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READING & LITERACY FROM OUR RESEARCH CENTER

The Most Popular Reading Programs Aren't Backed by Science

By Sarah Schwartz — December 03, 2019 15 min read

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There's a settled body of research on how best to teach early reading. But when it comes to the multitude of curriculum choices that schools have, it's often hard to parse whether well-marketed programs abide by the evidence.

And making matters more complicated, there's no good way to peek into every elementary reading classroom to see what materials teachers are using.

"It's kind of an understudied issue," said Mark Seidenberg, a cognitive scientist at the University of Wisconsin-Madison and the author of *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It*. "[These programs] are put out by large publishers that aren't very forthcoming. It's very hard for researchers to get a hold of very basic data about how widely they're used."

Now, some data are available. In a nationally representative survey, the Education Week Research Center asked K-2 and special education teachers what curricula, programs, and textbooks they had used for early reading instruction in their classrooms.

The top five include three sets of core instructional materials, meant to be used in whole-class settings: The Units of Study for Teaching Reading, developed by the Teachers College Reading and Writing Project, and Journeys and Into Reading, both by Houghton Mifflin Harcourt. There are also two early interventions, which target specific skills certain students need more practice on: Fountas & Pinnell's Leveled Literacy Intervention and Reading Recovery.

An Education Week analysis of the materials found many instances in which these programs diverge from evidence-based practices for teaching reading or supporting struggling students.

At this point, it's widely accepted that reading programs for young kids need to include phonics—and every one of these five programs teaches about sound-letter correspondences. What varies, though, is the nature of this instruction. In some cases, students master a progression of letter-sound relationships in a set-out sequence. In others, phonics instruction is less systematic, raising the possibility that students might not learn or be assessed on certain skills.

Phonics is "buried" in many commercial reading programs, Seidenberg said. Teachers might be able to use what's there to construct a coherent sequence, he said, or they might not.

And frequently, these programs are teaching students to approach words in ways that could undermine the phonics instruction they are receiving.

Several of these interventions and curricula operate under the understanding that students use multiple sources of information, or "cues," to solve words. Those can include the letters on the page, the context in which the word appears, pictures, or the grammatical structure of the sentence.

Observational studies show that poor readers do use different sources of information to predict what words might say. But studies also suggest that skilled readers don't read this way. Neuroscience research has shown that skilled readers process all of the letters in words when they read them, and that they read connected text very quickly.

Even so, many early reading programs are designed to teach students to make better guesses, under the assumption that it will make children better readers. The problem is that it trains kids to believe that they don't always need to look at all of the letters that make up words in order to read them.

Still, teachers may not know that cueing strategies aren't in line with the scientific evidence base around teaching reading, said Heidi Beverine-Curry, the co-founder of The Reading League, an organization that promotes science-based reading instruction.

Classroom teachers also aren't usually the people making decisions about what curriculum to use. In Education Week's survey, 65 percent of teachers said that their district selected their primary reading programs and materials, while 27 percent said that the decision was up to their school.

Even when teachers want to question their school or district's approach, they may feel pressured to stay silent. Education Week spoke with three teachers from different districts who requested that their names not be used in this story, for fear of repercussions from their school systems.

Cueing Strategies Persist

Reading Recovery, the 1st grade intervention used by about 20 percent of teachers surveyed, was developed in the 1970s by New Zealand researcher Marie Clay. Thirty-minute lessons are delivered one-on-one, and generally follow a similar structure day to day. The idea is to catch students early before they need more intensive intervention, said Jeff Williams, a Reading Recovery Teacher-Leader in the Solon school district in Ohio.

Students read books they've read several times before, and then read a book that they've only read once, the day before, while the teacher takes a "running record." Here, the teacher marks the words that the student reads incorrectly and notes which cue the child apparently used to produce the wrong word.

For example, if a child reads the word "pot" instead of "bucket," a teacher could indicate that the student was using meaning cues to figure out the word.

During the rest of the lesson, students practice letter-sound relationships, write a short story, and assemble words in a cut-up story. At the end, they read a new book.

The program also requires intensive teacher training, which is administered through partner colleges.

Fountas & Pinnell's Leveled Literacy Intervention follows a similar lesson structure, but it's delivered in a small group format rather than one-on-one.

In both programs, text is leveled according to perceived difficulty. Teachers are told to match students to books at a just-right level, with the idea that this will challenge but not overwhelm them.

In this sample lesson from Fountas & Pinnell's Leveled Literacy Intervention program, students are taught to use multiple sources of meaning while they read. One of the goals of this lesson is for students to "look carefully at words and use letter/sound information to solve them." But in the same lesson, teachers are also introducing strategies that ask students to take their eyes off of the words—like in this example, which asks students to use meaning cues. This lesson is at level A, the first level in LLI, often used with kindergarten students.

Students in the lowest levels read predictable text: books in which the sentence structure is similar from page to page, and pictures present literal interpretations of what the text says. One LLI book, for example, follows a girl as she gets dressed to go sledding in winter. "Look at my pants," the first page reads, facing an image of the girl holding up a pair of pants. "Look at my jacket," is on the next page, with a photo of the girl pointing to a jacket.

Irene Fountas and Gay Su Pinnell, the founders of LLI, declined an interview for this story through their publisher, Heinemann. The company also declined to comment.

The main point of disagreement concerns these predictable texts and the teaching methods that align to them. For Williams, the Reading Recovery teacher leader in Ohio, predictable text can be a useful orienting tool when children are still learning how print works. The repetitive sentence structure demonstrates that words have consistent meaning, and the frequent pictures provide a context to link to the words, he said.

He gave the word "hippopotamus" as an example. By pointing out that "hippopotamus" starts with the letter "h," and linking that word to a relevant picture and story context, the student can connect the word and the meaning of the word.

"When it's in isolation and we just say arbitrarily, 'This shape makes this sound,' that's a little abstract for little kids," Williams said.

But other experts say using predictable text this way teaches young children the wrong understanding of how the English language works.

"You build this foundation of, English is a language that I have to memorize," said Tiffany Peltier, a doctoral student at Oklahoma University, who studies reading instruction.

But kids don't memorize words to learn them. Instead, they decode the letter-sound correspondences. After several exposures, the word becomes recognizable on sight, through a process called orthographic mapping.

Of course, a picture of a hippopotamus can convey useful information. It could help a child understand what the animal looks like, or what it might do in the wild. But a picture of a hippo won't help the child read the word.

In predictable texts, students don't have to recognize the individual sounds in the word, said Peltier, even though learning how to do that is highly correlated with reading ability. So do Reading Recovery and LLI attend to the sounds in words at all?

Both have daily sections for letter and word work. Reading Recovery tests students on 50 phonemes when they enter the program, and teachers target the ones that students don't know, said Williams.

But basing instruction around individual student errors—rather than progressing through a systematic structure—can leave some gaps, said Kristen Koeller, the educator outreach manager at Decoding Dyslexia California, who used to be a Reading Recovery teacher.

For example, she said, she might have a student who didn't know the /ow/ sound, like in the words "how" or "wow." Koeller would work with the student on that sound, but she wasn't expected to explain the difference between when "ow" makes the /ow/ sound, like in "how," and when "ow" makes and /o/ sound, like in "show."

Phonics does happen in Reading Recovery lessons, she said. "But it is not systematic, it is not multisensory, and it depends largely on the teacher's knowledge base and the book that is selected."

LLI does include a scope and sequence for phonemic awareness and phonics instruction. But students enter the program at different points, and it's possible that they might need more practice with skills that are deemed below their level—or that they will exit the intervention before they reach all of the sound-letter correspondences that they don't know.

The company, Fountas & Pinnell Literacy, identifies two main studies that it claims validate the program's effectiveness in grades K-2. Both are from the Center for Research in Educational Policy at the University of Memphis, and both were funded by Heinemann, which publishes LLI.

The 2010 paper, which the company calls its "gold standard" study, found that kindergarten, 1st, and 2nd graders who received LLI made greater gains than students who received no intervention. But these gains were only consistent on Fountas & Pinnell's own assessment, rather than an external validator of reading achievement. Results on DIBELS, a separate early literacy test, were mixed. Kindergartners and 1st graders in the treatment group did better than the control group on some subtests, but 2nd graders saw no difference.

Reading Recovery, by contrast, has a much stronger evidence base for effectiveness. Most notably, an independent evaluation of the federal grant expanding the program found that students who received the intervention did better on assessments of overall reading, reading comprehension, and decoding compared to similar students who received their schools' traditional literacy interventions. But even that study has invited controversy.

Psychologists James W. Chapman and William E. Tunmer published a critique of the evaluation, arguing that many of the lowest-achieving students were excluded from the program, potentially inflating success rates.

The executive director of the Reading Recovery Council of North America did not respond to requests for comment.

Three core instructional programs also made the top five most popular list among teachers, according to the Education Week survey: The Units of Study for Teaching Reading, by Heinemann, and Journeys and Into Reading, both by Houghton Mifflin Harcourt.

Units of Study for Teaching Reading was developed by Lucy Calkins, a researcher and the founding director of the Teachers College Reading and Writing Project.

The program follows a "reader's workshop" model. Teachers give a short "mini-lesson" at the beginning of class, and then students spend the majority of time practicing that skill independently as the teacher monitors them and works with small groups.

"We think about what is it that a good reader does. What is the life that a good reader leads?" Calkins says in a video describing reading workshop on the Units of Study website. "So above all, that means putting reading front and center."

Calkins declined an interview for this story through her publisher, Heinemann. The company also declined to comment on the program itself.

Units of Study instills these reading habits in children, and teaches them that reading is something to value, said Susan Chambre, an assistant professor of education at Marist College in Poughkeepsie, N.Y. It also introduces a variety of genres and gives students choice in what they read. "The fact that we are immersing kids in literature—that is important," Chambre said.

But Chambre struggled with Units of Study when she used it as a kindergarten teacher in an inclusion classroom. The program assumed a lot of knowledge—of oral language, of phonics—that students just didn't have. Chambre would watch children mumble through sentences, making up words by looking at the pictures.

"For those kids who come in [to school] and can learn foundational skills easily, and have a fair amount of general knowledge and a fair amount of vocabulary, they would come out okay," Meredith Liben, the senior fellow for strategic initiatives at Student Achievement Partners, said of the Units of Study for Teaching Reading.

This strategies chart for figuring out tricky words is from a 1st grade sample lesson in the Units of Study for Teaching Reading. Some strategies encourage students to decode: Instructions like, "Look at ALL the parts of the word," ask students to pay attention to specific letter/sound correspondences. Other strategies, like, "Think what kind of word would fit," ask students to guess at words based on context.

But a lot of students don't come into school with that knowledge, and the program isn't explicit enough to fill in the gaps, Chambre said. Starting in kindergarten, students are taught reading "super powers" that encourage them to "search for meaning, use picture clues, and use the sound of the first letter of a word to help them read," according to kindergarten sample lessons downloaded from the Heinemann website. One sample lesson encourages teachers to say things like "Check the picture," "Try something," or "Does that look right?" when students struggle, which prompts students to take their eyes off of the letters in a word.

In a public statement responding to science-based critiques of her program, Calkins wrote that asking students to guess or "try it" when they come to hard words teaches reading stamina. She also argued that there is value in predictable texts for young children, who are "approximating reading" when they rely on syntax and picture clues.

Though billed as a core reading program, the Units of Study in Reading doesn't teach phonemic awareness or phonics systematically or explicitly. "At best it's a suggestion, and there's a lot of

focus on the three-cueing system," Liben said.

The Teachers College Reading and Writing Project recently released a separate phonics program, the Units of Study in Phonics. In her recent statement, Calkins emphasized the importance of a systematic phonics program, and said it would be a "wise move" for teachers to include more decodable texts in lessons with emerging readers. Still, marketing materials for the units imply that the company believes phonics should not play a central role in the classroom.

"Phonics instruction needs to be lean and efficient," the materials read. "Every minute you spend teaching phonics (or preparing phonics materials to use in your lessons) is less time spent teaching other things."

Menu of Choices

The other two core instructional programs, Houghton Mifflin Harcourt's Journeys and Into Reading, differ in some significant ways from the rest of this list. Into Reading is the company's newer product—this is its first academic year in schools. According to HMH, more than 6.7 million students use Journeys in school.

Both programs include an explicit, systematic program in phonemic awareness and phonics. In an emailed statement to Education Week, a representative for HMH wrote that the company suggests teachers follow this sequence, as phonics skills build cumulatively. Decodable texts are available for purchase.

This section of a scope and sequence chart from Houghton Mifflin Harcourt's Journeys reading program lists the skills to teach during kindergarten lessons. The company says that teachers can choose from a variety of materials and have the flexibility to make different instructional decisions.

Because these programs are meant to be comprehensive, they include lessons and resources for teaching other foundational skills—like writing letters, spelling, and fluency—as well as explicit vocabulary instruction, anchor texts and student texts, writing instruction, and comprehension instruction.

Seidenberg, who has reviewed the Journeys materials but not Into Reading, said that the amount of materials, lessons, and instructional choices in the program was overwhelming. "It looks like the publisher's response to all the debate about reading instruction was to make sure that they included everything," he said.

In the emailed statement, HMH said that teachers can "choose from a variety of resources to make the best instructional decisions for their students and to align with district curriculum requirements."

When Milton Terrace Elementary in Ballston Spa, N.Y., started using Journeys, teachers were using the materials differently, said Kathleen Chaucer, the principal. (The school is no longer using the program.) For example—even though the program offers decodable books, kids were practicing in leveled texts, which didn't offer opportunities to use patterns they learned, Chaucer said.

Journeys includes six teacher manuals for its 1st grade program alone, Seidenberg said. "There is so much information in those teacher manuals, it raises serious questions about whether anyone is actually using them," he said. "And if they are using them, are they just picking through them to find the pieces that they're comfortable with?" Chaucer said that's what happened at her school.

A Perfect Program?

It's hard to find a perfect curriculum, said Blythe Wood, an instructional coach in the special education department at the Pickerington school district, and the vice president of the International Dyslexia Association of Central Ohio.

She's critical of Leveled Literacy Intervention, specifically, for the focus it puts on looking at words as wholes, and the lack of decodable text. But there are good and bad parts to most commercial materials, she said.

"The knowledge base of the teacher, and being able to identify the needs of the student, are more important than a boxed program," Wood said. "We're not going to meet every kid with one box."

Taking a hard look at curriculum is important—but more important is making sure teachers have the training they need to evaluate practices themselves, said Beverine-Curry, of The Reading League. "Just handing teachers materials or a program or a curriculum is not going to do the job."

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