The Dyslexia Toolkit

An Essential Resource Provided by the National Center for Learning Disabilities

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What Is Dyslexia?

As with other learning disabilities, dyslexia is a lifelong challenge that people are born with. This language processing disorder can hinder reading, writing, spelling, and sometimes even speaking. Before we go further, let's take a look at how dyslexia can manifest itself in writing:

This text was taken from our interview with Stanford University graduate Ben Foss. You'll find the interview on page 34.

> It is criticla they you experiment with being public about who you are and see what ifeels like not to hide on this issues. It canbe scary to tell people that you are of part of a lable that is associated with being lazy or stupid. I have fel this sting. The day I turned in mt thesis at Stanford Law School, a classmate laughed outloud at the registers office bcause I had the term learning disabilities in my title. "They can;t articulate anything!" I looked at him and explained that I had a learning disabili-ties. He was embarrassed and appologized.

Dyslexia is not a sign of poor intelligence or laziness. It is also not the result of impaired vision. Children and adults with dyslexia simply have a neurological disorder that causes their brains to process and interpret information differently.

Dyslexia occurs among people of all economic and ethnic backgrounds. Often more than one member of a family has dyslexia. According to the National Institute of Child and Human Development, as many as 15 percent of Americans have major troubles with reading.

Much of what happens in a classroom is based on reading and writing. So it's important to identify dyslexia as early as possible. Using alternate learning methods, people with dyslexia can achieve success.

What Are the Effects of Dyslexia?

Dyslexia can affect people differently. This depends, in part, upon the severity of the learning disability and the success of alternate learning methods. Some with dyslexia can have trouble with reading and spelling, while others struggle to write, or to tell left from right. Some children show few signs of difficulty with early reading and writing. But later on, they may have trouble with complex language skills, such as grammar, reading comprehension, and more in-depth writing.

Dyslexia can also make it difficult for people to express themselves clearly. It can be hard for them to use vocabulary and to structure their thoughts during conversation. Others struggle to understand when people speak to them.

It becomes even harder with abstract thoughts and non-literal language, such as jokes and proverbs.

All of these effects can have a big impact on a person's self-image. Without help, children often get frustrated with learning. The stress of dealing with schoolwork often makes children with dyslexia lose the motivation to continue and overcome the hurdles they face.

What Are the Warning Signs?

Dyslexia has different warning signs in people of different ages. See pages 5-16 for more information on signs of dyslexia in different age groups.

Everyone struggles with learning at times. Learning disabilities such as dyslexia, however, are consistent and persist over time. The following lists are a general guide, for identifying dyslexia. Our Interactive Learning Disabilities Checklist is an additional resource to consider. Finally, be aware that some of the "symptoms" listed also apply to other learning disabilities as well as other disorders such as Attention-Deficit/Hyperactivity Disorder (AD/HD), which often co-exist with LD.

If you or your child displays several of these warning signs, don't hesitate to seek help. Check off the warning signs that apply to your child, and take the list to the professional(s) who you consult. With proper identification and support, your child will be better able to succeed in school, the workplace, and in life. No one knows your child better than you do, so trust your instincts if you think help is needed.

How Is Dyslexia Identified?

Trained professionals can identify dyslexia using a formal evaluation. This looks at a person's ability to understand and use spoken and written language. It looks at areas of strength and weakness in the skills that are needed for reading. It also takes into account many other factors. These include family history, intellect, educational background, and social environment.

How Is Dyslexia Treated?

It helps to identify dyslexia as early in life as possible. Adults with unidentified dyslexia often work in jobs below their intellectual capacity. But with help from a tutor, teacher, or other trained professional, almost all people with dyslexia can become good readers and writers. Use the following strategies to help to make progress with dyslexia:

• Expose your child to early oral reading, writing, drawing, and practice to encourage development of print knowledge, basic letter formation, recognition skills, and linguistic awareness (the relationship between sound and meaning).

• Have your child practice reading different kinds of texts. This includes books, magazines, ads, and comics.

• Include multi-sensory, structured language instruction. Practice using sight, sound, and touch when introducing new ideas.

• Seek modifications in the classroom. This might include extra time to complete assignments, help with note taking, oral testing, and other means of assessment.

• Use books on tape and assistive technology. Examples are screen readers and voice recognition computer software.

• Get help with the emotional issues that arise from struggling to overcome academic difficulties.

Reading and writing are key skills for daily living. However, it is important to also emphasize other aspects of learning and expression. Like all people, those with dyslexia enjoy activities that tap into their strengths and interests. For example, people with dyslexia may be attracted to fields that do not emphasize language skills. Examples are design, art, architecture, engineering, and surgery.

Common Warning Signs of Dyslexia: Pre-K to Grade 2

While dyslexia is most often formally identified in school-age children, signs of dyslexia can frequently be detected in preschoolers.

If you're concerned about your child, review the following checklist of common warning signs of dyslexia in children in pre-kindergarten to grade 2.

For at least the past six months, my child has had trouble:

Language:

☐ Learning the alphabet, numbers, and days of the week

☐ Naming people and objects

☐ Speaking precisely and using a varied, age-appropriate vocabulary

☐ Staying on topic

☐ Getting or staying interested in stories and books

☐ Learning to speak (delayed compared to his peers)

- ❑ Understanding the relationship between speaker and listener

- ❑ Pronouncing words correctly (Example: says "mazagine" instead of "magazine")

- ❑ Learning and correctly using new vocabulary words

- ❑ Distinguishing words from other words that sound similar

- ❑ Rhyming words

- ❑ Understanding instructions/directions

- ❑ Repeating what has just been said

Reading:

- ❑ Naming letters

- ❑ Recognizing letters, matching letters to sounds, and blending sounds when speaking

- ❑ Learning to read as expected for his/her age

- ❑ Associating letters with sounds, understanding the difference between sounds in words

- ❑ Accurately blending letter sounds within words

- ❑ Recognizing and remembering sight words

- ❑ Remembering printed words

- ❑ Distinguishing between letters and words that look similar

- ❑ Learning and remembering new vocabulary words

- ❑ Keeping one's place – and not skipping over words – while reading

- ❑ Showing confidence and interest in reading

Writing:

- ❑ Learning to copy and write at an age-appropriate level

- ❑ Writing letters, numbers, and symbols in the correct order

- ❑ Spelling words correctly and consistently most of the time

- ❑ Proofreading and correcting written work

Social-Emotional:

- ❑ Making and keeping friends

- ❑ Interpreting people's non-verbal cues, "body language," and tone of voice

- ❑ Being motivated and self-confident about learning

Other:

❑ Sense of direction/spatial concepts (such as left and right)

❑ Performing consistently on tasks from day to day

Common Warning Signs of Dyslexia: Grades 3 to 8

Are you concerned that your elementary or middle school child isn't learning, communicating, or relating to others as successfully as his or her peers? Does your child especially struggle with reading? Is it affecting your child's confidence and motivation?

If so, the following checklist of common warning signs of dyslexia in children in grades 3 to 8 may help clarify your concerns.

For at least the past six months, my child has had trouble:

Language:

- ☐ Understanding instructions or directions

- ☐ Repeating what has just been said in proper sequence

- ☐ Staying on topic and getting to the point (gets bogged down in details)

- ☐ Naming people and objects

- ☐ Speaking with precise, accurate language, proper grammar, and a varied vocabulary

- ☐ Distinguishing between words that sound similar

- ❏ Pronouncing words correctly

- ❏ Speaking smoothly, without much halting or use of "filler words" (like "um")

- ❏ Rhyming

- ❏ Understanding humor, puns, and idioms

Reading:

- ❏ Reading age-appropriate content with good fluency

- ❏ Reading aloud or silently with good understanding

- ❏ Feeling confident and interested in reading

- ❏ Remembering sight words and other printed words

- ❏ Learning and remembering new vocabulary words

- ❏ Accurately analyzing unfamiliar words (tends to guess instead)

- ❏ Reading words and letters in the correct order, seldom reversing or skipping over them

- ❏ Understanding word problems in math

Writing:

- ❏ Mastering spelling rules

- ❏ Spelling the same word consistently and correctly

- ❏ Writing letters, numbers, and symbols in the correct order

- ❏ Proofreading and correcting self-generated work

- ❏ Expressing ideas in an organized way (older children)

- ❏ Preparing/organizing writing assignments (older children)

- ❏ Fully developing ideas in writing (older children)

- ❏ Listening and taking notes at the same time

Social-Emotional:

- ❏ Participating in a peer group and maintaining positive social status

- ❏ Interpreting people's non-verbal cues, "body language," mood, and tone of voice

- ❏ Dealing with peer pressure, embarrassment, and expressing feelings appropriately

- ❏ Setting realistic social goals

- ❏ Maintaining positive self-esteem about learning and getting along with others

- ❏ Maintaining confidence about "fitting in" with his classmates and other peers

Other:

❏ Learning/remembering new skills; relies heavily on memorization

❏ Remembering facts and numbers

❏ Sense of direction/spatial concepts (such as left and right)

❏ Performing consistently on tasks from day to day

❏ Applying skills from one situation to another

❏ Learning new games and mastering puzzles

Common Warning Signs of Dyslexia: Teens

Are you concerned because your teen is struggling with academic learning in school? Have you noticed any social awkwardness or a tendency to keep a distance from peers? Does lack of motivation seem to be a problem? Do you worry about whether low self-esteem is taking the joy out of learning?

These may all be signs of a not-yet-identified learning disability (LD) such as dyslexia. Look over the following checklist of common warning signs of dyslexia in teens.

For at least the past six months, my teen has had trouble:

Language:

- ☐ Speaking fluently (not haltingly) and precisely, using a rich vocabulary

- ☐ Understanding instructions/directions

- ☐ Using correct grammar and vocabulary

- ☐ Understanding the relationship between speaker and listener; participating in conversation appropriately
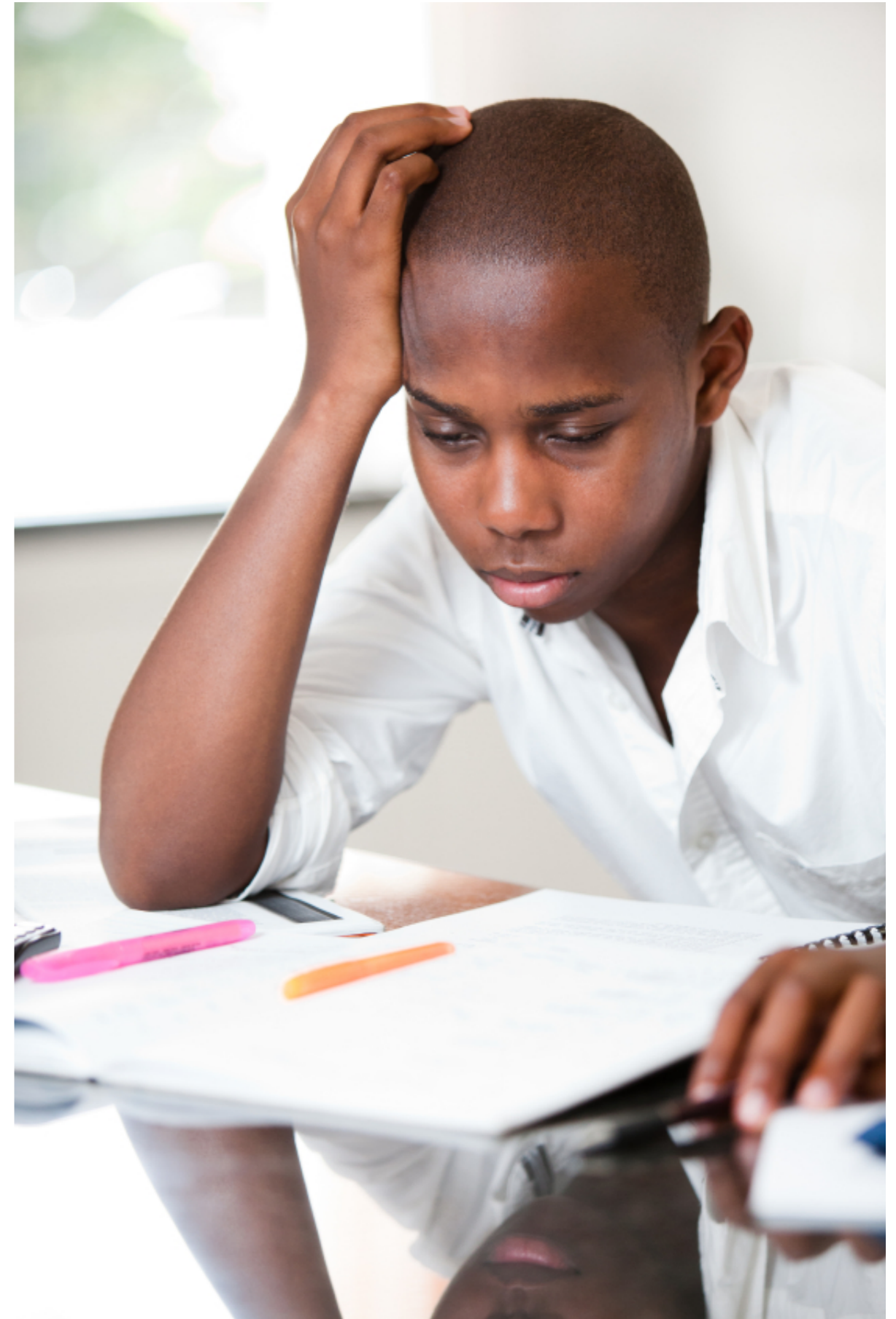
- ❑ Staying on topic and getting to the point (gets bogged down in details)

- ❑ Summarizing a story

- ❑ Distinguishing between words that look or sound similar

- ❑ Understanding non-literal language such as idioms and jokes

Reading:

- ❑ Reading with speed and accuracy for one's expected grade level

- ❑ Reading aloud

- ❑ Reading without losing one's place or substituting/ skipping over words

- ❑ Recognizing sight words

- ❑ Using word analysis (not guessing) to read/learn unfamiliar words

- ❑ Finding enjoyment and confidence in reading

Writing:

- ❑ Spelling accurately and consistently

- ❑ Proofreading and editing written work

- ❑ Preparing an outline for written work

- ❑ Expressing ideas in a logical, organized way

- ❑ Fully developing ideas in written work

Social-Emotional:

- ❑ Picking up on other people's moods and feelings

- ❑ Understanding and responding appropriately to teasing

- ❑ Making and keeping friends

- ❑ Setting realistic goals for social relationships

- ❑ Dealing with group pressure and embarrassment, and unexpected challenges

- ❑ Having a realistic sense of his or her social strengths and weaknesses

- ❑ Being motivated and confident about learning and relationships

Other:

- ❑ Organizing and managing time

- ❑ Navigating space and direction (e.g., knowing left from right)

- ❑ Reading charts and maps

☐ Performing consistently from day to day

☐ Applying skills learned in one situation to another situation

☐ Learning and mastering new games and puzzles

☐ Memorizing

☐ Learning a foreign language

Common Warning Signs of Dyslexia: College and Adults

Have you always struggled with reading, spelling, or writing and wondered if you (or an adult you care about) might have a learning disability (LD) such as dyslexia?

It's never too late to seek help to discover whether LD is contributing to or underlying these problems. The following is a checklist of common warning signs of dyslexia in college students and adults. This list may describe struggles that have perplexed and plagued you for years!

For at least the past six months, I've had trouble:

Language:

❑ Distinguishing between words that look or sound alike

❑ Understanding non-literal language such as jokes and idioms

❑ Picking up on non-verbal cues; participating properly in conversation

❑ Understanding directions/instructions

- ☐ Avoiding "slips of the tongue" (e.g., "a rolling stone gathers no moths")

- ☐ Summarizing the main ideas in a story, article, or book

- ☐ Expressing ideas clearly, in a logical way, and not getting bogged down in details

- ☐ Learning a foreign language

- ☐ Memorization

Reading:

- ☐ Reading at a good pace and at an expected level

- ☐ Reading aloud with fluency and accuracy

- ☐ Keeping place while reading

- ☐ Using "word analysis" (rather than guessing) to figure out unfamiliar words

- ☐ Recognizing printed words

- ☐ Finding enjoyment and being self-confident while reading

Writing:

- ☐ Spelling words correctly and consistently

- ☐ Using proper grammar

- ☐ Proofreading and self-correcting work

- ☐ Preparing outlines and organizing written assignments

- ☐ Fully developing ideas in writing

- ☐ Expressing ideas in a logical, organized way

Social-Emotional:

- ☐ Picking up on other people's moods and feelings

- ☐ Understanding and responding appropriately to teasing

- ☐ Making and keeping friends

- ☐ Setting realistic goals for social relationships

- ☐ Dealing with group pressure, embarrassment, and unexpected challenges

- ☐ Having a realistic sense of social strengths and weaknesses

- ☐ Feeling motivated and confident in learning abilities at school and at work

- ☐ Understanding why success is more easily achieved in some areas compared with others

Other:

- ☐ Organizing and managing time

- ☐ Navigating space and direction (e.g., telling left from right)

❑ Accurately judging speed and distance (e.g., when driving)

❑ Reading charts and maps

❑ Performing consistently from day to day

❑ Applying skills learned in one situation to another

Testing for Dyslexia

If you suspect that a child has dyslexia, an evaluation can lead to a better understanding of the problem and to recommendations for treatment. Test results are also used to determine state and local eligibility for special education services, as well as eligibility for support programs and services in colleges and universities.

Ideally, evaluation results provide a basis for making instructional decisions and help determine which educational services and supports will be most effective.

At What Age Should People Be Tested for Dyslexia?

People may be tested for dyslexia at any age. The tests and procedures used will vary according to the age of the person and the presenting problems. For example, testing with young children often looks at phonological processing, receptive and expressive language abilities, and the ability to make sound/symbol associations. When problems are found in these areas, targeted intervention can begin immediately. Of course, a diagnosis of dyslexia does not have to be made in order to offer early intervention in reading instruction.

Who Is Qualified to Make the Diagnosis of Dyslexia?

Professionals with expertise in several fields are best qualified to make a diagnosis of dyslexia. The testing may be done by a single individual or by a team of specialists. A knowledge and background in psychology, reading, language, and education is necessary. The tester must have a thorough working knowledge of how individuals learn to read and why some people have trouble learning to read. They must also understand how to administer and interpret evaluation data and how to plan appropriate reading interventions.

What Test Is Used to Identify Dyslexia?

There is no one single assessment measure that can be used to test for dyslexia. A series of tests (or sub-sections of tests) is usually chosen on the basis of their measurement properties and their potential to address referral issues. While a variety of tests may be used, the components of a good assessment remain the same. Special attention should be paid to gathering data in areas such as: expressive oral language, expressive written language, receptive oral language, receptive written language, intellectual functioning, cognitive processing, and educational achievement.

What Should an Evaluation Include?

The expert evaluator (or team of professionals) will conduct a comprehensive assessment to determine whether the person's learning problems may be specific to reading or whether they are related to other disorders such as Attention-Deficit/Hyperactivity Disorder (AD/HD), affective disorders (anxiety, depression), central auditory processing dysfunction, pervasive developmental disorders, and physical or sensory impairments.

The following elements should be included in an assessment for dyslexia:

- Developmental, medical, behavioral, academic, and family history

- A measure of general intellectual functioning (if appropriate)

- Information on cognitive processing (language, memory, auditory processing, visual processing; visual motor integration, reasoning abilities, and executive functioning)

- Tests of specific oral language skills related to reading and writing success to include tests of phonological processing

- Educational tests to determine level of functioning in basic skill areas of reading, spelling, written language, and math

Testing in Reading/Writing Should Include the Following Measures:

- Single-word decoding of both real and nonsense words

- Oral and silent reading in context (evaluate rate, fluency, comprehension, and accuracy)

- Reading comprehension

- Dictated spelling test

- Written expression: sentence writing as well as story or essay writing

- Handwriting

- A classroom observation, and a review of the language arts curriculum for the school-aged child to assess remediation programs that have been tried

What Happens After the Evaluation?

Discuss the test results with the individual who did the testing. You should receive a written report consisting of both the test scores as well as an explanation of the results of the testing. The names of the tests administered should be specified. The strengths and weaknesses of the individual based on interview and test data should be explained, and specific   recommendations should be made.

In the case of school-aged students, a team meeting should take place when the evaluation is completed. This meeting should include the student's teachers, parents, and individuals who did the testing.

When there is a reading problem, the report should suggest recommendations for specific intervention techniques. This intervention should be provided by skilled teachers who are specifically trained in explicit, research-based instruction.

How Long Does Testing Take?

An average series of tests will take approximately three hours. Sometimes it will be necessary to conduct the testing in more than one session, particularly in the case of a young child whose attention span is short or who might fatigue easily. The extent of the evaluation is based on clinical judgment.

Who Is Entitled to Testing?

The Individuals with Disabilities Education Act (IDEA) provides for free testing and special education services for children attending public school. Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) provide protection against discrimination in federally funded programs for individuals who meet the criteria for qualification. This includes individuals diagnosed with dyslexia.

Helpful Dyslexia Resources

Looking for more information on dyslexia? Check out our homepage LD.org, which we've packed with content (including videos and podcasts) on all aspects of learning disabilities. The following resources will help you learn more about dyslexia and find local help. You can always use NCLD's Resource Locator to find programs in your local area.

- Bookshare: Bookshare is an accessible online library for people with dyslexia and other disabilities. Over 160,000 titles are available, and membership is free for students.

- Dyslexia Help at the University of Michigan: Dyslexia Help is designed to help you understand and learn about dyslexia and language disability. Visit their site for a wealth of information for individuals with dyslexia, parents, and professionals. If you've ever wondered about celebrities who have dyslexia, be sure to check out their "Dyslexia Success Stories" section.

- Dyslexia on Kids Health and Dyslexia on Teens Health: Are you a parent or educator looking for age-appropriate materials on dyslexia? These articles offer the basics of dyslexia, tailored for the reading and developmental level of kids and teens.
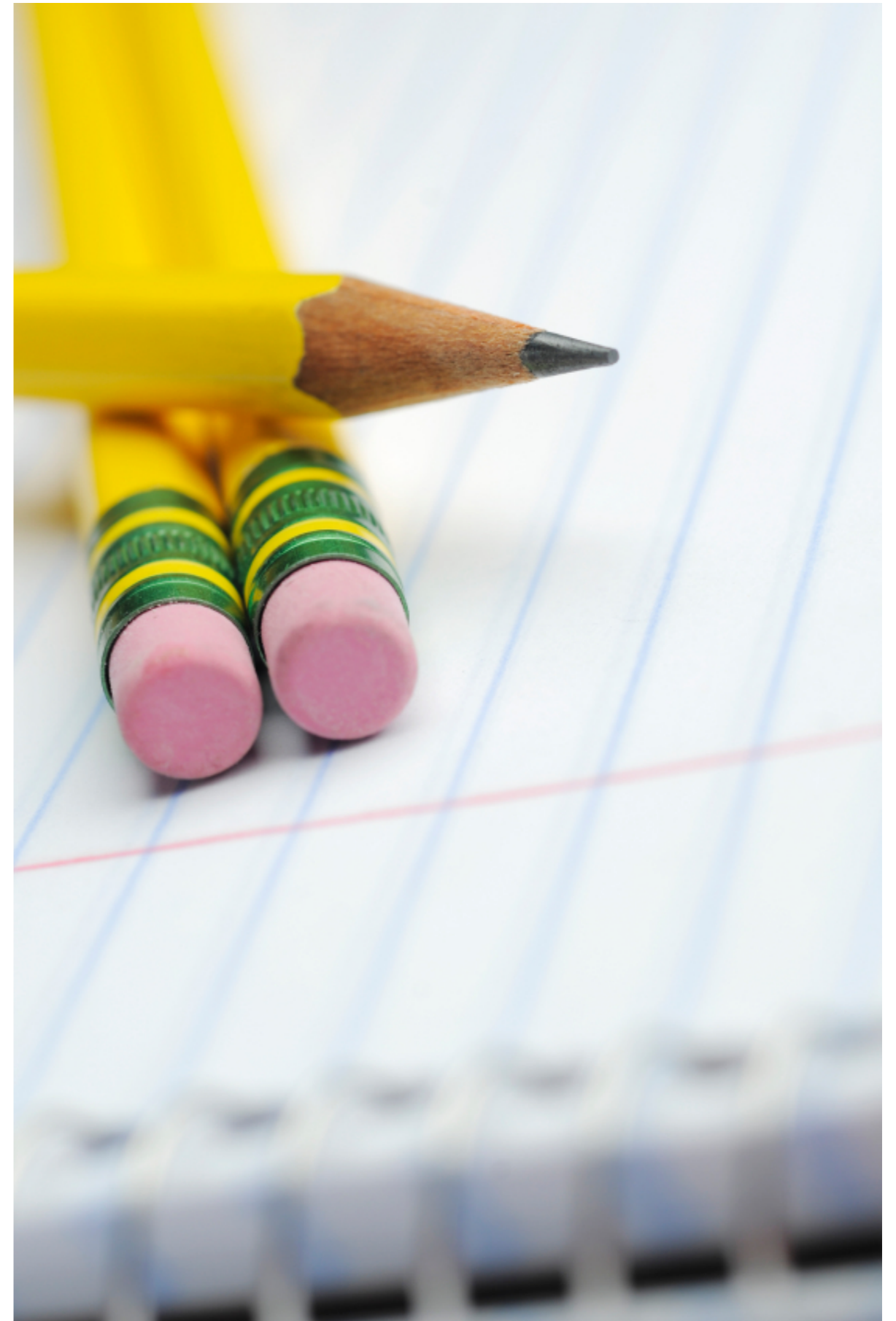
- **Eye to Eye**: Eye to Eye is a "mentoring movement for different thinkers," providing mentoring programs to students identified with learning disabilities such as dyslexia and AD/HD. Visit their site to learn more about their program and find out how to get involved.

- **International Dyslexia Association**: The International Dyslexia Association (IDA) is a national non-profit dedicated to helping individuals with dyslexia, their families, and the communities that support them. Visit their site to connect with a local branch near you, find IDA-member providers in your area, and learn more about dyslexia.

- **Learning Ally**: Learning Ally, formerly known as Recording for the Blind and Dyslexic, offers more than 75,000 digitally recorded audiobooks (including both textbooks and literary titles).

- **Parent Center Network-Parent Center Listing**: If you are the parent of a K-12 student with dyslexia, you'll want to take a look at this site and find your nearest Parent Training and Information Center (PTI). PTIs are funded by the federal government and offer parents assistance in navigating special education and their child's rights under the Individuals with Disabilities Education Act (IDEA).

- **The Big Picture: Rethinking Dyslexia (film)**: The website of the new film "The Big Picture: Rethinking Dyslexia" (scheduled for a television premiere in October 2012), offers video clips from the film, ways to take action to support people with dyslexia, and offers uplifting advice for students with dyslexia and their parents.

- **The Yale Center for Dyslexia and Creativity**: Yale University's Center for Dyslexia and Creativity seeks to illuminate the strengths of those with dyslexia, disseminate information, practical advice, and the latest innovations from scientific research, and transform the lives of children and adults with dyslexia. Visit their site to learn more about their cutting-edge research and get concrete tips for parents, educators, and individuals with dyslexia.

Video: What Is Dyslexia?

Learning disabilities expert Dr. Sheldon Horowitz talks about dyslexia and its impact on individuals with LD in this insightful video. If you're connected to the internet, click to watch the video.
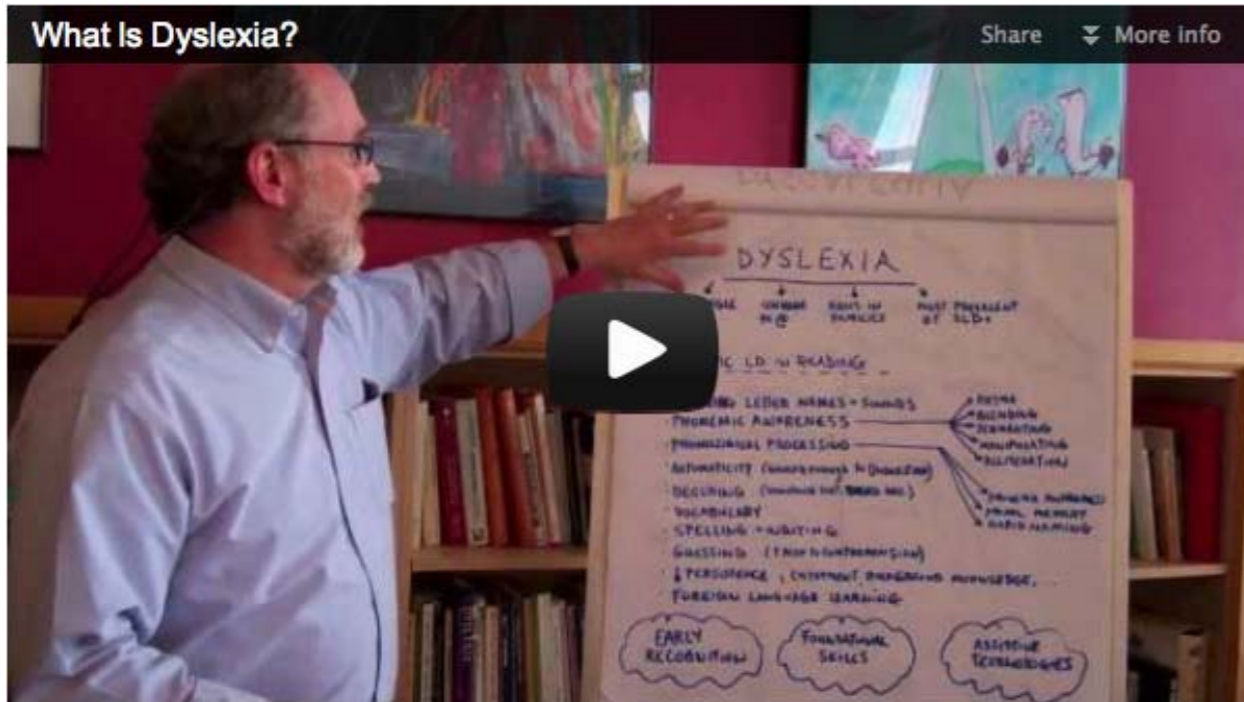
Can Audio or Digital Books Improve Learning Outcomes?

Children with learning disabilities (LD), like dyslexia, have trouble understanding words they read. Causes are unclear, but we now know that LD is not due to a lack of intelligence or a desire to learn.

While dyslexia is a life-long condition, early identification, support from a parent or teacher, and access to digital or audio books and other learning materials may help your child to improve their learning outcomes and be better prepared to successfully work around their LD.

Research now demonstrates that when children with LD are given accessible instructional materials (often referred to as AIM) — textbooks or learning materials that are delivered in audio and/or digital formats — they can excel in school and also learn to enjoy reading.

Reading with digital (or e-books) and audio books can enrich a user's learning experience by engaging them in the content in multi-sensory ways (e.g., reading and listening at the same time, reading along while the e-book highlights each word).

Sadly and too often, thousands of children who struggle with reading because of a print disability such as dyslexia do not receive access to resources that may help them enjoy reading.

About Accessible Formats

Accessible instruction materials are specialized digital formats of textbooks and other printed materials that are provided specifically to accommodate persons with print disabilities due to visual impairment, blindness, a physical disability, or a reading disability due to dyslexia. For those with dyslexia, digital formats make it possible to "listen" to text at the same time as "seeing" it on a computer screen or device.

AIM formats include braille, audio, large print, and digital text in a common standard file format called DAISY (Digital Accessible Information System). Through audio books, DAISY enables a user to hear audio by a recorded human voice or synthesized electronic speech. The digital files use reading software so that users can simultaneously see and hear text read aloud, typically by a computer voice. Many children are familiar and comfortable with computer voices because of video games, computer use, and other electronics.

Access Is the Law

The nation's special education law, IDEA, includes the National Instructional Materials Accessibility Standard (NIMAS).

The purpose of the NIMAS is to "facilitate the provision of accessible, alternate-format versions of print textbooks to pre-K–12 students with disabilities." The NIMAS helps IEP teams discuss how students with reading disabilities such as dyslexia should be provided access to textbooks and other school materials in electronic formats.

If your child has an IEP or a 504 plan due to a reading disability, review it to see if there is a question related to eligibility for AIM. If your child was not found eligible for AIM, you have the right to meet with the school and discuss why your child isn't considered eligible for access to the alternate formats of his or her school materials as well as the technology (digital reader and/or software) to use it. It's never too late to discuss with the school how your child learns best and how adding accessible instructional materials can sometimes make a dramatic difference in both their ability to learn as well as build their confidence and excitement about learning.

Where to Find Accessible Audio and Digital Books

Ask if your school has a membership to organizations that specialize in providing accessible formats such as Bookshare (bookshare.org), an online digital library of more than 150,000 copyrighted books and textbooks and Learning Ally (learningally.org), an audio library of over 70,000 digitally and human-recorded textbooks and literature titles.

Both organizations are approved by the U.S. Department of Education to provide AIM to school districts and schools when they request the digital files/formats for students who qualify with print disabilities. Once you are a "qualified" member of either organization, it is fairly easy to become a member of the other, thanks to their cooperative mission. Although not always the case, some schools and districts will pay for an eligible child's membership to one or both organizations. You may even choose to give both organizations a try to determine the best reading solution for your child.

So, you've learned about AIM and why students with print disabilities such as dyslexia should generally be found eligible by schools and districts. You've also learned about the digital (or e-book) file formats, been given suggestions in talking with your IEP team about AIM, and learned where to find quality audio and digital resources.

Features and Benefits of Reading Technologies with Text-to-Speech (TTS)

Today, there is research to suggest that students with learning disabilities can read with better comprehension and fluency skills using digital or audio formats with the right reading technologies. The experience of hearing content read aloud through text-to-speech or TTS (i.e., seeing words and sentences highlighted on a computer screen or portable device) is referred to as "multimodal" or "multi-sensory" reading.

In today's digital education environment, where learning can happen anywhere – in a classroom, home, or on the go – there are several quality reading assistive technology programs to support children with learning and print disabilities.

These include Kurzweil 3000 by Cambium, Read Write Gold by TextHelp and Read: OutLoud by Don Johnston. There are portable devices (e-readers) such as the iPad that can read digital formats with apps like Read2Go, created by Bookshare for members to download and read digital books from the online library to Apple devices. Through digital text, users can navigate by paragraph, page, chapter, or table of contents and manipulate settings and preferences such as:

- Background displays

- Font size and color hypertext links

- Selection of male and female voices

- Rate of speech

- Read aloud on/off function

- Bookmarking

Some software and portables may have built-in scanners, graphic organizers, note taking tools for essays, writing outline support, bibliographers, dictionaries, spell checkers, and keyword search features. Some may have voice recording or voice recognition and options to hear text read aloud in

Spanish or other languages using Acapela Voices – a good option for English language learners.

One note is that there are still limitations to full accessibility of digital formats today. Not all images can be accurately described through text-to-speech, such as graphs, charts, and mathematical concepts. A new web application tool called POET, created by the DIAGRAM Center at Benetech, the parent organization of Bookshare, shows great progress. POET is an open source resource that makes it easier to create image descriptions for DAISY books and allows crowd sourcing of image descriptions.

New Ways to Learn and Receive Knowledge

Research on text-to-speech as an effective way to teach reading is well documented since the National Reading Panel Report of 2000 identified three key elements of effective reading instruction:

- Alphabet (phonemic awareness and phonics)

- Fluency and comprehension (vocabulary, text comprehension

- Comprehension strategies

In our quest to ensure that more students with LD and print disabilities receive full access to AIM, we asked teachers and school assistive technology specialists to share their thoughts about the benefits of digital books and technologies. Here are some of their top responses.

Maybe one or several points will catch your eye to start a new conversation with more parents and teachers:

- Opens a world of new learning possibilities

- Provides flexible options based on learning styles and preferences

- Promotes independence, socialization, and personal achievement

- Unlocks decoding struggles

- Holds a reader's attention span longer

- Ensures readability on grade level

- Encourages note taking and annotations

- Corrects spelling

Will a Multi-Sensory Reading Experience Help My Child?

If this is the question on your mind, it's time to explore AIM and the reading technologies that can best support your child. Start with an investigation of what works best (i.e., strategies and tools) for your child with a special education or tech-savvy teacher, a teaching professional such as speech and language pathologist (SLP), a reading teacher, or an assistive

technology specialist. You can point to the 2004 IDEA law and compliance with AIM, the research behind TTS, and the benefits of digital formats suggested by teachers to engage learners in multi-sensory reading experiences and best practices of UDL.

Opening the door to new conversations may enable more children to receive access to quality digital and audio formats and technologies that exist today. Inquire about accessible curriculum (e.g., books, literature, and textbooks) to determine if your child needs an IEP or 504 plan that includes resources and tools to improve their academic skills. Maybe you'll start a digital reading program or parent technology network and tweet about the benefits of digital books in this article. The steps you take today will ensure that your child, or anyone with LD, can improve their learning outcomes and enjoy a meaningful reading experience.

Additional Resources

The Center for Implementing Technology in Education (CITEd): Universal Design for Learning

The National Center on Accessible Instructional Materials: Assistive Technology Research

The DIAGRAM Center at Benetech

➡️ Click here to learn more about assistive technology.

Accommodating Students with Dyslexia

Teaching students with dyslexia across settings can be challenging. Here are some accommodations that general education and special education teachers can use in a classroom of heterogeneous learners.

Accommodations Involving Interactive Instruction

The task of gaining students' attention and engaging them for a period of time requires many teaching and managing skills. Some accommodations to enhance successful interactive instructional activities are:

- Repeat directions. Students who have difficulty following directions are often helped by asking them to repeat the directions in their own words.

- Maintain daily routines. Many students with learning problems need the structure of daily routines to know and do what is expected.

- Provide students with a graphic organizer. An outline, chart, or blank web can be given to students to fill in during presentations. This helps students listen for key information and see the relationships among concepts and related information.
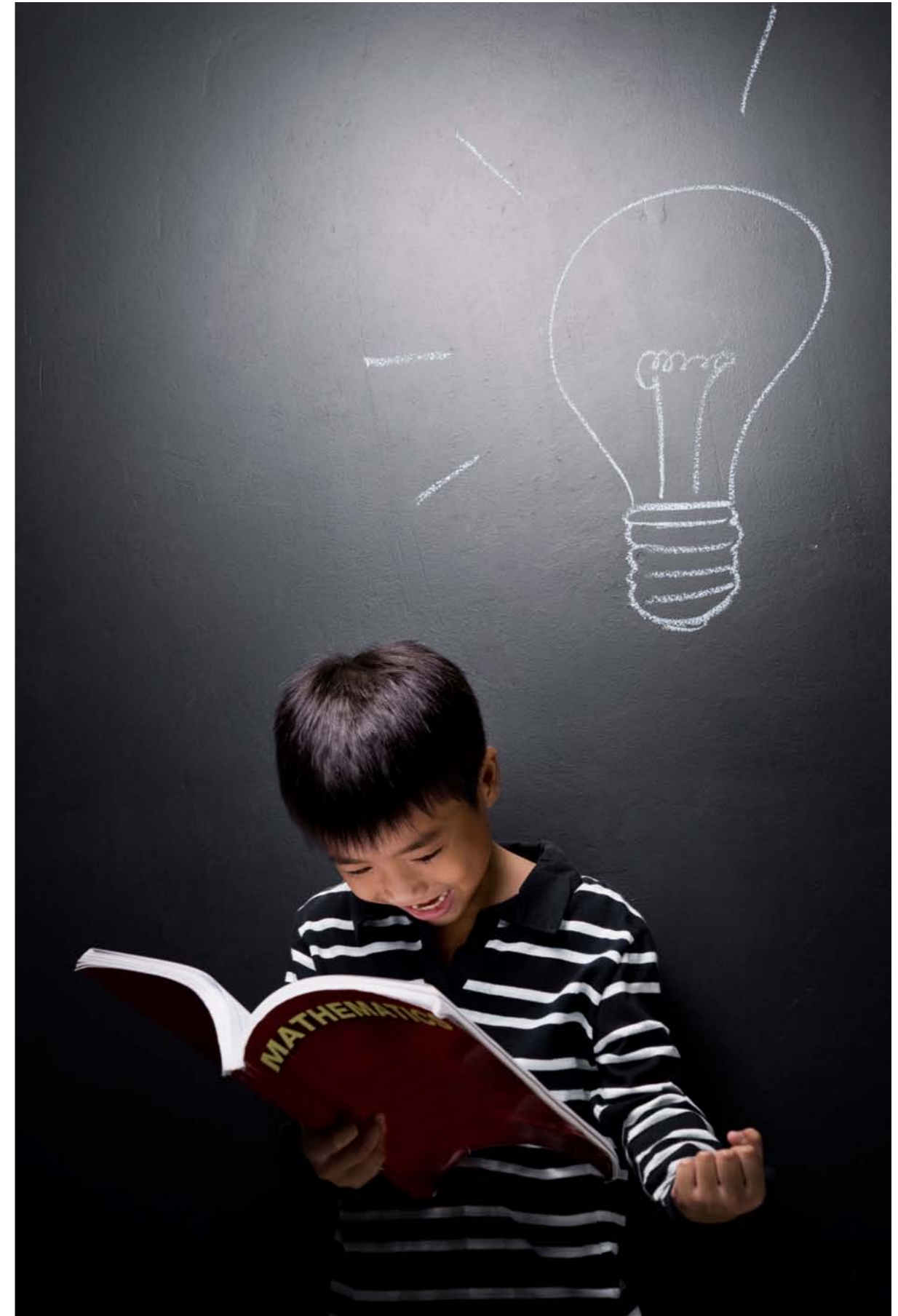
- Use step-by-step instruction. New or difficult information can be presented in small sequential steps. This helps learners with limited prior knowledge who need explicit or part-to-whole instruction.

- Simultaneously combine verbal and visual information. Verbal information can be provided with visual displays (e.g., on an overhead or handout).

- Write key points or words on the chalkboard. Prior to a presentation, the teacher can write new vocabulary words and key points on the chalkboard or overhead.

- Use balanced presentations and activities. An effort should be made to balance oral presentations with visual information and participatory activities. Also, there should be a balance between large group, small group, and individual activities.

- Emphasize daily review. Daily review of previous learning or lessons can help students connect new information with prior knowledge.

Accommodations Involving Student Performance

Students vary significantly in their ability to respond in different modes. For example, students vary in their ability to give oral presentations; participate in discussions; write letters and numbers; write paragraphs; draw objects; spell; work in noisy or cluttered settings; and read, write, or speak at a fast pace. Moreover, students vary in their ability to process information presented in visual or auditory formats. The following accommodations can be used to enhance students' performance:

- Change response mode. For students who have difficulty with fine motor responses (such as handwriting), the response mode can be changed to underlining, selecting from multiple choices, sorting, or marking. Students with fine motor problems can be given extra space for writing answers on worksheets or can be allowed to respond on individual chalkboards.

- Encourage use of graphic organizers. A graphic organizer involves organizing material into a visual format.

- Encourage use of assignment books or calendars. Students can use calendars to record assignment due dates, list school related activities, record test dates, and schedule timelines for schoolwork. Students should set aside a special section in an assignment book or calendar for recording homework assignments.

- Reduce copying by including information or activities on handouts or worksheets.

- Have students turn lined paper vertically for math. Lined paper can be turned vertically to help students keep numbers in appropriate columns while computing math problems.

- Use cues to denote important items. Asterisks or bullets can denote questions or activities that count heavily in evaluation. This helps students spend time appropriately during tests or assignments.

- Design hierarchical worksheets. The teacher can design worksheets with problems arranged from easiest to hardest. Early success helps students begin to work.

- Allow use of instructional aids. Students can be provided with letter and number strips to help them write correctly. Number lines, counters, and calculators help students compute once they understand the mathematical operations.

- Display work samples. Samples of completed assignments can be displayed to help students realize expectations and plan accordingly.

- Use peer-mediated learning. The teacher can pair peers of different ability levels to review their notes, study for a test, read aloud to each other, write stories, or conduct laboratory experiments. Also, a partner can read math problems for students with reading problems to solve.

- Use flexible work times. Students who work slowly can be given additional time to complete written assignments.

➡ Click here to learn more about accommodations.

Homework 101

When your child has dyslexia, homework can be a particular chore. When it's time to sit down and do homework, students' struggles with reading, writing, and/or spelling collide with difficulties like organizing and managing time. It's easy to see how stressful this can be for students and their parents alike. But homework doesn't have to be a daily struggle for students with dyslexia and other learning disabilities. Read these tips to help your child build skills and systems that will reduce the stress of homework for your whole family.

School-to-Home Organization:

• Eliminate the risk of forgotten books/notebooks at school by asking teachers to check in with your child at the end of the day. For those children using lockers, hang a typed list on color paper reminding your child what to ask him/herself each day when packing up homework. In addition, a small index card could be taped on the cover of your child's planner.

• Advocate for a well-established communication system between home and school.

Homework Organization:

- Select a specified area for homework and necessary supplies. When completed, request that your child return all materials/supplies to their appropriate places.

- Help your child avoid avoiding homework. Work with your child on establishing rules on when and how homework will be accomplished. For example, should your child start with his favorite subject? Take a break after each assignment? How will your child know when it is time to return to work? (Verbal reminders, such as "Johanna, just a reminder that there are only two more minutes left in your break," and timers are very effective in reminding your child to return to work.) What stimuli is acceptable or unacceptable when studying? How homework is completed is equally important as completing it.

- For weekend homework, encourage your child to begin on Friday evenings. This is invaluable. Not only is information fresh in their minds but it allows enough time to make contingency plans for forgotten books or purchasing materials for projects.

- Ask yourself: "Are the teachers giving homework and instructions that suit my child best?" If not, don't hesitate to share concerns and ideas with the teacher.

- If your child misses school, help your child be responsible for finding out the next day's homework. While there may be times your child cannot complete the homework without the classroom instruction, it is still good to have your child follow through by calling a classmate or emailing the teacher (if this option is available) during the day. This learned skill becomes very important by mid-elementary years and, certainly, by middle school. It further minimizes some anxiety when your child returns to school.

- For children taking medication, ask yourself and your child if he or she is finding that the medication is working as optimally as possible. Work with your professional to determine if a change may be required.

Reinforce Learning:

- Become intimate with your child's areas of need (for example, organization, inattentiveness, comprehension, decoding) and help find appropriate techniques to enhance and reinforce learning. Locate professionals early in the school year at your child's school and/or in the private sector who can provide helpful strategies.

- In general, study cards or index cards are easier than a study guide or worksheet. Have your child write words, thoughts or questions on one side and answers on the other. The act of writing out a card is one more opportunity to enhance learning by reinforcing memory.

- Use the internet to supplement and complement classroom materials.

- For children having difficulty extracting ideas, build lists of words for your child from which to choose. Similarly, ask them to compare and contrast ideas. For those with writing challenges, there are several approaches: Have your child verbalize his or her ideas first. Use a word-web format or an old-fashioned outline using bullets before writing an essay. Encourage your child to refer to the list/chart/web/rubric and use a minimum of details (two to three details for younger children; four to 10 details for older children).

- Consider making board games, such as a bingo or lotto board, as another way to reinforce learning. An opened manila folder works great as a board, index cards can be used for questions and coins can be a player's pawn. It is inexpensive, simple and a great addition to family time!

- Offer to give practice tests. After a few weeks of school, you will have a sense of a teacher's testing style. Practice tests that mirror the teacher's style offers your child the opportunity to "experience" what could be asked.

- Consider a study group. For slightly older children, a study group of two or three can be very beneficial and make learning more enjoyable.

The ultimate goal is to provide your special learner with good work habits, to prepare and anticipate, to avoid unnecessary tardiness, and to stay on task. Par for the course with teaching organization, homework, and learning strategies is making a long-term commitment. The foremost rule is to find the best system for your child; frequently this will mean many trials before finding the best one. Parental assistance can go a long way in making your child feel a sense of accomplishment and progress while minimizing stress for all of you.

How Self-Advocacy Can Lead to Innovation: An Inteview with Ben Foss

Ben Foss was formerly the director of access technology for Intel. He leads a team that makes tools for people with specific learning disabilities and others who have difficulty reading printed text. His experiences as an individual with dyslexia have motivated him to find new ways to help others with reading disabilities access information. He is also passionate about creating new opportunities for those with learning disabilities to connect with one another. He has an MBA and a law degree from Stanford University.

NCLD: When was your learning disability first identified? How did your parents share this information with you?

Ben Foss: I was identified in first grade. My mom was asked to come into the school and was seated at a desk with a box of tissue in case she burst into tears. She said, "I figured something was up. So what do we do?" They explained that they had just gotten new money — the first funds from IDEA were just reaching the schools at this time — and wanted to place me in special education.

My parents were very straightforward with me, making a point to involve me in the discussions. They talked to me about what dyslexia meant — that it meant I had trouble with reading, and that it didn't mean I wasn't smart. They also made a deal with me that I could act out in my room — even throwing things or wrecking my stuff — when I was angry over having failed a spelling test or sad about having to sit alone during reading time, but I needed to be respectful in school or elsewhere. This gave me space to express my frustration while still showing up to school ready to learn.

NCLD: There was a time when you didn't want people to know you had dyslexia. What changed your mind and how did you feel when you decided to be more open about it?

Ben Foss: Throughout elementary and secondary education, I was militant about keeping it quiet. In college, I set up secret accommodations, working out a relationship with a writing teacher to sit and read my papers aloud to me to help me check for errors. This caused two problems. I got less help than I needed, meaning I spent late hours struggling through textbooks when books on tape could have helped. More importantly, I carried this as a dreaded secret, one that took emotional energy to hide.

The biggest turning point was in business school at Stanford. There I met a fellow MBA candidate named Mark Briemhorst who had no hands.

He encouraged me to join a panel of people with disabilities to explain to the future leaders at our school that disabilities in the workplace take all forms. I learned from him that giving people context on how to deal with you as a person with a disability is critical. He sent a mail to everyone at the school explaining, "Hi, I am Mark. I have no hands. When you meet me, shake my wrist. If you see me in class, I do not need your help picking up my bag. I brought it in with me in the first place…" and so on. It showed me that if you explain who you are and what you need, people generally are open to it. If they are not, that's on them to resolve.

NCLD: When did you first start to play an active role in advocating for your own needs? Was there a particular experience early in your school career that helped you understand the importance of self-advocacy?

Ben Foss: I was taught early that I had a say in what happened to me. Whether it was what clothes I wore or when I went to bed, my family let me have a say in how my world was set up. In school, I was invited to all my parent/teacher conferences. Sometimes advocating for myself meant making a tough call. When I got a D in Algebra in middle school, I was told I could progress if I worked hard the following year. Instead, I decided to repeat the year because I knew mastering Algebra would be important to all of my future math classes.

When I got to law school, I learned the real power of standing up for the right to accommodations. Often schools know they have an obligation to provide accommodations, but they do

not know what you need. In my first year of law school I negotiated an agreement that let me have someone read my papers aloud to me in addition to using text-to-speech software where my computer read it aloud. I needed the person to spot homonyms — council v. counsel — in my essays and I had to have repeated meetings with the deans, signing a written pledge that I was not relying on this person to get help other than this.

NCLD: We know it's important for those with LD to build a "community of support." What did your community of support look like when you were in school, and is this still a valuable resource for you today?

Ben Foss: Support comes in many forms. Ideally, the first is family. My mother, father and brother were sounding boards for strategies. In college, I let some people know about my experience. It was important to offer examples and concrete anecdotes. Instead of saying, "I am dyslexic," I'd say "I fax papers home to my mom to have her read them to me." This gives tangible details that stick in people's minds.

The hardest community to find is other people with LD. We are invisible to others, though I like to point out that if you look out in Times Square and see 10,000 people, there are likely 1000 or more with LD there. Finding them through online communities like Headstrong (headstrongnation.org) or campus mentoring programs is critical. There is a special bond between members of the community. We function like

immigrants from the same place, with common experiences and challenges. If we can just come up with a national dish we might even apply for passports!

NCLD: Despite your dyslexia, you've worked for the White House National Economic Council, and the Children's Defense Fund, and you've earned graduate degrees from Stanford. How did you build the necessary confidence to thrive, despite the daily challenges of your LD?

Ben Foss: Not despite dyslexia. Because of my dyslexia I functioned well in these professional environs. I learned to pay attention to what matters in an academic or a professional setting. I knew that I could not read an entire book, so I would prioritize, reading only the most important chapter. In the White House, no one has enough time, so being able to prioritize and delegate is critical. I also learned to engage people and understand their roles. This is how I navigated third grade. I understood that the resource room teacher was my ticket to getting through spelling tests, not the general ed classroom teacher. The same applied at the Children's Defense Fund. The budget director of the organization is critical to supporting my budget requests, not the executive director, and so on.

NCLD: As the project manager for development of the Intel Reader, what were your main goals for developing this innovative tool? And, what makes it different from other assistive technologies that support reading?

Ben Foss: I was frustrated with the existing tools. I used to wait three weeks to get my books in an audio format I could use, and this was at Stanford, a fancy school with lots of money. I wanted to be able to read right on the spot. In 2006 at Intel, I started playing with cameras and computers and realized that I could build a system that gave me independence, allowing me to point, shoot and listen to printed text. My overall goal was to get the best technology into the hands of people who need it. Intel has brilliant scientists on staff and working with them to solve the technical issues allowed us to develop something portable you can carry with you. This means you can read on the go, reading a handout in class or a menu in a restaurant, as opposed to trying to lug around a flatbed scanner.

NCLD: As an adult, you've been a passionate spokesman for those with dyslexia and an avid promoter of the importance of self-advocacy. Tell us about your organization, Headstrong.

Ben Foss: I started Headstrong in 2003 because I was frustrated that all the useful information about learning disabilities was in books. This made about as much sense as having the wheelchair meeting upstairs. We put this information into formats people in our community can use, like film. We made a national award-winning film Headstrong, about the first person to win a civil rights victory in the area of dyslexia.

You can watch the film for free on the site. We also have forums for discussion, information on resources and a website that will read itself aloud to you with the click of a button. Overall, we are re-framing this as a public policy and a civil rights issue.

How many people could we keep out of prison if we offered the right accommodations in schools, allowing people to get a high school diploma? How many more jobs could our economy produce if we trained people with LD to ask for what they need in the workplace? These are the questions we should be asking.

NCLD: What are your top five tips for parents of kids with LD?

Ben Foss:

- Talk to your child early and often about what you know about their LD. Engage them, show them the numbers, reinforce that they are smart and they will do well.

- Get formal identification of their LD for your child. An education psychologist or a learning specialist at your school can point you to the right resources. If they do not want to offer testing, look for a way to get the documentation on your own. This can be expensive, but it is critical to get services, to understand your child's specific profile and to establishing a history for Glossary Link accommodation on testing.

- Use assistive technology such as books on tape or talking computers early and often. Exposing your child to language and getting them comfortable with the tools they will need helps them stay on grade level. Microsoft Windows has a basic speech engine built into it – look in the Control Panel under "Speech." Same with Apple computers. It will allow them to try it out and see if they like it. It takes 10 minutes to set up and will give your child the ability to read an email or a website on the spot.

- Seek out mentors in the LD community for your child. Show them the films at headstrongnation.org/documentary, reach out to other parents in your schools, look for local college mentoring programs and so on.

- Self-determination is the highest goal for your child. My parents told me I could go to Yale or win a Nobel Prize. Some of us can do great things and some of us cannot, but the key is that it should be up to the person with LD to decide what that looks like. Teach your child to think about themselves as agents of their own destiny.

NCLD: What are some specific tips for teens and adults with LD?

Ben Foss: Come out. It is critical that you experiment with being public about who you are and see what it feels like not to hide on this issue. It can be scary to tell people that you are part of a label that is associated with being lazy or stupid.

I have felt this sting. The day I turned in my thesis at Stanford Law School, a classmate laughed out loud at the registrar's office because I had the term learning disabilities in my title. "They can't articulate anything!" I looked at him and explained that I had a learning disability. He was embarrassed and apologized. I could have laughed with him and hid, but I would have been doing damage to myself. The key to this is finding a community of people who get your experience. Tell your best friend about your experience. Tell your siblings. Work your way up to telling a teacher you trust. Then try a new teacher. Rehearse and develop a script that tells specifics, is honest and works for you. Eventually, you will be comfortable talking to strangers about it. And then other people with LD will start coming to you, allowing you to be part of something larger. It is a good feeling and is the most important accommodation you can have.

As part of coming out about this, I like to show people the raw version of what it looks like when I write. Below is my last answer with out the benefit of spell check, and the three passes I make through it with text to speech (think Steven Hawking voices) reading it back to me to allow me to improve the grammar. In a public forum like this, there will also have been a copy edit by a non-LD person. See the raw version below to understand where I start on this stuff and remember this is today – I have a JD/MBA from Stanford, and I spell terribly:

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➡️ Click here to download our LD Advocates Guide.

Dyslexia: An Obstacle, Not a Limitation

2012 Anne Ford Scholar Silvia Ortiz-Rosales (pictured at right) describes herself as having a "thirst for knowledge and success." Once her dyslexia was identified in fourth grade, Silvia promised herself that she would not let LD hold her back from academic and personal success. Her story begins below.

My teacher walked to the board and began to write down our assignment. Tonight it was simple: log into an account and register our names. When I got home, I hoped to make a good impression and register my name early. To my surprise red words came to the screen claiming the password I entered was incorrect. I tried several times and came to the conclusion that the teacher must have given the class the incorrect password.

As I approached her after class the next day, she seemed concerned. She asked me why I had failed to register and I told her it was because the password she had given us didn't work. She checked my agenda, where I had written down all of my assignments, and she said to me "Silvia, the password on the board says m4kog, not w4kog. You shouldn't be so careless." I looked up at the board and noticed she was right.

It's little things like that, which remind me I must take my time whenever I'm doing school work. When I was younger I found myself struggling in school. I was in the fourth grade when my teacher noticed that I wasn't learning at the same speed as my peers. Taking tests was very difficult for me. Most of my time at school was spent trying to understand what the teacher was talking about. On average I spent twice as long on tests and quizzes than my peers. After meeting with my mother, my school decided to send me to a learning center to see if I had a learning disability. As it turns out, I am dyslexic and have auditory processing differences.

Of course as a fourth grader I didn't understand, nor did I think it was important. However, as I got older, I began to realize that I had to work harder than my peers to understand the material. My mother began to blame my dyslexia and for a while I hopped on the bandwagon and thought I didn't have to succeed in school. The more my family pushed the idea that my low grades were because of my dyslexia, the more I yearned to prove them wrong.

One day I had enough. I began studying harder and working on different techniques to teach myself the materials I didn't understand at school. I learned how simple tricks and searching the Internet for further background helped me remember things. I also realized that being accurate and correct is much more important than being the first one to finish. Thanks to the accommodations that were provided by my high school, St. Joseph Notre Dame, I was finally given the time I needed to finish all of my assignments, tests and quizzes with accuracy. After coming to terms with my learning disability I gained an amazing quality. I acquired the ability to keep trying, to adjust and learn despite my disability. I learned that the best way to overcome my dyslexia and auditory processing differences is to accept them and strive through them to show others I can compete with my peers. I also learned that there's nothing wrong with asking for help when you need it. My focus has helped me exceed people's expectations and show them that my learning disabilities will not hold me back.

I have become a driven individual and that makes me proud. Although I take multiple Advanced Placement classes and challenge myself with numerous extracurricular activities, I know college will present me with even more opportunities to be involved. There is nothing that excites me more than the thought of meeting new people and becoming an active member of a new community. I look forward to the coming years, even though I must continue to push myself. I will succeed. My thirst for knowledge and success fuels my passion for college. As a first generation college student who struggles with a learning disability I'm eager to prove to the world that dyslexia isn't going to hold me back. I plan to continue my studies, fueled by my desire to prove dyslexia isn't a limitation, it is merely an obstacle designed to keep you motivated. I know college will be difficult, but I embrace the new opportunities that college life will bring me.

I will be a student at California State University, East Bay when I graduate from high school. While in college I hope to study journalism. Writing is something I've always enjoyed doing. People have often challenged my writing and reading capability with comments such as "You're dyslexic, you shouldn't even be able to write. I thought dyslexics couldn't read?" However, I've found that I'm quite good at both reading and writing. Although it takes me longer than most, I write and read for fun. Last year, to my surprise, I was awarded my school's Certificate of Merit in English. In my free time I try to push myself to write in new and creative ways in order to further develop my skills. I read literature that challenges life themes and give my own interpretations of them simply because I love it. I constantly share on my blog the challenges of dyslexia as well as the struggles of everyday life.

I hope that pursuing a career in journalism will ultimately get my writing out to the general public. It would be a blessing if my writing became accessible to other students with learning disabilities, and would in turn inspire them to strive past their disability. I want people regardless of age to see me as a role model and advocate for those who are struggling with any learning disability. Although I have learning differences I continually reach for more, regardless of the challenges thrown my way.

➡ Click to watch a video interview with Silvia.

Join Our Online Community

Join   Join   Join