



EDUCATION INSIGHT

Reading By Design

**Science and Systems Support
All Readers—Especially Students
With Dyslexia**

Lexia®
ALL FOR LITERACY™

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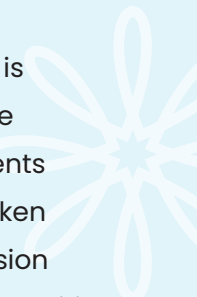
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Introduction

More than 10 million U.S. children have [undiagnosed dyslexia](#). Scientists estimate that between 5% and 12% of children have dyslexia, while just [4.5% of students](#) in public schools are diagnosed with a “specific learning disability,” that includes dyslexia. Even when students are diagnosed with dyslexia, districts may not have trained staff or the additional budget to support them.

There can also be unhelpful arbitrary policies, such as student isolation and retention. Sending a student who is not keeping up with the class to the back of the room for quiet reading or keeping students back a year does nothing to help dyslexia without explicit instruction. An example of an arbitrary policy occurred in Texas. For 12 years, the Texas Education Agency imposed an arbitrary [cap on special education eligibility](#) at 8.5% of students when the national average at the time was 12%, thus under-identifying students with dyslexia.

Old ideas and policies about dyslexia, biased misinformation around dyslexia, lack of training to explicitly teach reading skills, and lack of funding for special education all contribute to students being under-identified with dyslexia. However, a University of Minnesota study found that [80% to 85%](#) of children who qualify for special education can achieve the same academic outcomes as non-struggling readers if given the correct instruction.



Dyslexia is a specific learning disability that is [neurobiological in origin](#). It is present at birth and unrelated to intelligence. Students with dyslexia have difficulties processing, storing, retrieving, or producing information. Students with dyslexia struggle to translate printed words on a page into their spoken equivalents, and this is in spite of having adequate listening comprehension skills. Dyslexia is not about seeing letters or words backwards. Students’ cognitive resources are so focused on deciphering words, they are unable to [focus on meaning](#). This common learning disability affects as much as 15% to 20% of the population.

Federal law requires public schools identify, refer, and evaluate students who are suspected of having a disability as early as possible, including students who may have dyslexia. Identifying children with disabilities ensures they have their individualized and specialized needs met in the least restrictive environment possible. For more information about the Child Find Process, please visit the [IDEA Child Find website](#) and your state or district website.

Complex Systemic Barriers

Despite updated research and recent ESSER funding to help accelerate reading progress, schools and districts are slow to change. Each school district has its own challenges that include outmoded policies, inadequate literacy training for teachers, inadequate budgets, and legacy procedures that need updating. Here are four common district challenges:

- 1 Inaccurate identification:** Students of color and students from families with low income are most likely to experience a disproportionate exclusion or inaccurate diagnosis. These students are more often identified with emotional and intellectual disabilities and placed in classrooms where [academic outcomes are worse](#) and expectations are lower. Their teachers usually have less experience teaching math, English, and science. While special education does benefit students with mild disabilities, if these programs are ineffective, the negative impact for students of color, who don't require these services, can include [racial segregation, stigmatization, and group misrepresentation](#).
- 2 Outdated and disproven methods of literacy instruction:** The three-cueing strategy in the balanced literacy model still lingers in some states. In fact, it is still the most [favored method in California](#), where preservice teachers are taught this method in schools of education, meaning teachers graduate without being taught Structured Literacy, a method for explicit instruction based on the science of reading. California lawmakers want all students to be tested for dyslexia and other reading challenges. Even if the diagnostics are improved, most public school teachers have not been adequately trained to teach students how to read. Only [42% of third-grade students](#) met or exceeded their ELA standards this past school year.
- 3 Misidentification of dyslexia for Emergent Bilinguals:** The relationship between Emergent Bilinguals and special education has long been complicated. Emergent Bilinguals are [both over-identified and under-identified](#) as students with dyslexia who need special education. While these students may benefit from instruction that links English language learning with their first language, accommodations that are part of special education services are not a good fit for the instructional needs of an Emergent Bilingual learner because they don't have a learning disability.
- 4 Pandemic hangover:** Educators are still dealing with the aftermath of the pandemic's lost instructional time, which had a greater negative impact for students with IEPs, those who should have had IEPs, and other historically disadvantaged students, such as Emergent Bilinguals and students of color. As a result, these students have fallen even further behind their peers.

As more state legislatures require the use of research-based methods, such as the science of reading, students with and without dyslexia will become better readers. Struggling readers, including those with dyslexia, are overwhelmingly capable of learning to read. They require systematic instruction to build fluency and systems' leaders to have the information they need to transform outcomes for students.

What is the Three-Cueing Model and Why is It Losing Support?

With three-cueing, first used in the 1960s, students are taught they should first focus on determining the meaning of the text [when they're given prompts](#), such as "What makes sense?" and "Can you think of another word that would work in this sentence?" Students are essentially encouraged to guess at the word. Neuroscience has revealed that is not the way children learn to read; in fact, "reading is accomplished with [letter-by-letter processing](#) of the word."

According to Dr. Mark Seidenberg, three-cueing is a way to teach children to identify words by combining multiple cues. "Cues could include the pictures in a book, words in the sentence context, knowledge about the topic, the first letter or two of a word, and others," he said. "The problem with this approach is that it is a slow, unreliable way to read words and an inefficient way to develop word recognition skills."

Sometimes the three-cueing system is used as a [substitute for phonics](#) when the words are actually decodable. And the ideas about reading development that three cueing is built on, have been [proven false](#). Three cueing is being banned across the U.S. because it is an ineffective approach to teaching students how to read.



Continuing Challenges Addressing Literacy Gaps

1 Identifying dyslexia. The identification of dyslexia is challenging. Particularly following the pandemic, distinguishing whether students are suffering from the trauma of disrupted learning or have a learning disability has grown more difficult. The Child Find process was similarly disrupted by remote learning and return to school, and continues to challenge teachers and caregivers. As a result, recovery from the pandemic has complicated the process of identifying students with dyslexia and other learning disorders.

Students with dyslexia may [also experience difficulties](#) with attention and organization as well as executive function, such as:

- Beginning and completing homework assignments
- Maintaining focus on tasks
- Keeping track of supplies and materials
- Confusing concepts related to time and space, or left and right directions
- Memorizing math facts
- Reading/understanding word problems
- Handwriting
- Learning foreign languages or English as a second language
- Making and keeping friends and other social skills

Due to the challenges of educator recruitment and retention, there are fewer specialists in schools post-pandemic when the need for literacy specialists and special education teachers is great. The failure of literacy programs, such as balanced literacy and its three-cueing model, and the shift to science of reading-based instruction is challenging virtually every school and district.

However, regardless of the specific issue, science of reading-based instruction can close the gaps and help students achieve literacy through systematic, explicit, instruction.

2 Expanding educational equity. When students' needs are unmet, unaddressed, or addressed with unhelpful systems and programs, the opportunity gaps increase. What began as a narrow skill gap can grow to encompass a significant grade-level discrepancy, and then further deteriorate into lost confidence, engagement, and esteem if not addressed appropriately. It's important to note this is the system failing the student and not the student's failure. It is important to address the needs of the whole child in a holistic way with culturally responsive pedagogy, an asset-based orientation, and digital support.

Increasing educational equity is made possible through the instructional core—the inextricable link among teachers, students, and content. This expanded understanding of educational equity is based on the work of [Harvard researchers](#) with educators. If educators are serious about expanding educational equity, all three elements must be addressed simultaneously as [they are interdependent pillars of education](#).

3 Other learning disabilities. Students often deal with other disabilities. Developmental language disorder (DLD) is when a person has difficulty understanding language. It is largely a hidden disability, although it impacts [approximately two children](#) in every classroom. DLD commonly occurs with ADHD and dyslexia. Some researchers believe there is some overlap with autism. Dyslexia affects 20% of the population and [represents 80% to 90%](#) of all those with learning disabilities.

Students of color, and Black students in particular, are [twice as likely as their white peers](#) to be labeled with an intellectual or emotional disorder. This misidentification of disability can have lifelong impact. Cultural bias, lower expectations, and test bias are some of the reasons this happens.

However, reading instruction based on the science of reading can help all students, no matter their disability, label, or perception. The use of science of reading-based instruction may not be enough for students with dyslexia; they may need additional, more intensive instruction. However, this classroom instruction may support a diagnosis of dyslexia because part of the definition of dyslexia is that the student has difficulties with word recognition despite receiving effective instruction.

Changing the way reading is taught in this country will almost certainly reduce the number of students with Individualized Education Programs (IEPs) since up to [95% of children can be taught to read](#) with explicit instruction.

How Schools Can Promote Reading Success for Students with Dyslexia

To help students with dyslexia, educators need a deep understanding of the body of research called the science of reading. Multiple decades of research have repeatedly demonstrated that instruction based on this body of evidence is proven to teach reading to children.

Some best practices include:

- ✓ Implement science of reading-based professional learning and instruction.
- ✓ Empower teachers. Most teachers haven't received training and can't be expected to know how to teach this way without ongoing professional learning that trains them in the science of reading methodologies and helps them understand strategies to use for different academic outcomes.
- ✓ Train educators how to identify students with dyslexia and other learning disabilities, according to proven, fair, and unbiased methods.
- ✓ Provide teachers with high-quality learning materials that are based on the science of reading to use with their students.
- ✓ Monitor student progress. Literacy specialists and teachers must be able to guide instruction with real-time data.
- ✓ Make systematic reviews of the process of identifying and responding to the needs of every student. It is important to improve educational equity at every school and district.



Structured Literacy Has the Promise of Success

Structured Literacy explicitly teaches systematic word-identification and decoding strategies. These benefit most students and are critical for those with dyslexia. There are three principles of [Structured Literacy](#) instruction:

Systematic and Cumulative	Explicit	Diagnostic
The organization of material follows the logical order of language. Cumulative means each step is based on concepts previously learned.	Direct teaching of concepts with continuous teacher-student interaction	Individualized instruction with continuous assessment

Students with learning disabilities greatly benefit from explicit, step-by-step instructions for every part of the literacy-acquisition process—especially reading comprehension. Explicit instruction means teachers are stating exactly what is expected, defining terms, modeling, giving examples, and including step-by-step directions on the board for students to follow.

While some students may need additional intensive instruction, the beauty of using Structured Literacy to address dyslexia is that all students benefit from this type of explicit instruction. Structured Literacy is beneficial for all Tier I students. All students will also benefit from any changes to the systemic barriers already detailed. The research is clear that literacy instruction based on the science of reading will help students with dyslexia as well as students without dyslexia. Literacy leaders know it is time to update disproven and ineffective reading instruction to help more students become successful readers.



How Lexia® Can Help Students with Dyslexia

Lexia's portfolio of products based on the science of reading includes Lexia LETRS® and Lexia Aspire™—professional learning that upgrades teachers' skills in teaching reading while helping them avoid dysteachia, and proven, high-quality curriculum products Lexia® Core5® Reading and Lexia® PowerUp Literacy®. Additionally, Lexia® English Language Development® supports Emergent Bilinguals' language acquisition through academic conversations.

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Using Lexia has been a life-changing experience for me as a dyslexia teacher, and for my students. My students are always ready to log on after my whole-group lessons and do their units.

— Jesse Perez, Dyslexia Specialist





Lexia®, a Cambium Learning Group company, is a leader in science of reading-based solutions. For 40 years, the company has focused on pre-K-12 literacy and today provides solutions for every student and educator. With a complete offering of professional learning, curriculum, and embedded assessment, Lexia helps more learners read, write, and speak with confidence. For more information, visit lexialearning.com.



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