Q&A: Why the science of reading is as important as ever

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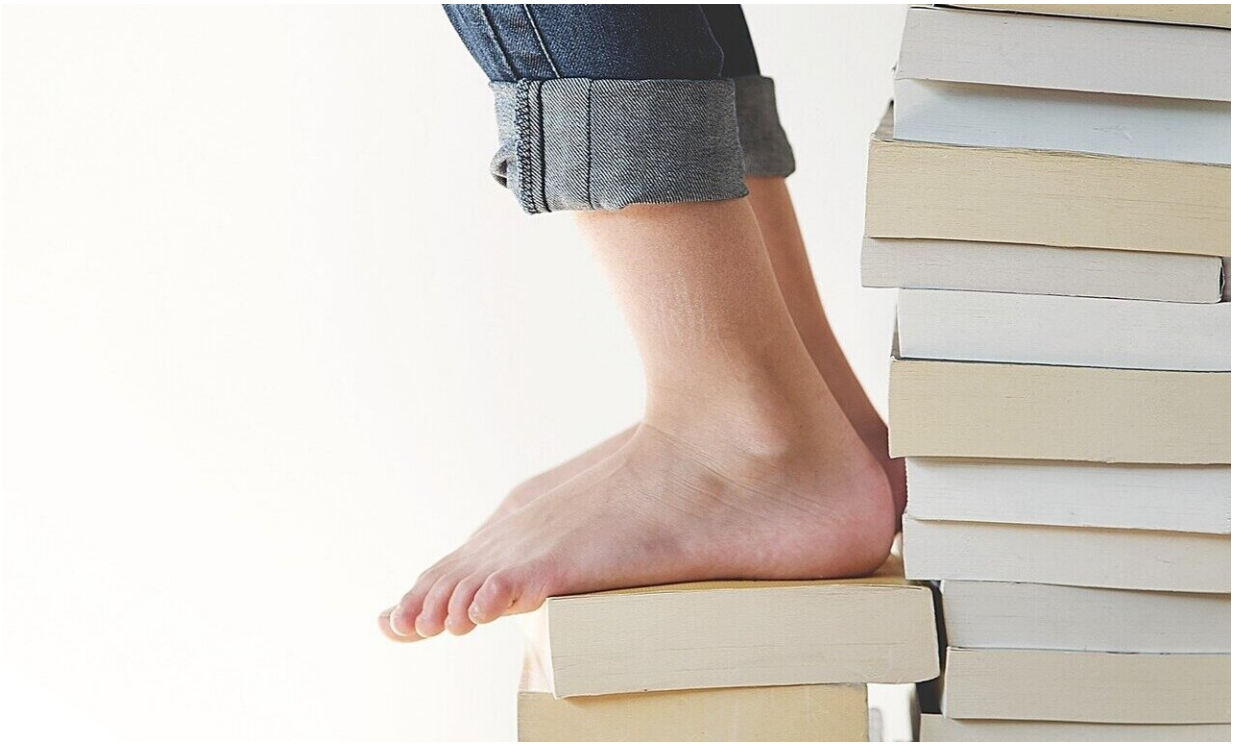

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How and when primary and secondary school students will resume their schooling in the fall is still in question. Students across the country recently completed the school year from home, some without standardized experiences, access to technologies or engagement across school division.

In a recent op-ed in *The 74*, an education news oulet, Emily Solari, professor of reading education at the University of Virginia's Curry School of Education and Human Development, argued that the coronavirus pandemic has potential to amplify a critical and widening nationwide gap in reading.

According to Solari, the good news is that a robust, evidence-based practice exists that can inform how best to teach reading and support students. Unfortunately, too much of that practice is not making its way to teachers and students.

Solari discuss how she sees the pathway to increasing literacy skills in American students—and how now is a critically important time for it to happen.

Q. What is the "science of reading" and how does it relate to the evidence we have about teaching reading?

A. The science of reading is a large body of empirical research amassed over the past 50-plus years from several different disciplines (linguistics, cognitive psychology, neuroscience, etc.) that describe both typical and atypical reading acquisition. In the past decades, this scientific work has coalesced around several conclusions with implications for the field.

The science of reading is not necessarily comprehensive, nor is it conclusive for all aspects of reading development. For example, the field knows a whole lot more about how word-reading both develops cognitively and knows evidence-based practices to teach these skills. We know less about effective instructional practices to help students comprehend what they read.

In the field of education and teacher preparation, the science of reading

is important because understanding the cognitive processes that are imperative for successful reading acquisition has the potential to translate into reading instructional practices. Many argue—and I think there is evidence of this in our schools—that what we know about the science of reading acquisition has not adequately transferred into classroom practice, nor has it sufficiently been incorporated into how teachers are taught to understand reading and how to teach reading.

Evidence strongly suggests that reading comprehension, which is the ultimate goal of reading, is driven by two broad skillsets: the capability to read words—or decoding skill—and a child's oral language or language comprehension skills.

Q. Why has there been so much disagreement about how to teach reading?

A. These disagreements can be broadly conceptualized as two opposing camps: those who support an idea classically called a whole-language approach, and those who endorse an approach to early reading that is an explicit and systematic, cracking-the-code approach, sometimes referred to as a phonics-based approach or structured literacy.

The major differences in the two approaches are that in a whole-language approach, children are immersed in literature experiences and the instructional approach is based in helping children understand how the oral language system applies to reading whole words. Often this approach uses a cueing system for reading unknown words, teaching students to use certain cues (meaning-based, language structure and visual).

A phonics-based approach, which actually endorses more than phonics-only instruction, calls for structured and explicit instruction in

developing word-reading skills, through explicitly teaching the relationship between letter sounds and their orthographic representation, oral language development and comprehension instruction.

The existing research is clear that the most effective early reading instruction, especially to develop efficient decoding (word reading), is structured and explicit phonics-based approach; this approach can be beneficial for all students, but is particularly important for students who are most vulnerable to reading difficulties.

These debates have been occurring for many decades, which undoubtedly has caused confusion for districts, administrators and teachers, impacting both individual children's reading development and nationwide reading achievement scores.

Q. Why isn't the robust evidence-based practice you mention making its way to teachers?

A. The implementation of evidence-based practices is complex. It is almost impossible to pinpoint one reason that the science of reading is not being translated into evidence-based instructional practices in schools.

One of the exciting things about scientific discoveries is that the research is ever-evolving. This is also the downside of science and empirical findings, when you think about it in educational contexts. It is difficult for the field to keep up as new findings emerge. And translating new evidence-based findings to teachers has proven to be a difficult task.

One important point is that, although we know a lot about how children learn to read, there has been much less research on a process that identifies how to implement these evidence-based practices at scale in

authentic school settings; there is a lack of research in this area.

Teachers operate in a very broad and complex system. The day-to-day decisions of the curriculum that they use and the instructional approaches they employ are not entirely their choice. A lot of the time, curricular materials are chosen at the state or district level. If teachers are not provided instructional materials that align with the science of reading, it would be nearly impossible for them to implement these evidence-based teaching practices.

Additionally, I think we really need to pay attention to what is happening in our teacher preparation programs. Not all teacher education programs are preparing teachers with the adequate knowledge to address the diverse spectrum of readers they will encounter in schools. When our teachers attend preparation programs that do not provide the foundational knowledge in the science of reading, and then they teach in a school that does not provide adequate materials to implement science-based reading instruction, this is the fault of the broad educational system, not of our classroom teachers. Investments in building teacher knowledge of the science of reading should be a priority.

Q. How is this evidence being used at UVA to prepare reading teachers?

A. The reading program at UVA over the past 18 months, has undergone a substantial process of revision to ensure that the preparation we provide for reading specialists and teachers is aligned with the field's most current understanding of reading acquisition and evidence-based instructional practices. We are committed to ensuring that the reading specialists and teachers we prepare have deep knowledge of the science of reading acquisition and are also equipped with the very particular instructional approaches that are based in our knowledge of the science.

We are also committed to developing teachers that acknowledge how issues of access and equity impact literacy development. We want to develop teachers that recognize systemic inequities and know how to advocate for students when necessary.

Q. What else needs to happen to improve children's reading performance, especially in light of the pandemic?

A. It is important to remember that children have lost access to critical face-to-face reading instruction. This is particularly important for our youngest learners (K-3) and students who were experiencing difficulties with reading before the pandemic hit. It is likely that some children will need more intensive, targeted reading instruction at the beginning of the school year—more than we would normally see. As such, it is important for educators to have the ability to efficiently screen students and plan targeted reading instruction.

However, to make real change in reading achievement, there needs to be full engagement and commitment to systemic change. This would include many different levels of engagement—from state-level policies, to teacher preparation in institutes of higher education, and access to evidence-based curriculum and professional development for our in-service teachers. Investment in teachers and professional development should be a priority. Developing teacher knowledge around evidence-based reading assessment and instructional practices should be seen as a priority for districts.

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