



Dyslexia: A Four-Part Professional Development
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Module One
A Dyslexia Overview: Facts, Terminology and Common Signs

They look like typical students... like any other students at school, learning to read and write and spell. But there is something different about these students.

“You search the whole world and you’re not going to find somebody just like me.”
– Matthew Lavine, Age 17

“You know, I was always one step behind everybody else.”
– Jodie Finney, Age 26

“It’s hard to explain how mad you feel because you’re not the same.”
– Julian Smith, Age 16

A difference that stays with them, even as adults. The difference is in their brains, in the way they see numbers and letters and words.

“I get my b’s and d’s mixed up.”
– Alex Barroso, Age 12

“And like when I see all the letters, and like a word, if it’s a big word, I get all weirded out.”
– Annie Beath, Age 11

“A Harry Potter page would take me, like, 10 minutes just to read one page.”
– Andrew Witherspoon, Age 10

It is a difference in the way they learn. Some people say these students are “learning disabled.” Others say they are stupid or lazy... which isn’t true, of course, although some kids still believe it.

“Maybe I am stupid. Maybe I don’t understand things well enough that I just can’t keep up, or anything.”
– Jack Rohan, Age 13
“I mean I just felt like I was – dumb!”
– Jodie Finney

“I thought I was retarded, basically.”

– Matthew Lavine, Age 17

But different is not dumb – and you and your colleagues have the experience and *expertise* to identify learning challenges and help change the stigma.

I am Stacey DeWitt, president and founder of Connect with Kids Education Network, a company that provides schools across the nation with evidence-based, multimedia resources designed to improve student behavior. I will be your facilitator throughout this four-part professional development program.

Our subject today, as illustrated by the students featured, is dyslexia. In the first part of this course we’ll review some of the basics and try to answer questions like just what is dyslexia. What are its causes and effects, its signs and signals, and what is the research telling us about what seems to be an increase in prevalence among students.

Later, we’ll move into testing and evaluation, learning strategies and accommodations for students at various grade levels. We will also review other considerations like the social and emotional impact of learning challenges – and where to turn for assistance. So, let’s get started.

Researchers say a part of the human brain is built specifically for speech... but there is no counterpart in the brain “made” for written language. In other words, reading does not come naturally.

“Put a child on a desert island, they will speak, but they will not learn to read. So reading is something that our culture has invented. And it’s just a purely arbitrary way that we map our spoken language onto print.”

– Guinevere Eden, Ph.D., Georgetown University Medical Center

Add dyslexia to the mix, and learning to read and to be a life-long reader can be especially challenging. Let’s begin with the basics. Experts say the job of a reader is to take print off the page and connect that print to sound. And to answer the question, “just what is **dyslexia**,” we can use a common instructional technique and pull the word apart:

*“The “**dys**” of the word **dyslexia** is Greek in its origin because the Greeks wrote the sound “I” and “e” with a “y.” **Dys**” in front of a word, means **difficulty** with and the word “**lexia**” means **language**. So a child with dyslexia has difficulty with language but it’s very specific to the phonological module of the brain. That piece of the brain is what helps us to process the linguistic sounds of a language, hold them to memory long enough to read them and write them.”*

– Brenda Fitzgerald, Ed.S, Curriculum and Instruction Specialist

According to the International Dyslexia Association, dyslexia is a **developmental reading disorder** that occurs when the brain does not properly recognize and process certain symbols. It occurs when there is a problem in areas of the brain that help interpret language. It is **not** caused by vision problems.

The disorder is a specific information processing problem that does not interfere with one's ability to think or to understand complex ideas. In fact, most people with developmental reading disorder have normal intelligence, and many have above-average intelligence.

“This is not necessarily a horrible situation... there are many gifts that can come along with dyslexia as well. Most dyslexics are extremely creative and artistic and they think outside the box.”

– Dr. Leslie Stuart, Psychologist

To highlight that premise, the International Dyslexia Association publishes a list of people who are very successful, as examples of the many highly creative and intelligent who are dyslexic:

- Albert Einstein
- Walt Disney
- Film Director Steven Spielberg
- Actor Tom Cruise
- Journalist Anderson Cooper
- Olympic Athlete Bruce Jenner
- Novelist John Irving
- Musician and Songwriter John Lennon
- Heisman Trophy Winning Football Player Tim Tebow, to name a few.

So, you can see that those with dyslexia are often capable or even gifted in areas such as art, computer science, design, drama, electronics, math, mechanics, music, physics, sales, and sports.

“When I talk with older kids or adults who’ve been diagnosed, they have a perseverance which I think is unique. They know how to problem solve because things haven’t come necessarily easy to them growing up.”

– Dr. Leslie Stuart, Psychologist

How widespread is dyslexia? According to Yale University research, as many as one in five Americans have some degree of dyslexia, although only about 5 percent of children have been formally diagnosed.

Students with dyslexia might exhibit symptoms including slow or inaccurate reading, poor spelling, poor writing, or mixing up similar words. Not all of these will qualify for special education, but they are likely to struggle with many aspects of academic learning and are likely to benefit from systematic, explicit, instruction in reading, writing, and language.

Dyslexia occurs in people of all backgrounds and at all intellectual levels. **It runs in families;** parents with dyslexia are very likely to have children with dyslexia.

While the exact causes of dyslexia are still not completely clear, anatomical and brain imagery studies show differences in the way the brain of a dyslexic person develops and functions.

“There’s fascinating brain research now that can really identify areas of the brain that are being used in dyslexic individuals as compared to individuals who don’t have dyslexia. They can actually see new neuron pathways being created with good intervention and good remediation.”

– Dr. Leslie Stuart, Psychologist

Are there different types of dyslexia? Absolutely. Dyslexia can manifest itself in different ways. It is common for children with dyslexia to experience one or several of these types of challenges and problems:

- The **auditory** side of language...understanding the way **sounds are translated into symbols**
- Struggling to **link multiple words together**, even if the words can be read without a problem
- Difficulty with **language comprehension** (for example, taking a long time to process words, by the time the end of a paragraph is reached, the beginning has been forgotten.)

And, for young students like Anna, who are just learning to read, a big challenge of dyslexia makes it **difficult to recognize letters**.

The word is sell – s-e-l-l – but for Anna Gaffney, simple words are sometimes unreadable. Even sounding out individual letters can be difficult.

“I’ll like think B is really D. It’s just frustrating because I’m like wanting to get the word right, but it’s hard to figure out in my mind.”

– Anna Gaffney, Age 10

Experts say Anna’s brain is different than other kids... and that difference is real. New studies use brain imaging to identify the learning disability in a child’s mind. In most kids, areas of the brain “light up” as they figure out new words. In children with learning disabilities, those areas do not light up at all. It’s as if that part of their mind is simply turned off.

“I think some people need to see that it’s real. Kids don’t all learn the same way, and once we step back and understand how brains work and how brains develop, we’re able to help kids learn that might have been perceived as learning disabled. What we’re saying is that we just need a different strategy for helping them be successful.”

– Dr. Paul Yellin, Pediatrician

The problems displayed by individuals with dyslexia involve difficulties in acquiring and using language. It is a myth that individuals with dyslexia “read backwards.” But spelling can look quite jumbled when students have trouble remembering letter symbols for sounds and forming memories for words. From word and letter reversals to fluency and spelling issues, experts call them dyslexia’s red flags.

“The reversals that you really should be concerned about are reversals of the letters within the words. For instance ‘was’ for ‘saw’, ‘form’ for ‘from’...those are the types of reversals you are looking for.”

– Brenda Fitzgerald, Ed.S

“Depending on the age of the child, we want to look out for different things. In very young children a lot of times we see them struggling to learn alphabet letters, letter sounds, struggling to really blend sounds, struggling to remember sight words and the more emerged in the reading process kids get, the more we start to really see the struggles in the reading area, phonics, reading fluency and spelling. In the older grades spelling always seems to remain a weakness. So that’s always a red flag. But we see more of the reading fluency kinds of issues. So kids can get to the point where they can learn to read but the fluency always seems to

remain a weakness.”

– Dr. Leslie Stuart, Psychologist

The general problems experienced by students with dyslexia can include **learning to speak, organizing written and spoken language, learning letters and their sounds, memorizing number facts, spelling, reading and learning a foreign language**. An important first step, of course, is to understand, recognize and be on the look-out for those common signs and signals that might indicate dyslexia in our youngest students.

“In the pre-school years, here’s what you’re looking for – and when I say pre-school it’s around age four. You are looking to see if the child can attend to rhyme. That means that if you are saying “Mary had a little lamb, its fleece was white as snow” and that child cannot even mimic or produce that back, and can’t attend to rhyme, that’s a huge red flag for a child with dyslexia. That means that if they are not attending to the phonemes in the English language. The other thing you are looking for in preschool is a child who omits a syllable from a word. For instance often you will hear them say for spaghetti ‘sgetti.’ You are also looking for family history. The other thing you are looking for in preschool would be any kind of difficulty remembering the letters of their name.”

– Brenda Fitzgerald, Ed.S

As students move into second and third grades, educators may see a more pronounced inability to learn *basic* reading skills.

“So you are always looking for more than one red flag. As they move into second grade, here’s how it presents itself in the classroom. That’s the child that omits words, guesses, they reverse, they struggle with the basic reading skills. They have retrieval issues... it’s difficult for them to retrieve in the oral language realm. Their reading is not fluent, it’s choppy. Their spelling is disastrous. Those are the things you are looking for in second and up.”

– Brenda Fitzgerald, Ed.S

When it comes to second- and third-grade students, here’s another way to evaluate the need for intervention. Answering “no” to some or most of these questions may indicate a need for more formal intervention. Does the second or third grader:

- **Remember simple sequences** such as counting to 20, naming the days of the week, or reciting the alphabet?
- Have an **understanding of rhyming words**, such as knowing that **fat** rhymes with **cat**?
- Recognize words that begin with the same sound (for example, that **bird**, **baby**, and **big** all start with **b**)?
- Easily **clap hands to the rhythm of a song**?
- Frequently **use specific words to name objects** rather than words like “that thing”?
- Easily **remember spoken directions**?
- **Remember names of places and people**?
- Show **understanding of right-left, up-down, front-back**?
- Can the student **sit still for a reasonable period of time**?

Despite the “red flags” and signs that trouble may lie ahead, remember that only a formal evaluation will confirm a dyslexia diagnosis. While students diagnosed with dyslexia may qualify

for accommodations through a 504 Plan; not every student diagnosed with dyslexia will qualify for special education services or an Individual Education Program (IEP).

“Now often we can see those red flags but you need the full psychological evaluation to really make that diagnosis. Because again what we are looking at is not just one area but we are looking at a number of areas and we are looking at discrepancies or inconsistencies or patterns or things like that.”

– Dr. Leslie Stuart, Psychologist

We know that educators are resourceful, resilient and relentless in educating their students, despite hurdles that learning disorders like dyslexia can present. Ongoing, promising new research into the human brain and how we learn is creating new teaching approaches. Some experts, in fact, refuse to accept that learning differently is a disability at all.

“What we are understanding is that kids’ brains are much more resilient than we once thought they were. Because what happens in kids’ minds is, they say “I’m dumb.” They see it as sort of a global problem. It spills over and doesn’t have boundaries around it. And what we have found is that you can pinpoint where the weaknesses are and then work on them.”

– Dr. Paul Yellin, Pediatrician

Yes, the brain is resilient and can adapt to learning challenges. In this part of the program we have learned exactly what dyslexia is, the challenge it presents to students and its warning signs.

In the next module we’ll focus on the importance of early detection – the methodology and protocol to test, evaluate and diagnose dyslexia – and best practices for developing a plan to face its challenges.