

DYSLEXIA

Hiding in Plain Sight

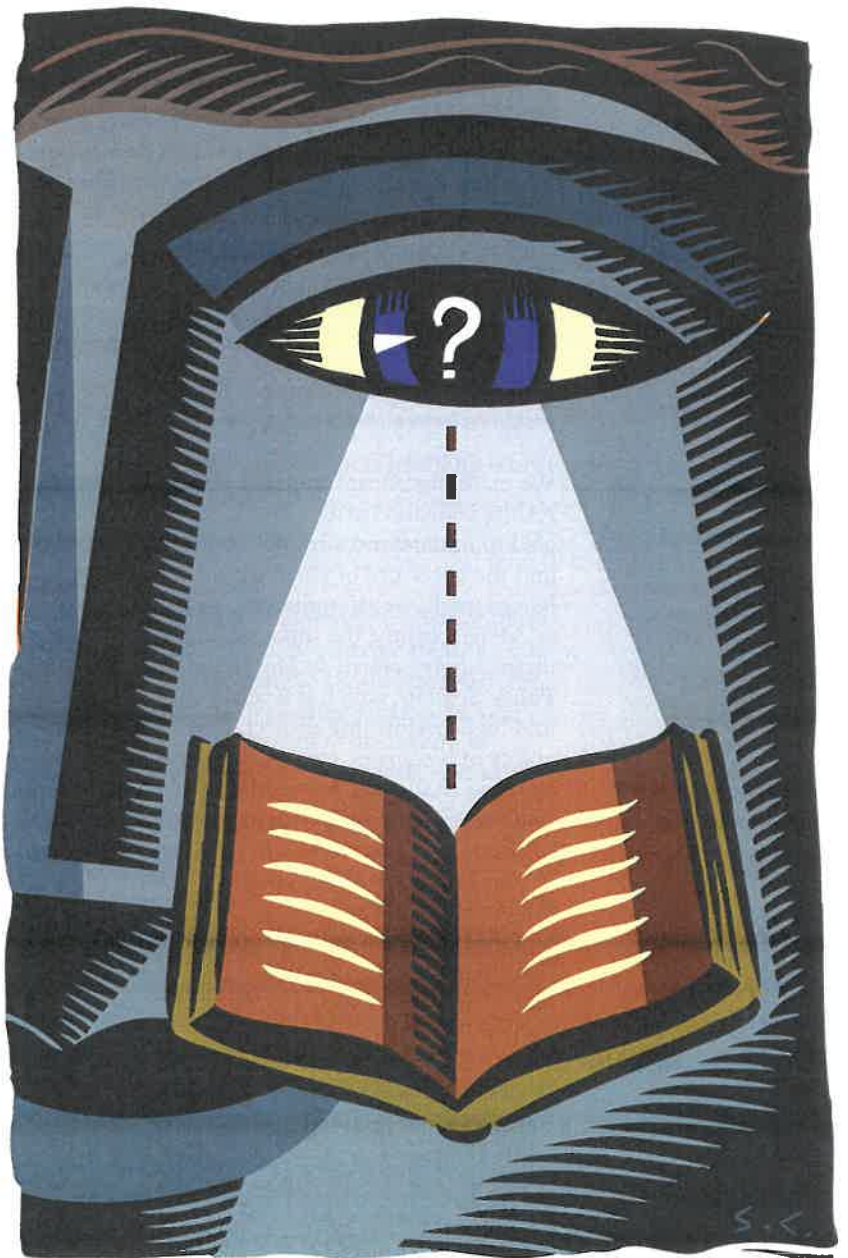
Less understood and more prevalent than realized and holding the key to students' reading performance

BY SHELDON BERMAN AND
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It sounds simple — every child will read on level by the end of 3rd grade. We all agree this goal should be achievable. Yet year after year, it remains beyond our reach.

For the past decade, National Assessment of Educational Progress results have stubbornly indicated that about a third of all 4th graders read below basic level, reflecting scant improvement over the 40 percent of the 1990s given the research and professional development devoted to this issue. We are increasingly convinced that what we have been missing is the hidden challenge of dyslexia and other language-based reading difficulties.

In 24 years as superintendent, one of us (Berman) has faced the reading conundrum in four school communities. Ten years ago, in the Jefferson County Public Schools in Louisville, Ky., we tackled it through a communitywide initiative that used after-school programs and thousands of volunteers (parent, civic and business) to achieve the district's reading targets.





Andover, Mass., Superintendent Sheldon Berman believes early identification of dyslexia can address learning problems before students require remediation.

We made significant improvement. However, the results plateaued after a few years and we struggled to understand why, not realizing that dyslexia and the spectrum of language-based reading challenges might be an underlying reason.

More recently, the same reading puzzle became distressingly evident in Massachusetts' Andover Public Schools, which is a relatively more affluent and high-performing district. Despite the availability of resources, reading and language-based learning challenges have dominated conversations between parents and professionals. Attuned to issues that may detract from their children's learning, parents and teachers have focused on the diagnosis of dyslexia.

Dyslexia is less understood and more prevalent than many realize and, because we identify it too late, it may hold the key to why it is so hard to improve reading performance.

A Learned Ability

Reading is not an innate ability. The sound-symbol connection must be mapped onto the brain through specific training. Because about 60 percent of children make this connection based on early pre-reading experiences, it may seem

reading skills develop naturally. However, some children's brains don't neurologically discriminate speech sounds and/or identify how speech sounds relate to letters and words. They struggle with decoding and recognizing words, causing problems with fluency, spelling and writing.

Dyslexia is not a single deficit but rather an array of language and cognitive processing issues that range in severity. Some students have difficulty mapping speech sounds to letters, some struggle with the rapid retrieval of sounds and words, and about 60 percent experience both. They also may have deficits in working memory, processing speed and attention.

The International Dyslexia Association estimates the condition's prevalence as high as 17 percent of the general population. Its impact is extraordinary. Although some individuals — including Steven Spielberg, Pablo Picasso, Whoopi Goldberg, Steve Jobs and Anderson Cooper — have achieved tremendous success despite their diagnosis of dyslexia, many are not so fortunate. A study of the Texas prison population revealed that 48 percent of inmates were dyslexic.

Dyslexia often can be prevented or lessened with the right interventions, opening up opportu-



nities for many who have repeatedly experienced failure in school and life.

Cloaked in Myths

Some dyslexic students memorize sight words well, thereby masking their inability to decode. Others find ways to compensate by relying on listening and accessing information through other media. Still others only master basic decoding skills and continue to struggle with word reading efficiency. In each case, they appear to be readers until they confront complex texts. By then they require significant remediation and may have acquired attitudes that promote avoidance rather than engagement in reading.

Dyslexia also is cloaked by persistent myths that limit teachers' understanding. Teachers often believe dyslexia is characterized by "word blindness" or seeing letters backwards and making reversals or that dyslexia is rare or only impacts boys.

In fact, dyslexia is a linguistic disability, not a visual one. It is the most common cause of reading, writing and spelling difficulties. According to the Dyslexia Help Center at the University of Michigan, 80 percent of students identified as learning disabled have reading deficits consistent with dyslexia. It impacts all genders, ethnicities and socioeconomic strata equally. Dispelling myths and providing teachers and administrators with solid background knowledge are critical.

Explicit Instruction

In Andover, it was apparent we needed to develop a better approach to prevention and intervention. We used an independent consultant to assess our reading and intervention programs and then, based on the findings, employed a student services director (Stetson) who has expertise in reading difficulties. We realized that dyslexia is not a special education issue but a matter of how we approach literacy in general. Addressing it requires shifts in thinking and instructional approaches for both regular and special education teachers.

Learning to read moves from discriminating sounds, to mapping sounds to letters, to whole word reading and finally to fluent reading of connected text. Intervention requires explicit instructional strategies that support specific stages of reading. For developmental dyslexia, intervention must occur at the lowest skill level at which a student's reading breaks down.

Addressing dyslexia and other language-based

reading difficulties requires early-grade teachers to explicitly teach phonetic strategies and to identify students who require multisensory instructional approaches. Teachers of older students must build on decoding strategies by providing direct instruction in vocabulary, fluency and grammatical structure. The teaching of reading cannot stop at 3rd grade but must continue intentionally and systematically until graduation.

Early Identification

We often wait until a student exhibits failure before referring him or her for special support. This wait-to-fail approach is particularly detrimental for dyslexic students because remediation in the higher grades is far less effective than identification and intervention in grades K-1.

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The most common underlying feature of developmental dyslexia is the inability to identify and discriminate speech sounds. In kindergarten and 1st grade, predictors of reading success include letter-sound knowledge, phonemic awareness skills such as knowing whether words rhyme, the ability to blend discrete speech sounds into words and the ability to segment words into their constituent sounds.

Assessments such as the Dynamic Indicators of Basic Early Literacy Skills, also known as DIBELS, include many of these strong predictors. Children with deficits on universal screenings should be followed up with simple assessments such as rapid naming — the ability to name familiar objects, colors and letters. Together, rapid naming, phonemic awareness and family history account for about 80 percent of the variability in reading performance and are better predictors of success than standard reading measures. To ensure that students remain on track and receive the supports they need when they need them,



Sara Stetson, student services director in Andover, Mass., leads the district's systemic approach to remedy reading problems relating to dyslexia.

districts must add specific skill-based assessments to their traditional outcome-based measures of reading comprehension, followed by systematic progress monitoring.

Without appropriate intervention, poor readers in grade 1 have a 90 percent likelihood of reading poorly in grade 4 and a 75 percent chance of struggling with reading in high school. By contrast, researchers have found that early screening followed by systematic instruction in phonemic awareness and decoding can raise well over 50 percent of struggling readers to average reading levels, with only 5 percent of identified children needing long-term intervention.

Classroom-Based Help

Addressing reading challenges requires a systemic approach that integrates universal screening, progress monitoring, professional development for regular education as well as special education teachers, and classroom-based prevention, intervention and reading support programs. Teachers need to be proficient at determining which students require particular approaches and at differentiating their classroom instruction to provide students with the right support.

Progress depends on the use of explicit, multi-sensory approaches such as the Lindamood Phoneme Sequencing program for sound discrimination and Orton-Gillingham methodology for

phonetic development. These approaches build connections by simultaneously engaging visual, auditory and kinesthetic pathways. Students are exposed to the specific rules and structure of the language, and they identify and correct their own mistakes so error patterns are not encoded. Instruction also must be cumulative and mastery-based.

Overcoming reading challenges is primarily the responsibility of the classroom teacher, not the reading specialist or special education teacher. Strategies that develop phonemic awareness and decoding need to be part of the instruction for all students. Given the wide range of skills among dyslexic students, teachers at the upper elementary and secondary levels need to understand the instructional and assessment accommodations that support success for these students.

As district leaders, we need to use the lens that dyslexia provides as we put in place the programs, structures and supports to develop strong readers. Although practice is critical for the mastery of fluency and vocabulary development, providing programs that essentially tell struggling readers to read more, practice more and suffer more only adds to their frustration and feelings of failure. The goal is to prevent the emergence of developmental reading disorders by providing targeted instruction in the regular classroom, with support from reading specialists and special educators.



Acting Systemically

Andover now works with the Tufts Center for Reading and Language Research and with Harvard Medical School to identify and apply more effective approaches to recognize and address dyslexia. A systemic approach includes such elements as:

- ▶ An early-screening model using behavioral tasks that are the strongest predictors of reading failure;
- ▶ Data teams across elementary schools, so students can be identified, grouped for instructional interventions and monitored for progress;
- ▶ Staff development for all teachers, so they understand the hallmarks of atypical reading development;
- ▶ Training in the systematic, explicit, direct interventions that students with early reading failure require;

- ▶ Ongoing, embedded staff development, including coaches who can support teachers as they work with struggling students; and

- ▶ Mapping the developmental trajectory of reading acquisition, placing interventions where students' specific deficits lie.

National and state policymakers are beginning to call attention to dyslexia. In 2016, Congress adopted the Research Excellence and Advancements for Dyslexia Act (READ Act, H.R. 3033). Legislatures in 36 states have passed dyslexia-related legislation. School districts now can take the lead in providing students with the foundation they need to read and understand the complex texts required to reach their college and career goals. ■

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Additional Resources

Authors Sheldon Berman and Sara Stetson suggest these resources related to dyslexia among students.

- ▶ **ACADEMY OF ORTON-GILLINGHAM PRACTITIONERS AND EDUCATORS** (www.ortonacademy.org). Orton-Gillingham methodology is a primary remediation for students with dyslexia. The academy provides training to educators.
- ▶ **CHILDREN OF THE CODE** (www.childrenofthecode.org). This is a collection of interviews with reading researchers and videos for educators.
- ▶ **FLORIDA CENTER FOR READING RESEARCH** (www.fcrr.org). The center conducts and disseminates research and practical resources on all aspects of literacy development.
- ▶ **GAAB LABORATORY AT BOSTON CHILDREN'S HOSPITAL** (<http://thegaablab.com>). Nadine Gaab's neuroscience laboratory uses functional magnetic resonance imaging to study the brain processes involved in dyslexia and other language-based learning disabilities.
- ▶ **GABRIELI LAB AT MASSACHUSETTS INSTITUTE OF TECHNOLOGY** (<http://gablab.mit.edu>). The lab is a multidisciplinary effort among MIT, Massachusetts General Hospital and Harvard Medical School using brain imaging to study brain-behavior relationships.
- ▶ **INTERNATIONAL DYSLEXIA ASSOCIATION** (<https://dyslexiaida.org>). The association provides research and resources on developmental dyslexia.
- ▶ **LINDAMOOD PHONEME SEQUENCING** (<http://lindamoodbell.com>). This program teaches students to discriminate speech sounds by discovering and labeling the oral-motor characteristics of phonemes.
- ▶ **MASSACHUSETTS GENERAL HOSPITAL INSTITUTE OF HEALTH PROFESSIONS** (www.mghihp.edu). The institute provides current information and training for dyslexia intervention specialists.
- ▶ **TUFTS UNIVERSITY CENTER FOR READING AND LANGUAGE RESEARCH** (<https://ase.tufts.edu/crlr>). The center provides professional development and intervention for supporting children with reading disorders.
- ▶ **WILSON LANGUAGE TRAINING CENTER** (www.wilsonlanguage.com). The center uses an Orton-Gillingham-based instructional program.
- ▶ **YALE CENTER FOR DYSLEXIA AND CREATIVITY** (<http://dyslexia.yale.edu>). The center highlights the strengths of people with dyslexia.