EducationWeek® | SPOTLIGHT®

2025

PD for the Science of Reading

iStock/Getty

Page 4

EDITOR'S NOTE

Effective implementation of the science of reading requires robust professional development. This Spotlight explores how districts, teacher-prep programs, and states are working to equip educators with the knowledge and skills needed. From training the trainers to sharing leadership insights on implementing the science of reading, these articles offer valuable perspectives. Discover how to bridge the gap between research and practice to transform literacy instruction.

iStock/Getty

Page 10

OPINION

Published June 1, 2024

Who Trains the Trainers in the 'Science of Reading?'

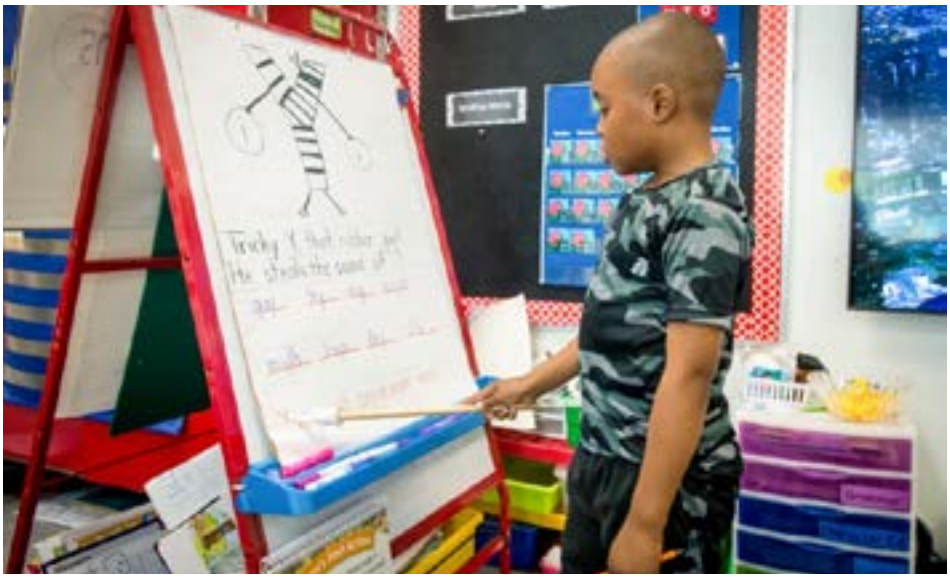
By Olina Banerji

When a school begins to move its practices closer to the "science of reading," the large body of knowledge about how kids learn to read, they must manage a number of significant changes. Schedules may need to adjust. Teachers and leaders both need training. Students will need to adjust to new routines. Often, all these parties will also be working with new curricula.

Principals are responsible for smoothing over this transition for their staff and students. One step ahead of the principals, though, is the support districts can marshal: A team of literacy coaches, curriculum directors, and trainers, who create the behind-the-scenes infrastructure.

School districts in the United States come in many shapes and sizes, and the support they give will look differently. Education Week spoke to three differently oriented districts to compare their approaches, both top down and bottom up.

Large or small, districts largely follow a three-step plan to roll out a new, science-of-reading-based curriculum: build knowledge, train, and sustain.



Kate Medley for Education Week

First grader Geniss Gibbs practices reading skills at Eastern Elementary School in Washington, N.C.

Building knowledge about reading among educators

The sprawling, suburban Katy Independent district in Texas needed a plan that could work at scale for 46 campuses. Katy switched to a new reading curriculum in 2022, prompted in part by state legislation that mandates that all teachers and principals who teach kindergarten through 3rd grade be trained in evidence-based reading instruction.

"Whatever we decided to do, it had to work for everyone," said Karen Muller, the director of elementary curriculum and instruction at Katy.

The district began a task force in 2023 to take stock of what principals, administrators, and teachers, including bilingual teachers, knew about the science of reading. Then it created its own in-house training for administrators and teachers, instead of contracting with a vendor. Building this capacity in-house, Muller said, means the district has been able to offer continuous support throughout the implementation, as well as for new teachers and principals who join the district.

Principals and teachers in Katy had already attended a few years of training introducing them to the basic tenets of the science of reading, so by the time the task force was formed, members were familiar with the core concepts. The task force reviewed all the curricular choices and picked one resource that would best suit the needs of a large district.

Then, Muller had to figure out how the knowledge would be disseminated to teachers and principals. Both groups are required under the law to do 60 hours of coursework every year on evidence-based reading practices, and until last year, this could be done virtually. In the upcoming school year though, these trainings will only be in-person, so it will have to be done in cohorts.

Katy's curriculum team has also created a virtual toolkit for principals, which houses all the documents and resources they would need to onboard new teachers in their schools.

In contrast, with only four elementary schools, the school district in Seaford, Del., has had a different approach to its science of reading rollout. Because of its small size, Seaford relied on the University of Delaware to provide training to its principals, rather than in-house training.

Knowledge transfer was a shorter and more organic process. Kirsten Jennette, who was then an elementary school principal, said she often brought doubts and concerns from her teaching staff directly to designers of the district's new curriculum.

Now the district's curriculum and instructional director, Jennette has built personal relationships with all the principals, and meets with them every month to go over their schools' progress in reading.

"We can just call or text each other if we needed to meet or get information. We're collaborative," Jennette said.

District leaders coach principals through early implementation of new reading techniques

Kathy Daugherty, the reading and Response to Intervention coordinator for the Murfreesboro school district in Tennessee, has spent a majority of the last four years in the classroom working with principals.

Reading specialists like Daugherty supported principals by accompanying them on their observational "learning walks." She also modeled lessons for teachers in professional learning community meetings, who struggled initially to figure out how to teach the new curriculum. These frequent touch points are

essential, said Daugherty, because it allows the district to keep track of which school teams need additional help.

District leaders like Daugherty balance working with administrators on one-off, individual challenges with noting common patterns that crop up in several schools. In her latest meeting with principals, Daugherty noticed that a lot of them had questions about how to make use of small groups in a classroom. Daugherty modeled a lesson, videotaped it, and brought it back to the principals' group.

"I asked them to use their evaluation tool to figure out if I'd done a good job," she said.

Katy's curriculum team has rigged up a partly decentralized system to keep track of implementation. Its 46 campuses are divided into three segments, and each is led by a curriculum coordinator, said Muller.

On site visits, which include going on learning walks with principals, the district leaders can pick up patterns of what's working, and what needs additional work.

"One simple thing that teachers weren't doing initially was putting up sound walls in their classrooms. This summer, we're going to do a robust training for teachers on why sound walls are useful to their instruction," said Muller.

How districts can sustain momentum

After four years of coaching and support, Daugherty is planning to gradually step back. She and her team have planned some immediate next steps for each school in the district.

"We tell them we're going to be back in four to six weeks to check on their progress," she said." We ask the leadership [in schools] to figure who's accountable for implementing these steps."

Leaders of smaller districts, like Seaford, don't need to retreat as much from their schools. Their size ensures that checking in with each school individually isn't as time-consuming.

However, Jenette said looming budget problems are worrisome and could affect the district's ability to secure additional training. As a fix, she is now focused on creating a pipeline of trainers within the district, while she still has the money to do so.

"We want to train teacher-leaders in our schools, who are interested in joining the administration," she said. "That way, when new folks come into the district, we don't have to rely on outside help to train them." ■

Published November 18, 2024

How This Teacher-Prep Program and District Aligned On the Science of Reading

By Sarah Schwartz

With dozens of states mandating changes to how reading is taught, requiring schools to use evidence-based methods, many teachers have asked the same question: Why didn't I learn any of this in my college classes?

Similar to school districts, the colleges and universities that prepare future teachers have long taken a range of different philosophical approaches to literacy instruction.

But unlike teachers in K-12 schools, higher education faculty usually have a great deal of autonomy over how they structure their courses. That means that even as states mandate changes to district practice to align to the "science of reading," educator-preparation programs may not make the same shifts.

In Tennessee, one group has started a district-university partnership network in an attempt to make these systems more connected.

Tennessee SCORE, a nonprofit research and advocacy organization, paired four school districts with one or two local universities that prepare a portion of the school system's incoming teachers. Together, these district-university dyads—the Lead in Literacy Network—are working to align coursework and preservice experiences with the materials teachers are now expected to cover in the classroom after the passage of the state's reading law.

The 2021 Tennessee Literacy Success Act requires educator-preparation programs to equip prospective teachers to teach foundational literacy skills and use universal screening assessments. Programs also have to prepare future teachers to teach with curricula that meet the state's definition of high-quality instructional materials.

In the SCORE partnerships, university faculty teach their students to use the same tools that they'll be working with in their future classrooms. That includes curriculum materials, of course, but also a step-by-step process for preparing lessons and understanding how they'll be observed implementing them.

"Having common materials and common tools that are so integrated into the work really takes a lot of the questioning off of the table," said Karen Lawrence, the senior director of networks and partnerships at SCORE.

iStock/Getty

Education Week spoke with a group of three leaders in one partnership, between Tennessee Tech University and Putnam County schools in Cookeville, Tenn.

Amber Spears, an associate professor of literacy at Tennessee Tech, teaches literacy methods courses at undergraduate and graduate levels. Having regular time to meet with Diana Wood, Putnam County's pre-K-4 curriculum supervisor, and her team allowed for deeper communication about their goals, Spears said.

"We had a handful of opportunities over the years to try to come together at the table, but it felt like it was just intermittent, and it wasn't frequent enough to really implement big change," she said.

Lindsey Braisted, an instructor at Tennessee Tech who oversees the literacy and English-learner practicums, also joined the conversation.

This interview has been edited for length and clarity.

How did the Tennessee Literacy Success Act change the work you were doing?

Spears: The idea is that as we were preparing our teachers, we needed to emulate the work that they would be doing when they were hired into the school system. Many of our students who graduate from our elementary ed. program do apply for jobs in Putnam County, and so it worked very well for us to parallel the work that the teachers in Putnam County were doing.

I went through the two weeks of the Tennessee Early Reading Training myself, and then shortly thereafter, all students who go through our program also had to complete the Tennessee Early Reading Training, which is a 26- to 30-hour online training. They all have that as part of their coursework.

We also learned in feedback from Putnam County that our students were not really doing a great job with their early literacy instruction, especially, at that time, phonics, and so we incorporated an online, six-hour training for our students, all of our candidates, to develop a more robust understanding of phonics. We also then incorporated some [Core Knowledge Language Arts, a curriculum], into our lessons as we were teaching. But we felt like we were still missing a lot.

We had a singular 7-credit hour literacy course that all students took, and it was a K-5 literacy methods course. But if they take that course in the fall semester of their junior year, by the time that they graduate and get a job, it's been up to a year or two years since they've had a literacy methods course. You can forget a lot ... not being in the field.

We knew that we needed a stronger emphasis in foundational literacy, skills, pedagogy, and so ... this is the first semester we're offering a 6-credit hour K-2 literacy methods course.

A year later in the program of study, during their senior year, the students will have a 3rd to 5th grade literacy-methods course where they're still building on the knowledge that they gained their junior year, and then they're starting to put all these pieces together. My hope is that within the next one to two years, we really see stronger content knowledge with our first-year teachers.

Braisted: We now use the IPG [Instructional Practice Guide] rubric as one of their evaluation tools [in the practicum], because that's a tool that's used widely in the state and in Putnam County schools.

My students are required to teach one foundational-skills lesson and one knowledge lesson. They teach the foundational-skills lesson about midway through this semester, and that's evaluated with the IPG skills rubric. And then they have the opportunity to teach a [Core Knowledge Language Arts] knowledge lesson at the end of the semester.

What work have you done so far

with the Lead in Literacy Network?

Braisted: We're now in year two of this work. The first year was looking specifically at the methods courses being taught, and what kind of content is being delivered, how it is being delivered, what kind of thinking we're eliciting from our preservice teachers.

We're now in a second round of course analysis for both the K-2 literacy course and now the [grades] 3-5 literacy course. Aside from that, we have this really cool component of our network this year, where we're getting to specifically come to the table with Putnam County. We started our first meeting by saying, 'What does a day one teacher need to be able to do?' And then we kind of backtracked and said, 'OK, starting their junior year, how can we help to prepare these students to be ready for the day one expectations of being a teacher?'

That has looked like some minor tweaks in the course, but then it's also looked like some larger projects that we're taking on that we're about to launch next semester, where we are supporting both mentor teachers and preservice teachers in developing a strong co-teaching relationship. Mentor teachers are being coached on how to give effective feedback, and preservice teachers are being coached on how to receive that feedback, ... how to observe.

Is there an example of something that came up about preparing teachers where there were diverging opinions?

Wood: I know it didn't start in that conversation, but one big-picture item that has come from our partnership—the fact that we no longer, with our [high quality instructional materials], are requiring lesson plans, but more digging into the materials and truly understanding what's expected of the kids. That has been a shift in expectations of a preservice student. [Creating a lesson plan], that's not as much a skill set that they need anymore; they're not pulling resources. It's there. It's more about digging into the materials and internalizing that lesson.

Introducing some of the materials that teachers would be using in districts seems really interesting. How have those materials been integrated?

Spears: I try to connect it to whatever we're teaching. If I'm teaching them about phonemic awareness, for example, and we spend two class periods on that, ... we move from just learning about it to actually doing it.

We might bring in Heggerty, [a popular phonemic-awareness curriculum], for example. I've had students put into pairs, and they practice teaching the lesson, they practice giving responses, they practice charting, and then they practice what skill is this, and where does it fit into this continuum of phonological awareness? They learn to identify those learning gaps that proceed learning at the next level.

If we're learning about comprehension or vocabulary, where it's easy to pull a CKLA lesson and be able to identify: Where is the vocabulary taught? What are these words? How do they fit into the broader context?

They're learning to internalize those things: What are the teacher moves here? What are the teacher shifts? How does that compare to what we've learned in our textbook? Lots of hands-on practice.

Are there any other mindset shifts that have come out of this partnership?

Spears: In the past several years, we had a strong focus on, 'Can I pass the Praxis [licensing exam]?' The goal is making sure they pass the Praxis—period, end of discussion—and it would be up to residency for them to be prepared for being great, responsive teachers.

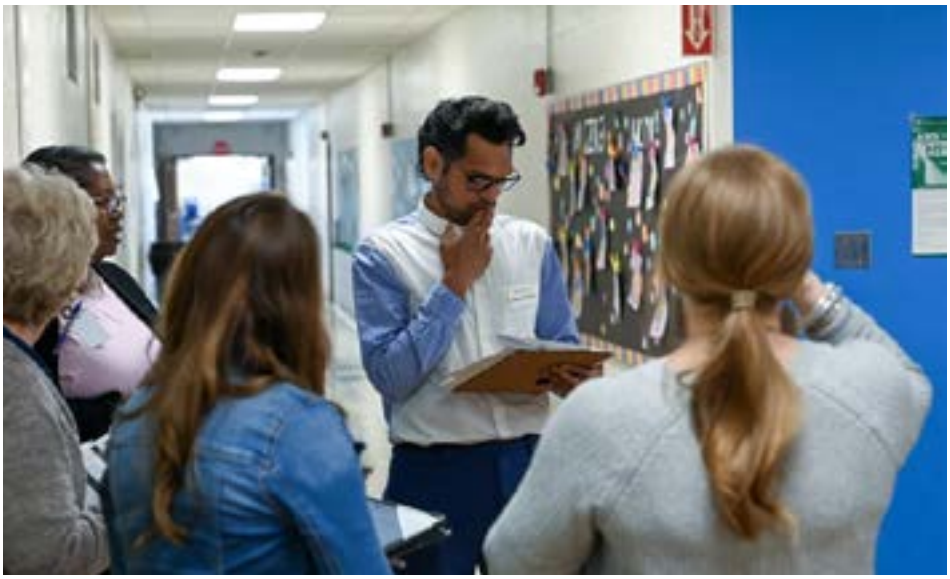
But as a result of this work, that has really not been the primary focus. We've done a lot more case studies. If we're teaching about fluency, for example, we'll pose a little case study at the end: You've got this child, he's doing x, y, and z. What are our next steps? What can we do differently to support him?

I think it's created a sense of humility with our students that they realize, 'Oh, sure, I'll be ready to pass this Praxis, but can I actually teach a young child? What are my moves?' They're realizing the more that they learn, the more that they don't know. I think that's been very challenging in a good way for them.

I know this partnership is still growing. But has it changed the way that teachers are coming into the district yet?

Wood: I was at Lindsey's class last week, and in talking to them about how much they're actually doing in the classroom—many of them are teaching the entire skills lessons and knowledge—it appears to me that there probably is somewhat of a shift. Our teachers are very picky about what they're going to release to a preservice teacher to teach the classroom.

I am encouraged by the change in their course offerings at Tennessee Tech, and definitely on our end of it, we want to make sure that our schools, our classrooms, are providing the experience that our preservice teachers need to be ready, instead of just seeing it as an extra pair of hands or an extra help. This is their chance to practice and experience the curriculum with real kids in real time. ■



Courtesy of Instruction Partners

A member of an Instruction Partners team works with leaders during a learning walkthrough at a school in Brownsville, Tenn. Learning walkthroughs help principals learn how to support their teachers in new methods for teaching reading and provide feedback to them.

Published May 29, 2024

Leading on the 'Science of Reading': Principals Share What They've Learned

By Olina Banerji

Within a year of taking up the principal role at Hobgood Elementary in Murfreesboro, Tenn., Quinena Bell had two major, overlapping challenges to grapple with. The school went into a pandemic-induced lockdown and chose to switch to a new literacy curriculum based heavily on the science of reading.

Hobgood coped the best it could with online classes. But when the school reopened, Bell couldn't ignore the huge drop in literacy scores. They propelled her into urgent action.

"We knew everything we did from then on had to be worth the time we spent on it," Bell said. She buckled down on the new literacy curriculum—a far cry from the loose mixture of instructional strategies applied before—as a means to get students' scores up across the board.

What followed was a multi-year effort to adopt the curriculum across the school. Teachers had to dissect and understand the research on reading, and then steep themselves in the instructional practices needed to apply that research in classroom lessons. Bell had to transform, too—from a former math coach to a principal who knew the curriculum well enough to give teachers granular feedback on its implementation.

> **"I had to be vulnerable ... this isn't how I was taught reading."**
>
> **QUINENA BELL**
> Elementary school principal, Murfreesboro, TN

"I had to be vulnerable ... this isn't how I was taught reading," said Bell, who'd attended Hobgood as a child. "This isn't how I learned how to read."

Bell's position isn't unique. So far, 38 states have passed policies or legislation aiming to overhaul how reading is taught. For those efforts to be successful, principals play a pivotal—and largely unheralded—role.

That role is both granular and grand, according to Emily Freitag, the CEO of Instruction Partners, a national organization that trains principals and other instructional staff to adapt to big curricular shifts.

"Principals need to know a lot about the curriculum, like the sequence in which letter sounds are taught," said Freitag, referring to the foundational technique of phonics, or "sounding out" words to learn them.

But it's equally important for principals to zoom out and have a detailed map of the whole operation in their heads—to direct teachers toward the right training, rework the school schedule to incorporate reading blocks, and keep a close watch on how new curricula and practices are being implemented in the classrooms.

Principals and teachers train together on 'science of reading,' but have distinct roles

There are effectively two phases to principal learning—learning the science itself, and understanding how it's embodied in lessons.

Principals and teachers usually sit through the same district trainings on the content and pedagogy, but principals also need a different space to ask their own questions about how to lead their schools through big changes in instruction, Freitag said.

For some school leaders, like Bell, the training can completely change their perspective about how students learn to read.

"I thought I knew how to teach reading as an academic coach. But there were several practices, like splitting up reading and writing, that don't help kids at all," Bell said.

New training helped Dana Perez, also a first-time principal at Pembroke Elementary School in Danbury, Conn., see how different concepts like decoding, encoding, phonemic awareness, and background knowledge, worked together in the curriculum that her

school district had picked.

"I'd only taught middle school as a teacher, when most kids have already crossed that foundational reading stage. I thought of all these strategies as disparate ones. My biggest learning [from the training] was that reading strategies are a continuum," Perez said.

But for many principals, this training is tested when they guide their teachers in implementing a new curriculum well. Learning it at least partly alongside teachers can help; Perez sits through every feedback session between the district coaches and the teachers, so she can hear the questions teachers have about new materials—and what kinds of feedback teachers may need.

Learning together, said Bell, also meant less confusion and anxiety about what the new curriculum would look like in practice. Together, they shared a clear view of the assessments and outcomes.

"We all had the same instructional guides, which were very clear on the practices we had to implement. There were no 'gotcha' moments ... teachers knew what we expected from them," she said.

Both principals also meet with instructional coaches on their own, to discuss student performance and go over implementation successes, challenges, and trends. These focused sessions, Perez said, give her the confidence to carry on her observations and feedback when the district coaches aren't by her side.

What principals look for in classrooms during the shift to 'science of reading

All that learning doesn't mean that it's always an easy row to hoe. Problems can crop up from the very start.

Chandra Phillips, the principal of Central Elementary School in Seaford, Del., remembers walking into classrooms with timers a decade ago, when her district had just adopted a new literacy curriculum. She was then the assistant principal, and part of the leadership team responsible for helping teachers get up to speed with a new instructional routine.

The timers were essential because the new curriculum hinged on three reading blocks of 45 minutes each, and she had to find the time to fit them into the school schedule and make sure teachers covered them.

Armed with the timers, Phillips would help her teachers tweak their lessons—dial down the discussion over a book, dial up the writing practice—depending on the grade level.

With over 10 years of implementation under her belt, Phillips, now the principal at Central, doesn't have to watch the lesson plans as closely, or pull out her timer for every observation. But newer principals, like Perez, must master the content and rhythm set by their curriculum.

Perez, the Connecticut principal, noticed recently that some teachers were skipping over fundamental routines they needed to establish early in the rollout.

"Students need to know how to transition from read-aloud time to writing to independent study. If they don't learn how to do this early, teachers struggle in the following units," she said.

Even then, problems persist, some of which reflect the scope of the challenge of increasing all students' reading proficiency. It's been hard, Perez acknowledged, to find blocks in the schedule where teachers can pay special attention to students who are struggling to read at grade level, or to input student data onto a centralized platform that helps monitor student progress.

As teachers' 'science of reading' knowledge improves, principals can step back

The first part of implementation can be the rockiest. Right now, Perez visits classrooms every four weeks and tracks her teachers' progress from one unit to the next.

With time, though, principals can take a more relaxed approach, and shift their role from administrators to facilitators of continued learning. A decade later, Phillips' literacy teachers are deeply familiar with their content, so most of her feedback is about maximizing student engagement—mixing up how teachers host student discussions or going a bit deeper into some of the curriculum's themes and topics. Recently, she said, a teacher brought in a baseball for students who had never seen or watched a game and were having a hard time connecting to a lesson on that theme.

In her journey as an instructional leader, Bell falls halfway between Phillips and Perez. There are some battles she's largely won, like dealing with the initial resistance to the curriculum.

"I had to put my foot down. Just because they had done things a certain way before the new curriculum wasn't a good enough reason to resist change," said Bell. She leaned on the early adopters, who were quick to extoll the benefits of the curriculum to the more resistant teachers. Student outcomes improved, too, which bolstered Bell's case.

Freitag believes the resistance is a form of feedback for principals, which eases up as the initial shock of the change passes. "Teachers aren't usually closed to the whole change, but they may find the pacing is off, or a particular text isn't to their liking," she noted.

Like Phillips, Bellhas learned to be more of a guide than an enforcer. "I make sure my teachers know that my learning walks aren't an evaluation," she said.

Bell encourages "vertical planning" sessions between different grades, which helps a kindergarten teacher connect what they're teaching to how a student might use their knowledge in 2nd grade. Bell is now trying to get more teachers trained in learning walks to grow a new generation of instructional leaders within the school.

Perez's school is tacking a version of that, too, as it plans to extend the new curriculum from 3rd grade to 4th and 5th grades. In preparation, Perez has given the grade-level teachers access to all the planning and coaching documents, and the materials they're going to be teaching.

As for her own capacity to handle two extra grades, Perez has a clear view of how she's going to navigate this challenge.

"It's not possible to know everything ... and be specialized in [areas like] ESL," she said. "What matters is how I collaborate with those leaders in the district who are experts in their own areas and get them to support me and my teachers."

And the process is continuous, reminds Freitag. There's always something that needs to be fixed, or a new benchmark to be met.

"The work is never done," she said. "And the work is human and emotional." ■

The Missing Thread in Science of Reading Success

By Barbara Pape, Senior Director of Digital Promise's Learner Variability Project
She earned an M.Ed. from Harvard in reading and literacy and launched her career as a Pittsburgh middle school teacher.

Nationwide, the "Science of Reading" is widely recognized as the best approach to ensure students develop strong literacy skills, especially for children with learning differences. Unfortunately, teachers historically have not been provided with professional development that allows them to understand and teach the research-based strategies that constitute the Science of Reading.

Thanks to new mandates and initiatives, teachers will receive hundreds of hours of front-loaded professional learning to increase their knowledge of these practices. And while these mandates provide foundational knowledge, they often lack the follow-up practice, feedback, and additional learning necessary to translate into sustained classroom practices.

The allure of this approach is understandable: provide teachers with the training and give them autonomy to apply it in their classrooms. Research, though, has shown that successful implementation of systemic change, like the Science of Reading, is not achieved with a one-and-done professional learning session.

Instead, according to Dr. Linda Darling-Hammond and others (2017) systemic change requires professional development that is ongoing, collaborative, and job-embedded. Likewise, Joyce and Showers (2002) emphasized that for professional learning to lead to behavior change, it must include multiple opportunities for practice and coaching over time.

Why teacher support can't stop at initial training

The process of transforming knowledge into effective classroom practice is complex, iterative, and informed by context. Teachers face cognitive and emotional challenges in implementing multiple new strategies effectively. In addition, they are pressed for time.

> **"Sustained support ensures that educators have the tools, guidance, and resources to continually refine their teaching practices and achieve meaningful change."**

Under these stressors, it can be easy to fall back into old habits, such as relying on whole-language techniques or prioritizing less effective rote memorization methods, and drift from the foundational Science of Reading training they may have received. Sustained support ensures that educators have the tools, guidance, and resources to continually refine their teaching practices and achieve meaningful change.

Here are a few reasons why ongoing support is essential:

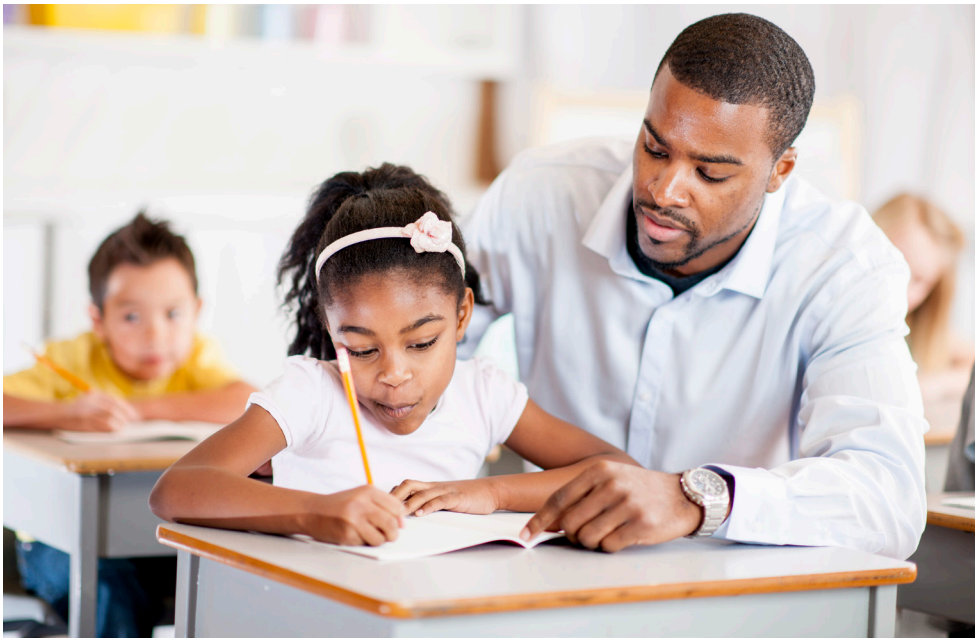
1. Bridging the knowledge- to- practice gap. While initial training provides foundational knowledge, effectively applying that knowledge in real classroom settings and changing contexts often requires additional time and practice. Teachers need opportunities to integrate what they've learned into their daily routines, experiment with new strategies, and receive feedback to adjust their approaches.

2. Understanding and addressing learner variability. Learner variability is the "recognition that all students differ, and learning sciences research shows that these differences matter for learning" (Pape, 2018). Classrooms are made up of students with varying levels of ability, language proficiency, and learning differences. Teachers must adapt the Science of Reading principles to suit these diverse profiles.

3. Unforeseen challenges. Limited resources, time constraints, and resistance to change are a constant in education systems. An ongoing support system can help address these challenges as they come up.

4. Avoid drift; Maintain rigor. Without consistent reinforcement, teachers may revert to familiar but less research-anchored methods, undermining the benefits of the Science of Reading. Regular coaching and observation also ensure that evidence- based practices are implemented correctly and consistently across classrooms.

5. Building teacher confidence. Mastering new teaching techniques takes time, and teachers often need multiple cycles of practice, feedback, and reflection to feel confident in their abilities.



6. Measuring and responding to student progress. Teachers need ongoing training to interpret student assessment data, adjust instruction, and implement targeted interventions. They also need opportunities to evaluate the impact of these interventions and refine them for struggling readers or students with specific learning disabilities.

To sustain long-lasting instructional improvements that are centered on the Science of Reading, teachers need frequent, targeted feedback to gradually update their skill set. They need support to help them understand and address student learner variability across a whole child spectrum, including domain-specific content, cognitive factors, social and emotional abilities, and backgrounds.

However, schools are under their own stressors. Budget constraints, such as insufficient funding for new materials or professional development, staffing shortages that increase workloads for remaining educators, and competing priorities like meeting standardized testing requirements, often limit a school's ability to provide such robust support for teachers.

The challenges schools face in implementing the Science of Reading provide an opportunity for research-based edtech and AI-powered tools to step in and assist schools and teachers effectively.

Leveraging new technology to scale up and sustain support for the Science of Reading

Providing high-touch, high-quality support for all teachers is a daunting task. New technologies, however, can scale research-based interventions for teacher learning. These tools enable teachers to deliver consistent, research-based instruction to students, including those with learning differences.

A tech-enabled approach offers several significant benefits. It provides self-paced and individualized learning opportunities, allowing teachers to learn at their own speed and revisit key concepts as needed. Interactive and practice-oriented tools engage teachers in the learning process, making it easier to translate theory into practice. And, on-demand opportunities to revisit and refine specific skills ensure that teachers can continuously improve and adapt their instructional techniques.

> **"These tools enable teachers to deliver consistent, research-based instruction to students, including those with learning differences."**

Technology also offers tailored support that considers learner variability, addressing the diverse needs of classrooms with different student profiles. These tools help maintain fidelity of support over time, ensuring that teachers receive consistent, high-quality guidance throughout their professional development journey.

Digital Promise's Learner Variability Project offers an open education resource (OER) web app called the Learner Variability Navigator (LVN). This app curates research on the Science of Reading, as well as math and 21st-century skills, for grades Pre-K to 12. This resource makes our research accessible to all educators.

Our recent partnership with Edthena harnesses the power of AI to not only provide the information needed to teach the Science of Reading but to do so on an ongoing basis. Edthena utilizes LVN research and resources to support their Science of Reading pathway within their AI Coach platform.

AI Coach is an innovative, adaptive solution that supports teachers through an on-demand coaching process. Using the secure platform, teachers analyze a video of their classroom and set short-term goals through a self-paced module designed to replicate the instructional coaching process.

Within the Science of Reading pathway that leverages LVN content, teachers now have access to comprehensive, content-specific supports including topics like phonological awareness, sentence structure, and verbal reasoning—to help them analyze their teaching practices and develop skilled readers.

The AI Coach platform makes it easy for any teacher to access the hundreds of teacher-facing strategy recommendations that are part of LVN and backed by published academic studies documenting the predictiveness of student outcomes. This ensures that, when teachers are building their action plan, they're selecting strategies that are aligned with the goals and needs of their classroom and their students. The evidence-based AI Coach process also supports school leaders and instructional coaches by providing a scaffolded learning experience, which includes step-by-step guidance, personalized feedback loops, and incremental challenges designed to build teachers' skills and confidence progressively throughout the year.

Teachers work with the virtual coach in a private space, at times that fit the changing demands of their school day, with the flexibility to pause and resume their coaching cycle as needed. This ensures teachers receive timely support when they need it most.

At the end of the coaching cycle, teachers download a reflection log which serves as the artifact of their learning that will act as a thread connecting their insights and learning from the AI Coach process to their in-person collaboration with coaches, colleagues, and administrators.

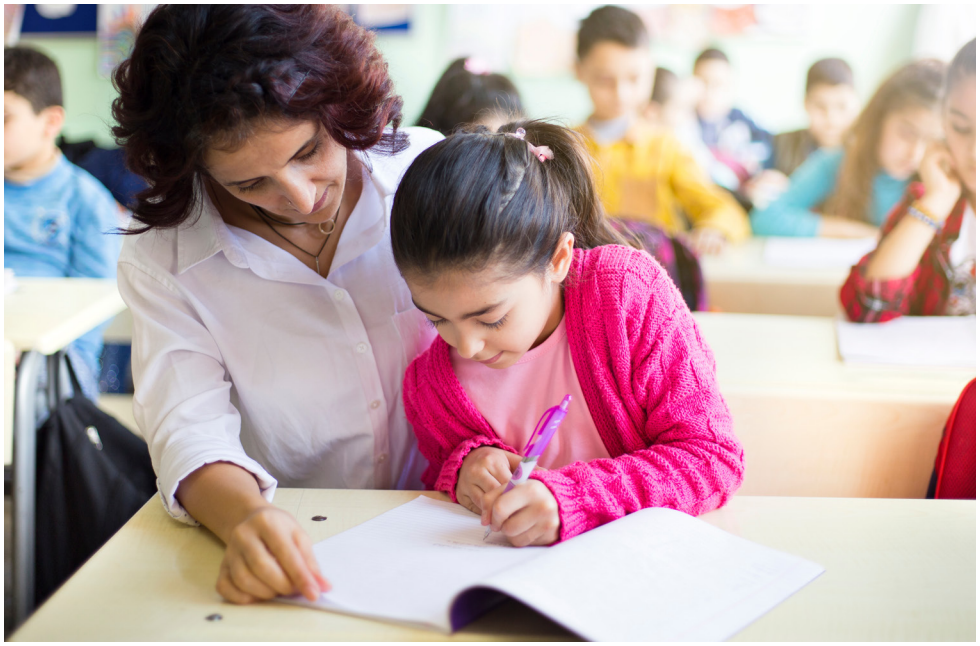
Steps to get started with sustainable change

Science of Reading training is often a large investment for many schools. Sustained professional support is critical to maximizing the returns on teacher training investments. Here are a few ideas to help you get started with your sustainable PD plan:

1. Don't delay. Schools face countless urgent priorities, but ensuring students can read is essential for their educational and lifelong success. The time to work on sustaining changes is now while the in-depth training is still fresh. By planning early and methodically, you can create the foundation for sustained improvements that benefit both teachers and students.

2. Pick a focus. You can't observe all key elements at once, and teachers can't practice all key pedagogical moves simultaneously with fidelity. Start by selecting a few key strategies to implement and observe gradually. This targeted, sustainable approach ensures meaningful, lasting change in your classrooms.

3. Choose supports that will sustain over time. Look for evidence-based solutions that are easy to implement and don't require additional in-service or training days. Consider tools like AI Coach, which don't require hiring extra staff to facilitate training at scale and can complement your existing in-person training and support model. The goal is to provide ongoing, just-in-time support to teachers without adding extra burdens for coaches or administrators.



4. Plan to measure changes. Focus on big-picture metrics over time, such as student growth markers, but also make a plan to document the increased frequency of key strategies in instructional observations and other formative measures. Measurement is key to tracking progress in real and meaningful ways.

By planning methodically and choosing efficient, supportive interventions, you can improve literacy outcomes and build a foundation for your students' future success.

Sustained support helps teachers move from theory to practice, providing the scaffolding they need to refine their skills, navigate challenges, and teach in alignment with the Science of Reading. This ongoing investment in teachers enables them to ensure every student receives the high-quality literacy instruction they deserve. ■

To learn more about our partnership with Edthena, visit
edthena.com/scienceofreading

References

Darling-Hammond, L. (2017). Effective teacher professional development. Learning Policy Institute.

Joyce, B. R., & Showers, B. (2002). Student achievement through staff development (Vol. 3). Alexandria, VA: Association for Supervision and Curriculum Development.

Pape, B. (2018). Learner variability is the rule, not the exception. Digital Promise Global.

Published May 6, 2024

The Key Parts of a 'Science of Reading' Transformation, According to One State Chief

Carey Wright discusses what a state can do to improve reading at scale

By Libby Stanford

Arlington , Va. -

The first step to boosting reading scores statewide is believing that students can and will make great strides if educators are committed to seeing it happen.

That was a key message from Carey Wright, who oversaw Mississippi's education department during what many have called the "Mississippi Miracle"—a period of historic reading gains for the state that traditionally ranked among the lowest in the nation—in an on-stage interview at Education Week's Leadership Symposium in Arlington, Va., on May 3.

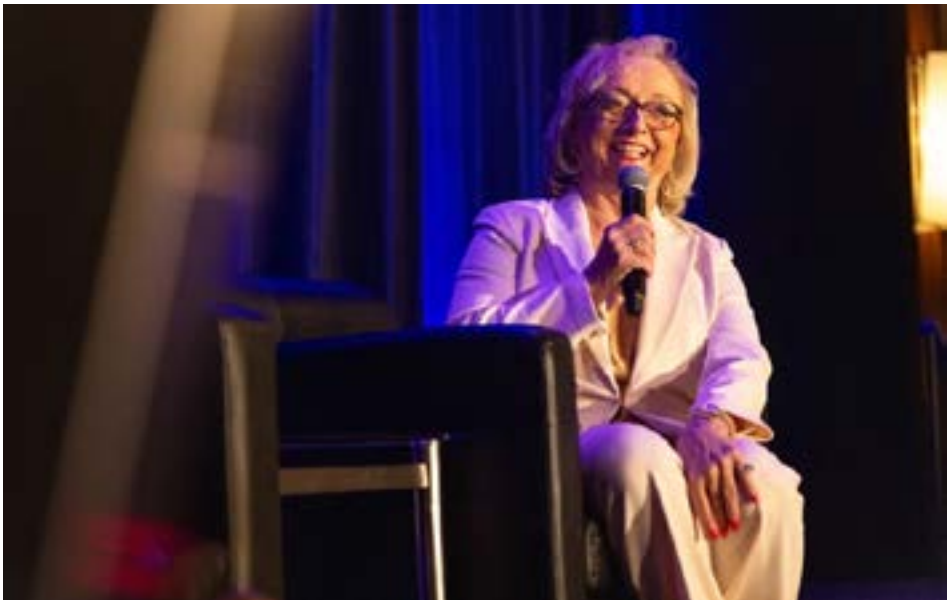
Wright is now the state superintendent in Maryland, where she's been serving as interim chief since October before her full term begins July 1. She led the education department in Mississippi from 2013 through 2022, a span during which the state went from 2nd worst in 4th grade reading on the National Assessment of Educational Progress to 21st.

In addition to a belief in high expectations for students, Wright made the case for strong state leadership—a state department that's focused on more than getting districts to comply with data reporting and funding deadlines—to guide such a transformation.

"You cannot do this work without a strong state department that believes in leaning in, believes in student achievement, and believes in doing everything possible for the state," Wright said during the interview with Education Week's Stephen Sawchuck.

In 2022, 64 percent of Mississippi 4th graders performed at or above basic on the NAEP reading exam, slightly exceeding the national percentage of 61 percent. The Magnolia State achieved that score despite having the lowest median household income in the nation and some of the lowest per-pupil spending in K-12—and despite its history about a decade before of scoring among the lowest.

According to Wright, a key component of Mississippi's turnaround was a commitment to the "science of reading," which refers to evidence-based reading instruction that centers on five core, research-backed components: phonemic awareness (identifying sounds and blending them into words), phonics, fluency, vocabulary, and comprehension.



Sam Mallon/Education Week

Carey Wright, the state superintendent for Maryland, discusses improving literacy instruction and achievement during Education Week's Leadership Symposium in Arlington, Va.

The state's strategy was enshrined in law with the 2013 Literacy-Based Promotion Act, which requires all students to learn to read through a "science of reading" approach. The law required schools to hold back 3rd grade students if they scored in the lowest achievement level in reading and assigned—and paid for—coaches to lead intervention programs at low-performing schools. In 2016, an amendment introduced a requirement that students with reading deficiencies have individual reading plans outlining goals for growth, the additional instruction and interventions they'll receive, strategies their parents will be encouraged to use, and more.

Mississippi's reading law inspired a wave of laws and policies in other states to move their classrooms to an evidence-based approach to reading instruction. Thirty-eight states have passed laws or implemented new policies related to evidence-based reading instruction since 2013, according to Education Week's "science of reading" tracker. Many replicate Mississippi's law or elements of it.

Now in Maryland, Wright and her team are looking to make the science of reading the standard throughout the state.

In January, the state's board of education passed a resolution calling for all schools to implement evidence-based reading instruction starting next school year. The state will include a specific evaluation of reading instruction in its renewal for educator licensure programs.

While students' reading scores have been rising on state standardized tests, Maryland has struggled to keep up on a national scale. In 2022, 56 percent of Maryland's 4th graders scored at or above basic reading levels on the NAEP exam, below the national percentage and a drop from 2019, when 64 percent of 4th graders scored at or above basic in reading.

There's more to raising student reading

scores than passing a resolution, Wright said. It also requires a commitment from the state department down to the teachers to do everything in their power to help students succeed.

The Mississippi turnaround "was proof positive that, yes, children in poverty can learn and can succeed," Wright said. "As educators, our job is to do whatever it takes."

Starting with foundational skills

Wright began the statewide reading transition in Mississippi by focusing on foundational skills. That meant providing professional development to train teachers on the core components of the "science of reading" before ever asking them to teach it.

The goal, she said, was to avoid a "hodgepodge approach" and ensure that teachers felt supported and well-equipped to adopt evidence-based strategies from day one. Once those foundational skills were in place, the state superintendent said, the next step was to determine how the strategy should work in classrooms.

That's what she's doing in Maryland right now. Wright and her team are meeting with superintendents, curriculum directors, principals, and teachers to see what they need to effectively line up their instruction with the "science of reading" tenets.

"It's really drilling down further into the classroom," Wright said. "How do we help classroom teachers implement those lessons? How do we better help them diagnose concerns they have initially? And what are the practical applications of this in a literacy classroom? How much time do they spend on literacy?"

All of those questions are part of ensuring that teachers are using the key components of the science of reading across the state, Wright said.

In Mississippi, the state also invited college and university professors who teach literacy instruction in teacher preparation programs to attend professional development on the "science of reading."

That will also be a part of Maryland's transition, Wright said.

The higher education professors "can actually see and feel what it was like, what we were expecting our teachers to know and be able to do on day one," Wright said.

Teacher preparation programs nationally have been slow to shift to a science-of-reading approach. In Mississippi, teaching candidates have been required to pass a test in reading science, and a governor's task force at one point suggested that education preparation program faculty also pass a test in the science of reading.

Combatting low expectations

The main challenge Wright identified in the work to transform reading was low expectations.

She found that educators in Mississippi were doubtful they could actually turn around student achievement.

"There really was just a cultural environment of low expectations for children," Wright said. "My message was, no, all students are capable of learning and achieving, and we're going to do everything we can to prepare our teachers and our leaders and our parents with what they need in order to make that happen."

Part of making sure that message was clear in Mississippi was setting high expectations through state standards and ensuring that the state's assessments aligned with those standards, Wright said.

The education agencies in Mississippi and Maryland allow schools to choose their curricula, but Wright has been adamant that whatever curriculum a school chooses and the accompanying instructional materials should be aligned to state standards.

Wright and her team in Mississippi also hired coaches that helped schools with literacy, math, early childhood improvement, data analysis, and digital learning across the state. Those coaches were trained to have high expectations, she said.

"Our standards were very rigorous, our assessment was very rigorous, and our accountability system ... was also very rigorous in keeping folks accountable for student progress," Wright said.

While the state agency in Mississippi was setting high standards and expectations, Wright said she was setting high expectations for the agency. She worked to change the mindset among her staff from a focus on compliance with state policies and initiatives to providing districts with support to achieve state goals.

She has those same expectations for the department in Maryland.

"We are here to serve our teachers, our leaders, our families, and our communities," Wright said. "We are not a compliance-driven organization. There's room for compliance—I get it, but that's not what we're here for. We're here to serve the people." ■

More Like This

3 Things Principals Can Do to Make Teacher PD Better

'Science of Reading' Learning Walks: 4 Things For Principals to Look For

4 Things to Know About The Literacy Lawsuit Targeting Lucy Calkins and Fountas & Pinnell

iStock/Getty

OPINION

Published October 1, 2023

Reading Research Is Getting Lost In Translation. What You Need to Know

By Larry Ferlazzo

'Not New'

Douglas Fisher and Nancy Frey are professors of educational leadership at San Diego State University and teacher leaders at Health Sciences High:

The reading wars are not new. Our profession has debated the best ways to teach children to read for many decades. In part, this is because it's hard work. In fact, Moats (2020) says "Teaching reading is rocket science." In part, the reading wars are a recognition that there is a gap between the state of knowledge and current practice. In every professional field, there is the need for translational research, or as it is known in medicine, from bench to bedside.

Of course, knowledge about effective reading instruction has existed for decades, but the implementation of that body of evidence has been uneven. The current reading wars focus on phonics instruction, as have previous reading wars. In too many classrooms, there is a salt-and-pepper approach to phonics: a little here and a little there. The evidence clearly indicates that most children need a systematic and explicit approach to learn grapheme-phoneme correspondences.

But the current reading wars extend beyond phonics. There is wider recognition that word recognition and language comprehension each need attention. In terms of word recognition, when it comes to alphabetics, the outdated approach of "letter of the week" needs to be replaced (*Ruetzel*, 1992). There is even evidence about the order in which letters should be taught (e.g., *Jones et al.*, 2013), yet some instructional materials are outdated.

And we know much more about learning words by sight, including the process of orthographic mapping. As Kilpatrick explained, "Orthographic mapping proposes that we use the pronunciations of words that are already stored in long-term memory as the anchoring points for the orthographic sequences (letters) used to represent those pronunciations." This has implications for the classroom in terms of ensuring students understand how to pronounce words and have multiple opportunities to practice reading those words. Rather than conflating sight words with high-frequency words, we now know that when they grow up, all words want to be sight words.

We also know a lot about reading fluency. Research in this area has outpaced implementation. When oral-reading fluency assessments were introduced, students were timed while reading and told to read faster so that they could obtain 90 percent on fluency norms. That's not best practice according to Jan Hasbrouck, co-author of the fluency norms, who notes that there are many influences in reading fluently, each of which needs to be taught.

It's not likely that the reading wars will end any time soon. It's important to recognize that teaching reading is complex and cannot be left to chance. Students need instruction in all aspects of word recognition and language comprehension in a systematic and intentional way. And they deserve to have teachers to continually update their knowledge base about effective instruction and actually work to implement that knowledge.

Jones, C. D., Clark, S. K., & Reutzel, D. R. (2013). Enhancing alphabet knowledge instruction: Research implications and practical strategies for early childhood educators. *Early Childhood Education Journal, 41(2), 81–89.*

Reutzel, D. R. (1992). Breaking the letter-a-week tradition. *Childhood Education, 69(1), 20.*

'What Are YOUR Students' Needs?'

Mary Beth Nicklaus is a secondary-level literacy specialist and English teacher in Minnesota:

The term "reading wars" raises blood pressure and anxiety levels. It turns the media, education professionals, and stakeholders into frantic soldiers ... shooting anecdotes and POVs across enemy lines ... firing "research and interpretations of research" missiles out into the Twittersphere with the hope of maiming and destroying those who do not agree.

Battlefield aside, when considering these discussions and possible district and state ideas on what is best for our students, here are two areas for teachers to consider:

One size does not fit all.

What is your experience regarding your location, student demographic, and the chemistry of your classes? What are YOUR students' needs?

As a secondary-level literacy specialist and ELA teacher, I normally do not teach beginning readers. Students come to me from elementary school with different reading experiences. Some readers are just rusty and need physical space and encouragement to read. Other students may need some decoding work. Some may need to brush up on their skills and be challenged at the same time. We need the freedom to treat our students as individuals with unique needs. A reading professional will make sure all students' needs are met in their ability to decode, comprehend, think about, and apply reading in whatever way this needs to happen.

The importance of "reading identity."

Scoggin and Schneewind define reading identity as being "comprised of five aspects: attitude, self-efficacy, habits, reading choice and process." How are you able to foster students' agency in their literacy? How do you assess their needs? How do you work with those needs? What does the research say is best practice for your situation?

For example, professionals will often initially mistake a lack of reading experience in older students with a need for intensive phonics work. But is phonics the problem? Oftentimes, the teen has the decoding knowledge but hasn't practiced reading in a long time. Why hasn't the student been reading? Why doesn't the student like reading? What aspect(s) of reading identity is the student missing? Needlessly drilling phonics in this case will ultimately kill a teacher's last chance to create an invested reader.

Assess where a student is in their reading identity. A good way to do this assessment is by conferring regularly with students within the context of their independent reading. This practice will guide the process to a reader's true needs. Conferring in this environment may involve working with decoding skills, keeping records, or just cheering students on in their journey. Teachers can also use this opportunity to share themselves as readers with the student. Developing and growing the reader's identity creates a reason to read and a firm foundation for future growth.

Teachers need to retain the freedom to decide best practice based on the individual needs of their readers. They may need to communicate those needs to administrators and back up their observations with action-research data. Preserving a teacher's prerogative to differentiate instruction and nurture growth will develop the strongest, most curious readers—a first step in creating literate students. ■

Larry Ferlazzo is an English and social studies teacher at Luther Burbank High School in Sacramento, Calif.

Published by Editorial Projects in Education, Inc.
6935 Arlington Road, Suite 100
Bethesda, MD, 20814
Phone: (301) 280-3100
www.edweek.org