innovativeness and performance. Trust rules just about everything you do”* (Kouzes & Posner, 2010).

Collective efficacy starts with trust. Coaches must be intentional about building and maintaining trust so that a safe learning space can exist. No substantive conversations about teaching and learning can occur without trust.

The work of Bryk and Schneider reveals the importance of developing relational trust in schools. Their studies show that when trust is absent, schools have a 1-in-7 chance of making gains with student learning (Bryk & Schneider, 2002). Trust must therefore be part of the initial and ongoing work

### 2. The team must commit to transparency in practice and results.

*“What do schools look like when all the adults in the school community care about the success of all the other adults?”* (Rutherford et al., 2011, p. vi)

It is important for teams to openly examine their current practices in relation to student results and commit to being vulnerable for the sake of their own and their students' learning. But some teams are not used to publicly sharing student data and discussing its relationship to their professional practices.

Once trust is in place, this kind of transparency is essential for practices to change and learning to improve. By using the professional learning approaches outlined in the table on p. 58, coaches can help make openness the norm and team members feel safe to share their work.

### 3. The team must create a climate of nonjudgmentalism.

*“By transparency I mean openness about results. I also mean openness about what practices are most strongly connected to successful outcomes”* (Fullan, 2008, p. 99).

Judgmental behaviors shut down team learning. When individuals operate from a place of fear, assumption, and generalization, understanding of other perspectives is limited. Meetings can become a place to vent or blame, which makes team members hesitant to share openly and in the spirit of learning.

The goal becomes self-preservation rather than what it

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2 TYPES OF COACHING SUPPORT TO DEVELOP TEAM TRANSPARENCY	
Role	Professional learning approach
<b>Coach as consultant</b>	Provide structures for teachers to visit one another's classrooms for learning purposes.
	Provide the team facilitator with structures and processes to support the sharing of student and teacher work.
	Scaffold support for teachers who are hesitant to join collaborative data conversations by providing data conversation protocols.
<b>Coach as collaborator</b>	Engage with the team in risk-taking by setting public professional goals for yourself, asking for support and feedback from team members.
	Together with team members, identify a problem of practice, engage in action research or inquiry, and analyze the results.
	As a team member, share successful and unsuccessful classroom practices after a cycle of inquiry for the purpose of learning from one another.
<b>Coach of reflective thinking</b>	Listen, paraphrase, and use questions to clarify or expand thinking, deepen reflection, and encourage self- and team assessment for continuous growth. This kind of deep authentic reflection on practice takes courage when done as a team.
	Lead planning and reflective conversations with the team.
	Through one-on-one coaching conversations, develop confidence for professional risk taking during team meetings. Coach individuals to develop their own sense of efficacy as a team member. Support them in identifying their values and beliefs and aligning their actions with values and beliefs.

should be: to create a safe learning environment for adults to take risks and experiment with a focus on their own and students' learning.

Coaches can play an important role in establishing a nonjudgmental climate among teams by using the professional learning approaches in the table above right.

#### 4. The team must be specific in terms of the practices it will

3 TYPES OF COACHING SUPPORT TO CREATE A CLIMATE OF NONJUDGMENTALISM	
Role	Professional learning approach
<b>Coach as consultant</b>	Teach the team the communication and language skills of assuming positive intent.
	Focus the team on the use of objective, quantifiable data versus subjective, assumption-based data.
	Provide protocols for practicing conversations that honor differences in beliefs about teaching and learning.
<b>Coach as collaborator</b>	As a team member, model asking for feedback and ideas.
	Stay curious, adopt an inquisitive mindset, and consider multiple perspectives.
	Recognize individual and team successes.
<b>Coach of reflective thinking</b>	Allow team members to hear their words and clarify intentions as needed by listening fully and reflecting their words back to them through paraphrasing.
	Invite thinking through the use of open-ended, reflective questions that include exploratory language that assumes positive intent.
	Support the team facilitator in providing group members equity in opportunity to speak, advocate, and make decisions.

#### employ and actually employ them.

*"The main thing is to keep the main thing the main thing"* (Covey, 2005, p. 160).

Ensure that the team stays focused on the school and district initiatives around learning and results. Although this may sound like common sense, it is often challenging for teams because of the many responsibilities and roles educators play.

Coaches can help team work stay focused by using a cycle of continuous improvement that begins with identifying what students and adults need to learn, clarifying what student and adult success looks like, determining multiple instructional pathways, and committing to bring student work back to the team for analysis and determination of next steps. Using this process includes the professional learning approaches outlined in the table on p. 59.

#### 5. The team must be clear about the specific evidence it will collect to document growth, and it must collect and use the evidence to improve professional practices.

4 TYPES OF COACHING SUPPORT TO KEEP THE FOCUS AND ENSURE IMPLEMENTATION	
Role	Professional learning approach
<b>Coach as consultant</b>	Ensure a cycle of improvement is used to align decisions about curriculum, assessment, and instruction with student learning goals.
	Identify and reinforce the team’s use of common language and concepts to guide their work.
	Provide the team facilitator with examples of protocols and job-embedded learning strategies for making meaning of data.
<b>Coach as collaborator</b>	Set specific, data-informed, measurable goals and develop plans for implementation.
	Assist the team facilitator in the development of a learning-focused agenda and prioritization of tasks and support the team as it defines individual/team responsibilities and timelines.
	Engage in brainstorming, co-planning, action research, inquiry processes and exchange of resources.
<b>Coach of reflective thinking</b>	Mediate awareness of individual and shared values and develop the team’s vision for continuous learning and improvement and shared responsibility for the work.
	Engage the team in learning-focused conversations to generate insights about student needs and instructional practices.
	Ask reflective questions about student data and related individual and team professional practices and help team members make their progress visible to each other.

5 TYPES OF COACHING SUPPORT TO DETERMINE EVIDENCE OF STUDENT LEARNING	
Role	Professional learning approach
<b>Coach as consultant</b>	Help teams develop common assessments (formative and summative) that focus on higher levels of achievement for all students and provide the team with a continuum of assessment strategies that promote student learning.
	Use a data analysis process to support learning from the data and identify ways to change instruction in response to student needs.
	Increase team members’ assessment literacy so that they use data ethically to make decisions that support student growth such as how to differentiate instruction versus using data to label students.
<b>Coach as collaborator</b>	Take an inquiry stance as a co-learner to determine which data sources provide the best information for instructional purposes.
	Co-create common formative and summative assessments and analyze results.
	Engage in professional learning such as action research to study the impact of data-informed decisions on student learning.
<b>Coach of reflective thinking</b>	Support the team in taking a meta-view of the big picture of learning.
	Raise awareness about assumptions related to student data to ensure that data is being used ethically.
	Pose reflective questions that encourage team members to learn from each other by deprivatizing their practice and sharing their successes and challenges.

*“The more you teach without finding out who understands the concepts and who doesn’t, the greater the likelihood that only already-proficient students will succeed” (Wiggins, 2006).*

Collaborative teams should use student data to celebrate success, acknowledge gaps in learning, and respond to learner needs. Committing to a close examination of teaching practices and the impact of those practices on student learning is an indicator that the team is embracing collective efficacy because it is taking responsibility for student learning.

Team members are aligning what they need to learn and

do as educators to meet the needs of their students. They are recognizing that as a team, they have a greater opportunity to impact student learning than they would have as individuals.

### COACHES AS CATALYSTS OF CHANGE

Coaches can use the collective efficacy framework described here to ensure teams are focused on developing the five conditions needed for developing collective efficacy. They can use it to diagnose a team’s needs and decide which type of coaching support to provide.

# IDEAS

By focusing on teams, coaches are more likely to be catalysts for change at the school level. Too often, the work of coaches is focused only on building individual capacity. This can result in improved teaching and learning in individual classrooms but not in the school as a whole. Schools that develop collective efficacy are schools where all teachers and students can thrive and reach their potential.

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## Thank you for being a member.

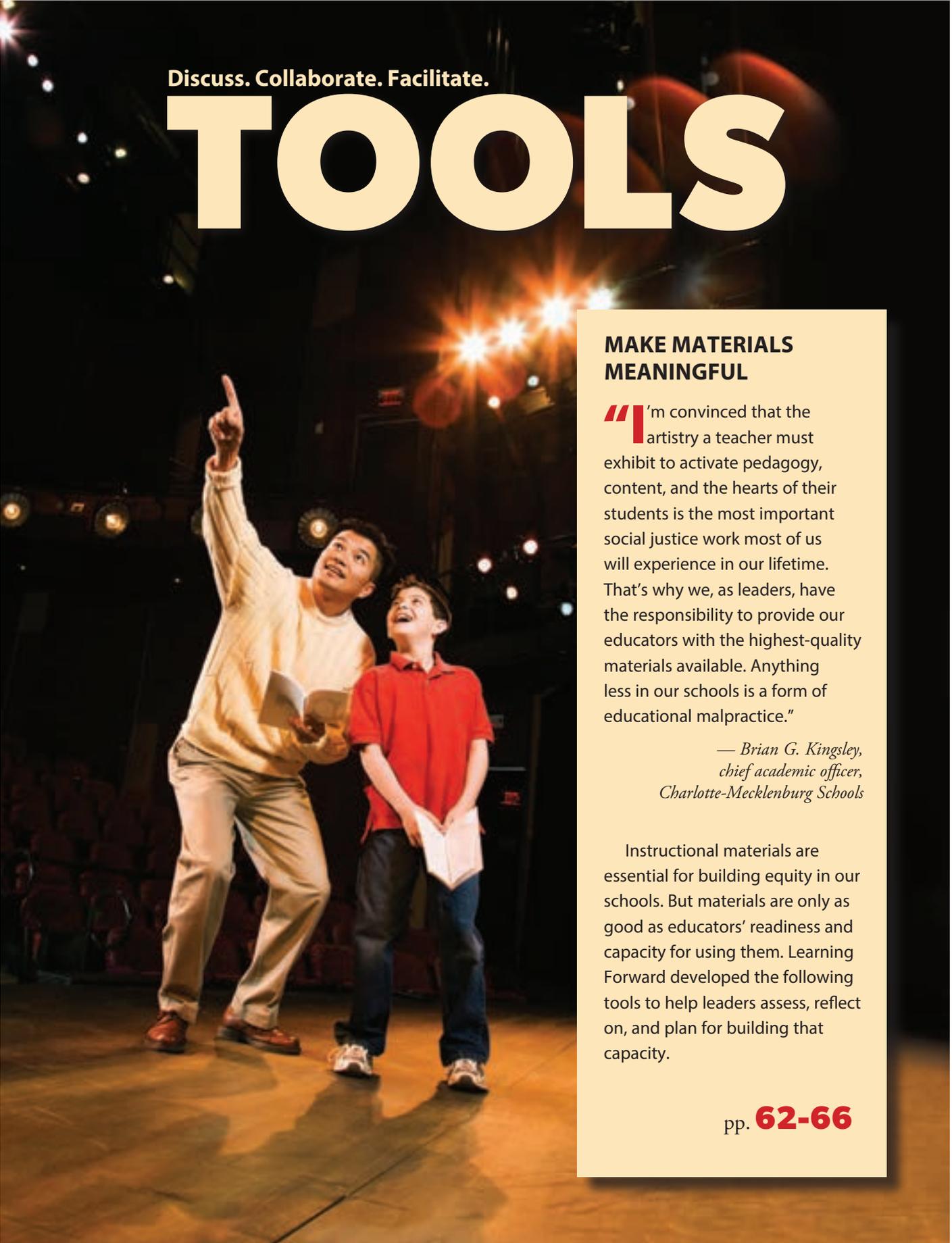
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THE PROFESSIONAL LEARNING ASSOCIATION

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Discuss. Collaborate. Facilitate.

# TOOLS

## MAKE MATERIALS MEANINGFUL

**I**'m convinced that the artistry a teacher must exhibit to activate pedagogy, content, and the hearts of their students is the most important social justice work most of us will experience in our lifetime. That's why we, as leaders, have the responsibility to provide our educators with the highest-quality materials available. Anything less in our schools is a form of educational malpractice."

— *Brian G. Kingsley,*  
*chief academic officer,*  
*Charlotte-Mecklenburg Schools*

Instructional materials are essential for building equity in our schools. But materials are only as good as educators' readiness and capacity for using them. Learning Forward developed the following tools to help leaders assess, reflect on, and plan for building that capacity.

pp. **62-66**

# IMPLEMENTING INSTRUCTIONAL MATERIALS: A CONVERSATION

While the articles in this issue of *The Learning Professional* can offer readers a solid foundation in understanding the intersection of instructional materials and professional learning more deeply, considering how to adapt or apply this new understanding will involve team study, reflection, and collaboration.

## PURPOSE

The following pages include a set of protocols for teams to use to explore views on instructional materials and professional learning and assess the current state of the local context related to instructional materials.

## OPTIONS FOR USE

Begin with Examining Assumptions on p. 63. This protocol asks educators to indicate the level of their agreement with a variety of statements related to instructional materials.

First ask individuals to fill out the protocol and then facilitate a conversation through each assumption. The goal is not to reach consensus at this point but rather to surface assumptions and raise related questions and perceptions

among a team working on this topic.

During conversation for each assumption, in addition to hearing team members' views, probe for deeper exploration, perhaps asking what changes to the statement would make it one they agree with or disagree with, or what else they would need to know about the topic.

Next, or as a second conversation, use A Learning System Assessment on p. 64 to look inward at the team's local context for learning. Either ask individuals to circle answers for each statement or have pairs complete the assessment together. Discuss the assessment as a full group, and together take notes on the columns listed on p. 65 with the headings Strengths, Concerns, and Wonderings.

Finally, use Considering the 4 A's on p. 66 to conclude the conversation for this stage of the work. Either fill in the chart as a group, as smaller groups, or create each square as a separate poster, asking small groups to start at one poster filling in their responses, and then rotating through each poster in a carousel brainstorm. If the timing is right, facilitators may adapt one of the A's to another important A: actions.

## EXAMINING ASSUMPTIONS / INVENTORY

1. Most teachers prefer to develop lessons independently rather than use district- and/or school-adopted curriculum and instructional materials.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5
2. Systemwide implementation of high-quality instructional materials conflicts with a system goal for personalization.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5
3. Ensuring all teachers have access to high-quality instructional materials is today's most important equity issue.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5
4. Focusing PLCs on implementing high-quality curriculum and instructional materials will reduce grade-level variation and accelerate student progress.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5
5. Principals and teacher leaders have significant roles to play in the selection and implementation of high-quality instructional materials.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5
6. School systems are responsible for ensuring all teachers have access to high-quality instructional materials and effective job-embedded professional learning.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5
7. State agencies have many policy levers to increase access and quality of instructional materials and professional learning available to educators.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5
8. High-quality instructional materials can be implemented successfully without effective professional learning.				
<b>Strongly disagree</b> 1	<b>Disagree</b> 2	<b>Neutral</b> 3	<b>Agree</b> 4	<b>Strongly agree</b> 5

# TOOLS

## A LEARNING SYSTEM ASSESSMENT

First, consider your state, system, or an individual school. Circle the number that most closely reflects your current view for each statement.

1. Learning communities meet several times per week to collaborate on how to implement high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
2. Time is available for teachers during the school day for professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
3. Teachers' backgrounds, experience levels, and learning needs are considered when educators plan and design professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
4. Teachers individually reflect on implementation of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
5. Leaders develop the infrastructure to incentivize, improve, sustain, and scale implementation of professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
6. Leaders are active participants with other staff members in professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
7. Leaders advocate for resources to fully support professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
8. Leaders speak about the important relationship between improved student achievement and professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
9. Teachers are involved with the decision-making about allocating resources for professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5
10. A variety of data is used to assess the effectiveness of professional learning grounded in the use of high-quality curriculum and instructional materials.				
<b>Never</b> 1	<b>Rarely</b> 2	<b>Sometimes</b> 3	<b>Often</b> 4	<b>Always</b> 5

## TAKE NOTES TOGETHER

**Strengths**

**Concerns**

**Wonderings**

# TOOLS

## CONSIDERING THE 4 A'S

As you conclude your conversations, consider how your assumptions have shifted, where you have agreements, what arguments you have, and what your aspirations are.

ASSUMPTIONS	AGREEMENTS
ARGUMENTS	ASPIRATIONS

Connect. Belong. Support.

# UPDATES



## LEARNING FORWARD ON CAPITOL HILL

**L**earning Forward's Capitol Hill briefing on September 27 was a great success as we shared data at the national, state, district, and school levels providing evidence that professional learning is making a positive impact on teacher practice and student outcomes.

We encourage all educators to watch the briefing and join us in documenting and providing evidence as we ready for next year. See the briefing at <https://learningforward.org/advocacy>.

Photo by MELINDA GEORGE

From left: Stephanie Hirsh, executive director, Learning Forward; Pat Jones, instructional coach, Woodland (Washington) Public Schools; Paul Fleming, assistant commissioner, Tennessee Department of Education; Chad Sutton, assistant superintendent for academic services and school accountability, North Kansas City Schools, Missouri; and Alan Ingram, president, Learning Forward.

## FOUNDATION PARTNERS WITH DISTRICTS TO EXPLORE INNOVATIONS

BY JANET CIARROCCA, AMY B. COLTON, AND EDWARD F. TOBIA

Teachers engaged in high-quality professional learning are akin to hikers venturing into unknown terrain. Experienced companions are invaluable as they negotiate the complexities of the change process. That is why members of the Learning Forward Foundation serve as guides for the educators we support with our grants.

The trek of administrators in New Jersey's North Brunswick Township Public Schools demonstrates how the Learning Forward Foundation walks side-by-side with grantees in support of professional learning and student success.

### THE INNOVATION THINK TANK

In 2015, Janet Ciarrocca, an elementary school principal in North Brunswick, was starting out on a new trail. She had engaged her teaching staff in the New Jersey Department of Education's statewide pilot of the Connected Action Roadmap Framework and the results were encouraging.

The framework, designed by the New Jersey Principal and Supervisors Association, guides professional learning communities to make



The team from New Jersey's North Brunswick Township Public Schools: From left, Fred Johnson, John Adams Elementary principal; Joseph Schmidt, Judd Elementary principal; Jennifer Nicosia, North Brunswick Early Childhood Center principal; Janet Ciarrocca, director of curriculum, instruction, and technology; Diana Whalen, Parsons Elementary principal; and Sidney Dawson, Livingston Park Elementary principal.

connections among standards, student learning, assessment, professional learning, educator effectiveness, and school climate and culture. The tools it includes facilitate use of a common language and coherent planning with a focus on student achievement.

When Ciarrocca moved from principal to district curriculum director, she envisioned expanding the program into her district's other three elementary schools and preschools. The process would be complex, but she was encouraged when she learned about the Learning Forward Foundation's Innovation Think Tank. This grant program partners grantees with experienced educators from the

foundation and other school systems.

The Innovation Think Tank funds district projects and supports a network of thought leaders interested in exploring innovations in professional learning and the possible outcomes that can drive successful implementation.

The six district teams awarded the grant and the Learning Forward Foundation board form a network that engages in inquiry, design thinking, prototyping, and innovation cycles related to the development and supports for innovative action.

Through cross-network group webinars, all district teams share ideas and provide feedback to each other. These opportunities for reflection



challenge teams to re-examine their current understanding and behaviors and consider alternate paths.

Unlike traditional grants, the Innovation Think Tank provides not only financial support but also implementation support. Each district team of “hikers” is paired with two experienced “trail guides” from the Learning Forward Foundation who serve as thought partners. They pose complex questions, share diverse perspectives, and provide feedback.

The primary intent of this collaboration is to help awardees meet their specified outcomes, but secondary goals include improving the foundation’s grant application process and system of support and informing the broader Learning Forward community about effective professional learning practices through blogs, articles, and presentations at the Learning Forward Annual Conference.

## REFLECTIVE CONVERSATIONS

North Brunswick is one of six district partners in the Innovation Think Tank. Ciarrocca says the process has been beneficial since the beginning. Early on, she engaged the principals from the four schools in the application process. That forced the district’s school leadership team to think deeply about their goals and consider what

innovation in schools should look like. These conversations were the first steps in creating a districtwide system of professional learning.

Since receiving the grant, the North Brunswick team has benefited from the chance to reflect and adapt, with guidance from the Learning Forward Foundation partners. To begin, foundation partners became familiar with the background of the school system and the framework. This was especially important because our collaboration did not happen on-site.

The next step was a series of conference calls, during which the foundation partners asked reflective questions to help the district clarify its intended outcomes and implementation processes. When appropriate, the partners asked the leadership team to consider different perspectives and potential actions that might help them overcome roadblocks along the way.

For example, during one call, the foundation partners asked how the principals knew that improvement was taking place as a result of the framework. One principal spoke about examining student achievement data. While well-intentioned, his response was missing a key element that leaders often overlook: whether there were changes in teacher practice. This is a necessary link between innovation and

student outcomes, and the foundation’s learning partners suggested looking at it more closely.

They encouraged the principals to consider questions like: “What are the teacher behaviors that have changed as a result of implementing the framework, and how have those changes in teacher behavior had an impact on student learning?”

The foundation partners also recommend using Innovation Configuration (IC) maps. IC maps provide clear, specific, and shared descriptions of what a new program or practice looks like when implemented with fidelity. IC maps identify essential components of the program and specify ideal and less-than-ideal behaviors for each component.

The result is a clear picture of what teachers do when they are using the program as intended. This provides both leaders and teachers with data to connect changes in behavior related to implementing a program with changes in student learning.

This fall, as a result of these conversations, the North Brunswick team began focusing its work on creating IC maps as a way to define how the framework should look from the leaders’ perspective to help drive reflection on their implementation at each of the leaders’ individual schools.

# UPDATES

With the support of the Learning Forward Foundation partners, the North Brunswick team plans to develop the IC maps collaboratively and continuously use them throughout their implementation to guide teachers and the leadership team.

## NEW TRAILS

Expanding to new trails is necessary if educators are to be innovative and push student learning forward. Walking the path with other hikers, both experienced and new, is valuable, as the North Brunswick team has found.

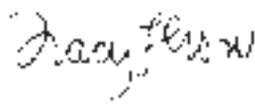
Its work with the Innovation Think Tank network is already having

a positive effect on transforming the district's professional learning system. Instead of five elementary schools working independently alongside one another, the district partners are becoming an innovative learning system in which all staff at each school and across the district are becoming part of a process that is responsive to and driven by student learning needs.

"Just being able to bounce ideas off of professional learning partners, hear new ideas, and learn from one another helps to shake our team out of its traditional practices," Ciarrocca says. "It is an exciting and innovative practice for our team to be engaged in.

It should lead to deeper thinking, creative planning, and greater success in the long run."

**Janet Ciarrocca (jciarrocca@nbtsschools.org) is director of curriculum, instruction, and technology in North Brunswick Township Schools, New Jersey. Amy B. Colton (acolton2@gmail.com) is a board member of the Learning Forward Foundation and executive director of Learning Forward Michigan. Edward F. Tobia (edftobia@gmail.com) is a board member of the Learning Forward Foundation. ■**

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## Evidence, evidence, evidence

Evidence of impact is not optional. From a state's ESSA plans to Title II to talking with the district superintendent, everyone wants to know when — or whether — professional learning is making an impact and what is the evidence that indicates impact. Learning Forward is here to help. We invite you to join your peers from across the U.S. to share your successes in a short survey: <http://bit.ly/impactPL>.

Tell us what Title II funds in your school or district, and, most important,

what outcomes you see as a result. Outcomes might include improved graduation rates or assessment scores, improvements for specific populations of students, or other indicators that students are experiencing more meaningful learning.

When Learning Forward's allies and members spoke up for Title II this year, it made the difference to convince Congress to include federal funds for professional learning. Let's make sure we keep documenting the importance of this critical investment.

## NEXT REDESIGN PD COMMUNITY OF PRACTICE UNDERWAY

A solid lineup of school districts is committed to join the new launch of the Redesign PD Community of Practice.

This cohort's focus will apply previous learning around measuring the impact of professional learning and building coherent systems of support to a new question: How do high-functioning collaborative teams, using continuous improvement processes, serve as the engine for school improvement?

Participants will explore how district-level systems sustain this engine and

develop strategies to measure the impact teams are having on teaching and learning.

Learning Forward will apply improvement science principles to facilitate the network, which officially launches in Dallas at the Annual Conference. Contact [michelle.bowman@learningforward.org](mailto:michelle.bowman@learningforward.org) to learn more.

### REDESIGN PD DISTRICTS INCLUDE:

- Fulton County Schools, Georgia
- Denver Public Schools, Colorado
- Broward County Public Schools, Florida
- Durham Public Schools, North Carolina
- Guilford Public Schools, North Carolina
- Syracuse City School District, New York
- Ft. Wayne Community Schools, Indiana
- Nashville Public Schools, Tennessee
- Hillsborough County Public Schools, Florida
- School District of Philadelphia, Pennsylvania

## DISTRICTS SELECTED FOR TEXAS NETWORK FOR SCHOOL IMPROVEMENT COLLABORATIVE

After a rigorous submission and vetting process, the Texas Network for School Improvement Collaborative (TXNSI Collaborative) has chosen four North Texas school districts to participate in an innovative program funded by a \$500,000 grant from the Bill & Melinda Gates Foundation.

The chosen districts include Duncanville ISD, Crowley ISD, Lancaster ISD, and Garland ISD. Within those districts, 10 middle school campuses will participate in the program:

- Duncanville ISD: Byrd Middle School, Kennemer Middle School, Reed Middle School;
- Crowley ISD: Crowley Middle School, H.F. Stevens Middle School, Summer Creek Middle School;
- Lancaster ISD: Elsie Robertson Middle School; and
- Garland ISD: Coyle Middle School, Schrade Middle School, Sellers Middle School.

TXNSI Collaborative is a partnership among Learning Forward, Educate Texas, a public-private initiative of Communities Foundation of Texas, and the Charles A. Dana Center at The University of Texas at Austin.

As one of 21 Network for School Improvement sites across the nation, this program aims to increase 8th-grade math proficiency, a key indicator of ongoing educational success among low-income, Hispanic, and Latino students using a structured continuous improvement process.

# AT A GLANCE

## THE VALUE OF

# INSTRUCTIONAL MATERIALS

### THE BENEFITS:

**3.6**  
percentile  
points



How much student achievement can increase as a result of a high-quality textbook.

**55th percentile**  
*versus*  
**50th percentile**

Math achievement levels of 1st graders using higher- and lower-quality textbooks.



The length of time it took to narrow the achievement gap when students who started behind their peers got access to grade-appropriate assignments.

*High-quality instructional materials are linked with effective teaching and student success. But teachers and students have unequal access to them. Professional learning about selecting and implementing instructional materials can help close that gap.*



### THE CHALLENGES:

**9 in 10**



Number of math teachers who develop or select their own materials at least once a week. **8 in 10** English language arts teachers do.

**4+** Number of hours teachers tend to spend per week selecting and developing materials. (Number represents about half of teachers in states with standards similar to Common Core.)



**11%**

Percentage of English language arts teachers who said that professional learning influenced their use of instructional materials “a great deal.”

**50%**



Percentage of teachers who participated in 8 hours or less of professional learning about their main instructional materials. **25%** participated in none.

### THE BOTTOM LINE:

**\$13**  
per student

Difference between most- and least-expensive math instructional materials—and more expensive materials are not always higher in quality.

#### Sources:

- [www.brookings.edu/research/never-judge-a-book-by-its-cover-use-student-achievement-instead](http://www.brookings.edu/research/never-judge-a-book-by-its-cover-use-student-achievement-instead)
- [files.eric.ed.gov/fulltext/ED512551.pdf](http://files.eric.ed.gov/fulltext/ED512551.pdf)
- [opportunitymyth.tntp.org](http://opportunitymyth.tntp.org)
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- [cdn.americanprogress.org/wp-content/uploads/2015/10/06111518/CurriculumMatters-report.pdf](http://cdn.americanprogress.org/wp-content/uploads/2015/10/06111518/CurriculumMatters-report.pdf)

# THROUGH THE LENS

OF LEARNING FORWARD'S STANDARDS FOR PROFESSIONAL LEARNING

## LEARNING FORWARD'S STANDARDS FOR PROFESSIONAL LEARNING

*Professional learning that increases educator effectiveness and results for all students ...*

### Learning Communities

... occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment.

### Leadership

... requires skillful leaders who develop capacity, advocate, and create support systems for professional learning.

### Resources

... requires prioritizing, monitoring, and coordinating resources for educator learning.

### Data

... uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning.

### Learning Designs

... integrates theories, research, and models of human learning to achieve its intended outcomes.

### Implementation

... applies research on change and sustains support for implementation of professional learning for long-term change.

### Outcomes

... aligns its outcomes with educator performance and student curriculum standards.

Many of the articles in this issue of *The Learning Professional* demonstrate Learning Forward's Standards for Professional Learning in action. Use this tool to deepen your own understanding of what standards implementation might look like and to explore implementation in various contexts. In this issue, we highlight three examples.

STANDARD	IN ACTION	TO CONSIDER
LEARNING COMMUNITIES	"Beyond buy-in" (p. 30) describes why a California district created a "responsive adoption process" for selecting and implementing new instructional materials, in which teachers were involved at every step. To ensure that this collective participation was informed and authentic, the district engaged teachers in team-based professional learning that built their capacity to evaluate materials. This work was only possible with learning communities and ongoing collaboration.	<ol style="list-style-type: none"><li>1. How are teachers in your district or school involved in decisions about instructional materials, and how can you build their capacity to participate in an informed way?</li><li>2. How can professional learning build collective ownership of other improvement efforts?</li></ol>
IMPLEMENTATION	"High-quality instruction doesn't happen without intense commitment and thoughtful deliberation from educators. Districts can support teachers by showing that same commitment and thoughtfulness as they implement a new curriculum," writes Emily Freitag in "Step by step" (p. 40). To help districts ensure that professional learning is sustained, meaningful, and job-embedded, Instruction Partners developed a curriculum support guide with tools for selecting materials, preparing to launch them, and engaging in an ongoing cycle of teaching and learning with teachers. The tools can support high-quality professional learning.	<ol style="list-style-type: none"><li>1. How do you assess educators' level of readiness for new content and materials? How do you factor their knowledge into the selection and implementation processes?</li><li>2. When implementing professional learning about new materials, how do you sustain and deepen the learning over time?</li></ol>
OUTCOMES	The Next Generation Science Standards encourage a shift in the way science is taught to promote deeper learning of scientific concepts. A consortium of science education experts developed an open source science curriculum and aligned professional learning to support this shift. As Katherine McNeill and Brian Reiser (p. 44) explain, the professional learning is designed "both to support teachers in enacting the instructional materials and to support changes in their vision of science instruction to focus on sense-making about the natural world." The end goal is to keep the focus on what students should know and be able to do in science.	<ol style="list-style-type: none"><li>1. How is the professional learning in which you are involved aligned with student learning standards?</li><li>2. What learning outcomes are students not yet achieving, and how can your professional learning opportunities support improvement in those areas?</li></ol>

Learn more at [www.learningforward.org/standards-for-professional-learning](http://www.learningforward.org/standards-for-professional-learning).



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## Are your improvement efforts getting the results you want?

Learning Forward supports leaders at all levels with high-impact consulting services that provide you with the tools to transform professional learning, increase educator capacity, and improve student achievement.

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- Coaches Academy
- Professional learning communities
- Principal leadership
- School improvement
- System improvement
- Standards alignment
- Comprehensive planning
- Support for states
- Customized services



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