

Why Every Educator Needs to Understand the 'Science of Reading'

An interview with Louisa C. Moats, Ed.D., the nationally recognized author and authority on literacy education.

Dr. Moats has written widely about the professional development of teachers, the importance of brain science, and the relationships among language, reading, and spelling.

Q: In your opinion, why do so many students fail to become proficient in reading?

Dr. Moats: Many factors contribute to the “achievement gap” in reading—insufficient early childhood language development, insufficient familiarity with books and print, differences in “wiring” or the brain’s capacity to analyze speech, and so forth. The solution to reading problems, no matter what their origin, is instruction by a well-informed teacher who knows how to help kids overcome those disadvantages.

Q: For decades, you have been a spokesperson for reading research and what we understand about how children learn to read. Can you define the science of reading?

Dr. Moats: The body of work referred to as the “science of reading” is not an ideology, a philosophy, a political agenda, a one-size-fits-all approach, a program of instruction, nor a specific component of instruction. It is the emerging consensus from many related disciplines, based on literally thousands of studies, supported by hundreds of millions of research dollars, conducted across the world in

many languages. These studies have revealed a great deal about how we learn to read, what goes wrong when students don’t learn, and what kind of instruction is most likely to work the best for the most students.

Q: Is there evidence that the “science of reading” can make a difference in reducing reading problems?

Dr. Moats: Yes, those findings about effective instruction are what’s driving our commitment to try to change the status quo. Whole states, as with Mississippi on the most recent NAEP, can make significant gains. But we have a series of studies showing that by the end of first grade, the rate of serious reading problems can be reduced to about 5 percent or less.

Q: Lately, there has been much discussion about the science of reading. For example, [Emily Hanford](#) of American Public Media has brought new attention to the concept. Do you feel that educators are becoming more familiar with the science of reading and are applying this into their teaching?

Dr. Moats: These days, I have moments when I feel more optimistic. Emily Hanford’s reports have been the catalyst sparking our current national discussion.¹ A growing number of states are confronting what is wrong with the way many children are being taught to read. I’m inspired by the dialogue and courage of the people who know enough about the science of reading to offer a vigorous critique of those practices, programs, and approaches that just don’t work for many children. I am also optimistic about the [recent report](#) out from the National Council on Teacher Quality. There’s an increasing trend of new teachers being trained in the components of reading, and I think that many veteran educators are open to deepening their learning.

However, there’s still a long way to go. In general, our teaching practice lags far behind what the research tells us. We consolidated the research on what it takes to teach children to read way back in the early 1990s, and yet today a majority of teachers still haven’t been given the knowledge or instruction to effectively teach children to read.

¹ For Emily Hanford’s reporting, see “At a Loss for Words: How a flawed idea is teaching millions of kids to be poor readers,” American Public Media, 8/22/2019. apmreports.org/story/2019/08/22/whats-wrong-how-schools-teach-reading



Q: Some states, like Mississippi and Ohio, are improving student literacy rates across the entire state. To what do you attribute this noticeable rate of improvement in those states?

Dr. Moats: Change in those states and others is a consequence of many converging factors, including unambiguous and consistent leadership from the state level; statewide delivery of professional development (mainly with **LETRS**[®]) to most teachers; in-class coaching to help teachers apply their professional learning; standards and incentives for both students and teachers, as is manifest on required tests; and support for changes in how teachers are licensed in the first place.

Q: Could you tell us a bit about LETRS and how it supports educators?

Dr. Moats: **LETRS** (*Language Essentials for Teachers of Reading and Spelling*) empowers teachers to understand the *what, why, and how* of scientifically based reading instruction. We focus on teaching essential components including phoneme awareness, phonics, vocabulary, fluency, and comprehension that should be taught during reading and spelling lessons to obtain the best results for all students. Teaching reading is a complex undertaking because, ideally, all aspects of language are explicitly addressed within a curriculum that is rich and meaningful. Not only do

teachers need to understand how kids are learning to read, but also, they must adopt instructional routines, activities, and approaches that can be used to differentiate instruction.

After going through the **LETRS** training, educators generally have a better sense of what they should be looking for in a reading curriculum and are much more critical consumers. For example, in one state we had a strong group of teachers who learned a tremendous amount about early reading through **LETRS**. When the state pushed to adopt a particular program, these educators could immediately identify the program’s significant design weaknesses based on what they had learned from **LETRS**.

Q: What should school and district leaders consider when evaluating programs that support what is known about the science of reading?

Dr. Moats: Here are a few important things for leaders to consider when evaluating programs. First, ideally, there should be explicit instruction in foundational skills for approximately 45 minutes daily that follows a lesson routine: review, explain the concept, provide guided practice, provide more (independent practice); spell and write to dictation; read decodable text. Then, determine if the instruction in phoneme awareness, phonics, and text reading is informed by knowledge of both the speech-sound system and the orthographic system. Third, examine the scope and sequence for order

and pacing of concept introduction. Intervention materials should be aligned with [Tier I] classroom instructional materials but provide more intensive practice. **AVOID** any program that includes drawing shapes around words, making alphabetic word walls, teaching the “cueing systems” approach (appealing to context to guess at unknown words), or that does not follow a clear scope and sequence where one skill is built upon another.

Q: What advice would you give to district or school leaders who want to change how reading is being taught in their classrooms?

Dr. Moats: Invest in teacher education before investing in specific programs. Any program will be more powerful if knowledgeable, confident teachers are using it. In fact, we have evidence that if teachers do not understand either the content or the rationale for explicit teaching, they are unlikely to get results even if the program they have been given is well designed. The program is only a tool; teachers must know how to use it. It’s a wonderful thing when we understand what we’re doing, why, and for whom we’re doing it. ■

Learn more about how **LETRS** prepares educators with the science of how reading and language work together to build strong literacy skills.

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