PEER-REVIEWED

Through a Librarian's Eye

Understanding Dysgraphia and Dyslexia

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When my son was six years old and preparing to start first grade, he was diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD). By the end of his first year of school, he struggled with handwriting and continued to write several of his letters backward.

When I mentioned my concern at a pediatrician appointment, the doctor advised me that it could be a sign of dysgraphia, which is common among students with ADHD. Dysgraphia? I was aware of dyslexia but never heard of dysgraphia before. I filed that information away and continued working with him on his other ADHD symptoms.

Fast forward four years, after the COVID lockdown and a mix of online and in-person schooling, my son was now in fifth grade, and his handwriting continued to be a struggle, both writing by hand (the act of producing the text) and his handwriting (the text produced). It could take him twenty minutes to put a single word on a worksheet, and continued to write some letters backward, especially "b" and "d."

After one particularly desperate evening of trying to complete homework, I handed him his laptop and told him to type his answers or, better yet, dictate what he wanted to say and then edit. He followed my instructions, and after only thirty minutes, he had completed the assignment's questions, giving detailed answers that used complete sentences and strong vocabulary. He was so proud of himself.

I was shocked by the difference and took this as confirmation that he was struggling with dysgraphia. I knew immediate action was needed to better support him. But when I contacted his school to request that he be evaluated for dysgraphia, school personnel were not familiar with the term. I knew then that as a librarian, an educator, and a mom, I needed to advocate on his behalf while also raising awareness of dysgraphia and its impact on students and their learning process.

What Is Dysgraphia?

Dysgraphia is a neurological disorder or learning disability of written expression and is common among students with ADHD.[1] Students with sloppy or poor handwriting are often mistaken as having dysgraphia, but dysgraphia is much more than just poor handwriting. Symptoms include

- difficulty forming letters;
- awkward or painful holding and gripping of a pencil;
- difficulty articulating thoughts on paper; and
- difficulty forming grammatically correct sentences.

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Dysgraphia is often categorized as acquired dysgraphia (associated with a brain injury) or developmental dysgraphia. Developmental dysgraphia is traditionally broken out into three additional categories—motor dysgraphia, which links fine motor skills and visual perception; spatial dysgraphia, which affects letter spacing; and linguistic dysgraphia, which "impacts the language processing skills required in the writing process."[2]

Dysgraphia is often detrimental to student learning; even in the digital age, handwriting is a critical skill used in everyday life.[3] Handwritten communications, from note-taking to memo writing, remain common, and the process of writing by hand is often used as an effective trick to help with memorization and organizing thoughts. All of this can be frustrating for students with dysgraphia.

While many who work in schools and libraries have a general understanding of dyslexia, many have never heard of dysgraphia. Yet, it is difficult to discuss dysgraphia without talking about dyslexia as well. The symptoms are very similar, and they are both considered language disorders and often mistaken for each other.

What Is Dyslexia?

Dyslexia is a neurological disorder or a learning disability that affects a student's reading ability in the form of phonemic awareness or phonological processing impacting a student's ability to read accurately and fluently.[4]

Symptoms include

- difficulty in identifying the individual sounds in words;
- difficulty with letter recognition, rhyming, and recalling letter sounds; and
- struggles with reading speed and comprehension.

Statistically, diagnoses of dyslexia are made equally across genders. It's also been found that wearing special glasses or using special fonts will not improve the symptoms of dyslexia, despite common misconceptions and myths.[5] Another important statistic to note is that "30 percent of children with dyslexia also have at least a mild form of ADHD."[6] According to *Psychology Today*, "children with ADHD are at a higher than average risk of developing dysgraphia."[7]

Dyslexia vs. Dysgraphia

While dyslexia is protected under the Americans with Disabilities Act (ADA), dysgraphia is not recognized by the American Psychiatric Association (APA) in its *Diagnostic and Statistical Manual of Mental Disorders 5th Edition* (*DSM-5*). Instead, the *DSM-5* lists problems in writing under the 'specific learning disorder' diagnosis category," which does align with dysgraphia disability.[8] While these disabilities share similarities, and students can have a diagnosis of both, dysgraphia and its interventions are not as commonly known.[9]

Both disorders are recognized as learning disabilities, allowing for students to have special classroom services protected under the Individuals with Disabilities Education Act (IDEA).[10] There are no standardized tests or formalized evaluations to diagnose dyslexia or dysgraphia. Rather, diagnosis of either is determined through observations and evaluations conducted at schools or by licensed professionals who specialize in learning disorders. Further, there are no medical treatments for either. School intervention and accommodations are the recommended courses of action to assist students and improve their overall success.

The demographic I work with are very avid readers, but they don't understand that not every child learns the same way. I was trying to explain that we all learn differently. Some of us are auditory, visual, kinesthetic.

What do librarians and educators need to know?

While researching dysgraphia and dyslexia, I discovered two blog articles that offered insightful information. *Storytime Solidarity* features an article by Juana Flores (JF, below), a children's librarian at Brooklyn Public Library Kings Highway Branch, who has dysgraphia. *Pop Goes the Page,* a Cotsen Children's Library blog, features an interview with Marissa Warren (MW, below), a teen services librarian at Princeton Public Library, who has dyslexia.[11]

I interviewed both of them via Zoom to assess what they feel librarians and educators should know about the disabilities.

What do you wish teachers and librarians knew about dysgraphia or dyslexia?

JF: The way I was diagnosed [with dysgraphia], it did not have to do with the penmanship process part. My fine motor skill is fine. It is more of writing coherently and having the mental flow process that is coherent, and a tendency to have grammatical pattern errors. When I'm in meetings, and they put us in groups, it is tormenting to me, as I don't write well on the spot. When I have anxiety, my penmanship becomes worse. I can write legibly [and clearly] when I am relaxed.

[During my undergrad program], before laptops and computers, like in 1989, my professor told me to bring in my typewriter, that I was going to take my exam using it. We get these little angels along the way that help us, and she was an angel in that way. I was taking a remedial course, and I kept repeating it because I couldn't pass the writing test. By having me use my typewriter, she was the one who got me through those courses. As soon as I began taking exams through the computer, that also helped a lot. Through all my experiences, I learned to compensate and adapt.

MW: I think in public libraries . . . in regards to disabilities, yes, we have to be ADA compliant, but there is more that we can do. Consistency is the key. For anybody with any learning difference and ADHD, consistency is key. For a student to go from classroom to classroom and see that consistency is really key makes them feel seen and heard and helps take away the anxiety of 'I'm going into this next classroom and I don't know if this teacher is aware I have this, will be accepting of it, or is going to work with me. But consistency across the board takes so much anxiety away and gives the student the ability to focus that they wouldn't have otherwise.

Does your dyslexia affect your writing?

MW: For me, it is just reading and math. I also have dyscalculia. Letters and numbers are a struggle for me. I went to a school for dyslexia, and I had friends for whom writing was a struggle. For example, for me, I still cannot read an analog clock to this day, and I don't know if I ever will!

What strategies or tools do you use today that help?

JF: Definitely typing information. A lot of things are getting computerized anyways, but still having kids writing is really important. *Grammarly* [a writing assistant that works across platforms to review spelling, grammar, punctuation, and more] has been a blessing and a personal strategy tool that I use. I also have other people proof my writing.

One of my strategies is to not always be forthright with your disability. Only [share information about disability] when it will empower and not disadvantage you in any way.

MW: I do things differently depending on what it is. For example, one day I might handwrite everything out and highlight, so having highlighters available is essential. Especially [having highlighters] in different colors so each color means something different, like the main idea or a detail.

Talk-to-text is brilliant and has been one of the best things invented, in my personal opinion. It's been incredibly helpful. Sometimes I need to just get everything out and this is the easiest way.

Having somebody look over my things [is one strategy]. I am very open about my dyslexia. My co-workers have been very, very gracious about it, and they will [proofread]. Sometimes, I still switch up words, and I want to make sure what I'm trying to say is what I am saying, so [proofing] is very important. Being able to have a designated computer where I can have the fonts set and have the computer set up to my comfort is important. Having hi/lo books that don't look super young are extremely helpful [for students].

Anytime I found a word I didn't know, we wrote that word down, and then our teachers would have us rewrite that word and look up the definition. I actually did this all through high school. Besides the dictionary, another thing that is helpful to people with learning differences, especially in our tech heavy society, is writing letters, which helps with muscle memory. I also found that in college, I hand wrote all of my notes instead of typing.

You mentioned hi/lo books. What about graphic novels?

MW: I am a huge fan of graphic novels. You have to [use] inference and figure out reading between the lines, and that's not an easy skill to learn, but really helpful to have, especially for dyslexia. I may not know what the word is, but I see something going on in the picture and that gives me a clue, whether or not I know the word or will learn it later. Especially for me, I would know that word had something to do with superheroes fighting in that moment, and then when I did learn the definition, it all came together and clicked. I do wish more teachers and librarians saw their value, not just for students with dyslexia, but also for ESL students.

How are we connecting with others? Is it in paper format, or are we connecting via social media with audio and visual posts? Are we offering programs in a space that is wheelchair accessible? Are we offering sensory storytime?

In my experience, my teachers always taught us to be advocates for ourselves. Our parents are advocates, but as we become older, we have to become our own advocate. I think that is really important and hard, especially for kids as it is easy [for some people] to dismiss what kids are saying. [Strategy-wise], letting kids try different things is really key, I think, because we function in such different ways, and we all function so differently that what works for one of us doesn't work for another one. You have to try some of these ridiculous things to see what will click and help you. I think that [need for exploration] is important for teachers, parents, and librarians to understand.

What accommodations or strategies do you feel would be helpful for schools and/or public libraries to use?

JF: Show parents multimedia books or books with different fonts, graphic novels, or what I call doodle books, such as *Diary of a Wimpy Kid, Dork Diaries,* even James Patterson would be great books for kids. For someone with dysgraphia, typing is the key, but they still need to practice writing. For me, my teachers folded a piece of paper up into four columns; each word was in each space; and then I was taught to use my pinkie finger to help with spatial [awareness] and separating my words.

College-ruled paper also helped me, so have kids explore with different paper lines and textures. Taking extra time and using separate testing area accommodations [are helpful]. Ask the teacher what type of exam it will be: multiple choice, fill in, or writing. If the test was multiple choice, I was fine around others. However,

if the test was a writing test, I definitely struggled around others, and I needed my typewriter or computer. Another accommodation that helped was to have someone record answers [oral dictation]. When giving writing prompts or during programming, allow kids to draw!

What about forms we fill out by hand every day, like job applications, library card applications, and medical records? Maybe just having an iPad available to fill out applications or forms could be an accommodation?

JF: At my library, we have a QR code for patrons to send electronically, and then we have the paper submission as well. Most parents submit for students. We have a library lab which is a STEM program, so for this program, we have a form for the hypothesis and a prompt that says you can write or you can draw your observation. We also tell the students that we don't collect these forms, but they will help with the students' experience.

MW: I went to schools that were specifically geared for kids with dyslexia from second grade all the way through high school. In our English classes, we would listen to a book on audio as well as read it. There were definitely times where I just was not tuned in whatsoever. But then there were times where the audiobook really did help; the audio actually clarified it. [That knowledge] built a little building block of confidence. . . . And even in grad school, I would read the book and listen to it on audio. Something about the two inputs that was really helpful. The information kind of stuck a little bit more. Everybody's a different learner.

So in between working at Princeton Public Library and earning my Masters, I was a lead replacement in a public elementary school library for about six months, so I kind of saw that side of the library world, and then the public side of the library world. Audiobooks were definitely really important, and not just for kids with dyslexia, but also for those who were ESL. There wasn't enough funding for more audiobooks, but the kids who were able to check them out found them immensely helpful. The nice thing about it, too, is that listening to audiobooks doesn't necessarily pinpoint you as somebody who might have a learning difference. And that, I think, is also key.

Things have changed. Things are a lot more holistic in classrooms, I think, and a lot more integrated. And that's really key. Part of that is almost, in a way, just owning who you are and how you learn.

Having the things easily accessible in the classroom for students, letting them explore and try different things is really key . . . to help create a safe environment [for the students] and [help them] feel comfortable.

How has dysgraphia or dyslexia influenced your career and library programs?

JF: I just had a parent come in the other day who wanted their child to read classics like Mark Twain, but [the child] was not a motivated reader. The demographic I work with are very avid readers, but they don't understand that not every child learns the same way.

I was trying to explain that we all learn differently. Some of us are auditory, visual, kinesthetic.

Take a moment to look around our library or space and gauge its accessibility for our patrons with disabilities. Will a student who is struggling with reading know where to find a picture or fantasy book? What does the signage look like? Is it all text or are pictures used too? Is the font easy to read?

Before I was a librarian, I worked with individual development . . . and the whole universal design of teaching [learning], while knowing that we all learn differently. I try to incorporate all of those kinds of ways. I use a lot of visuals. We have families from other countries, and English is not their first language. I try to make things more concrete if possible. . . . If I am talking about an apple, I try to have an apple with me to make it more concrete. I use a lot of props, audio, and I really am movement inclined and use music [in my programs].

MW: From day one, I went in knowing that I had such an aversion to libraries [and wondered] how can I make them better, not only for others, but for myself as well. It led me to fighting and advocating and making strides for other disabilities, not just dyslexia.

There is more that I think we can do, like [using] pictographs. I think things that we do for kids can be carried over to teens and even adults and not in a belittling way. I know if there are too many words, you won't read it, so by adding pictures or infographics, people will stop and read a little more.

How are we connecting with others? Is it in paper format, or are we connecting via social media with audio and visual posts? Are we offering programs in a space that is wheelchair accessible? Are we offering sensory storytime?

Font is a big one. Is the font kid-friendly? How can we make fonts more readable? Even in public libraries, we see so many new people every day. [Staff] know obviously these things are connected, but to anyone coming in from the outside, it may not be so obvious. Many of these things are automatically built into what I do, but I even have to stop and reevaluate what I am doing and how I am doing it to see if I am meeting the needs of the people in our community who we tend to forget about. But it is not only [people in] our community that have disabilities, it is also our staff. We need to remember our staff, too!

Conclusion

Flores's and Warren's insights about dysgraphia and dyslexia, respectively, and how they use their experiences to improve libraries for their students and patrons are of benefit to the field of library science as a whole.

Flores said that sometimes we meet angels along the way who help. I think that these two incredible angels inspire others and set an example for advocacy for those with a disability and for disability awareness. As a mom of a child with dysgraphia, I am grateful for the opportunity to speak with each of them and learn more about how I can better support my son in his educational journey.

The methods used by Flores and Warren and the experiences they share offer me, as an educator and a librarian, a way to reconsider how I can better support my students and community. I encourage us all to take a moment to look around our library or space and gauge its accessibility for our patrons with disabilities.

Will a student who is struggling with reading know where to find a picture or fantasy book? What does the signage look like? Is it all text or are pictures used too? Is the font easy to read? This type of self-assessment is easily done and guides us to accommodations that need to be made and can be offered with little effort on our part. More research, resources, and trainings are needed to help librarians and library staff across the profession better reach and accommodate students and patrons with dysgraphia, dyslexia, and other learning disabilities. &

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