

Clearing up Common Misconceptions



Misconception: Dyslexia is a problem with visual processing that causes letters to look backwards or upside down.

Actually, dyslexia is a problem with phonological processing that causes confusion, disorientation, and often times results in letter and sound transpositions.

Misconception: It is best to wait until third grade to test for dyslexia.

Actually, dyslexia can be diagnosed before a child begins to learn to read. The earlier structured, multisensory explicit intervention is initiated, the better the outcome for reducing and even eliminating future reading struggles.

Misconception: Dyslexia is a reading disorder.

Actually, our brains were not designed to read specifically, but rather have adapted to read. Because of this, it is neurobiologically impossible for a singular reading deficit to exist; dyslexia is most readily identified when learning to read, but its neurobiological origins precede the historical underpinnings of the reading brain.

Misconception: Dyslexia is not accounted for under IDEA and is not a basis for an IEP***

Actually, dyslexia is in and of itself a basis for implementing an IEP; IDEA does not prohibit dyslexia from being listed as a specific area of difficulty under the category for Specific Learning Disorder (SLD).

*IDEA: Individuals with Disability Education Act

**IEP Individualized Education Plan

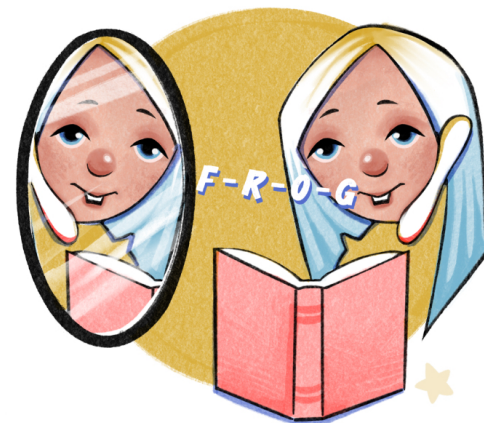
SLPs* recognize the most important parts of the reading brain. Many SLPs already practice systematic, explicit, multi-sensory speech and language based activities every day!

Broca's Area: planning for speech and language output

Wernicke's Area: processing written or spoken language

Arcuate Fasciculus: connects Broca's and Wernicke's area; imperative for phonological processing.

*Speech-Language Pathologists



*By understanding the nature and characteristics of dyslexia, Speech-Language Pathologists can better recognize potential signs of dyslexia during routine speech-language screenings and evaluations **before literacy struggles emerge.***

Consider a referral for a dyslexia screener if concern persists in more than one of the following areas in kindergarten:

- Repeating rhyming word sequences, nursery rhymes, or the alphabet
- Understanding & making rhymes
- Confusing phonetically similar words like 'pea' and 'bee'
- word finding, expressive vocabulary, color naming, and/or rapid automatic naming
- speech/language or a 'late talker'
- Lack of interest in learning about letters and sounds

References

Education Programs, 39th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, 2017, Washington, D.C.

Shaywitz, S. (2003). *Overcoming Dyslexia: A new and complete science-based program for reading problems at any level.* New York, NY: Alfred A. Knopf.

Wolf, M., & Stoodley, C. J. (2007). *Proust and the squid: The story and science of the reading brain.* New York, NY: HarperCollins.

Youman, M., & Mather, N. (2015). Dyslexia laws in the USA: An update. *Perspectives on Language and Literacy*, 41(4), 10-18.

Trusted Resources

Facts about a variety of topics related to dyslexia:
<https://dyslexiaida.org/fact-sheets/>

Understanding the Laws:
<http://dyslexia.yale.edu/resources/accommodations/understanding-the-law/>

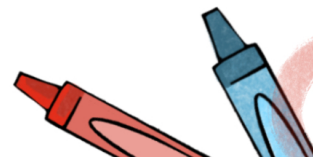
Signs of dyslexia in Preschool and Kindergarten+:
<http://dyslexia.yale.edu/dyslexia/signs-of-dyslexia/>



Dyslexia: Brain Fundamentals for Educational Based Speech-Language Pathologists

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Dyslexia and Developmental Language Disorders

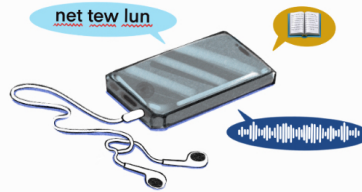


Students with dyslexia will likely struggle with some language based skills.

Consider dyslexia when language concerns are largely related to:

- word retrieval, memory & recall, color naming, letter naming
- remembering and following directions, especially with increasing length and complexity
- learning spatial concepts, such as before, after, last, first
- explaining, giving directions, or retelling a story

Dyslexia and Developmental Speech Disorders



Students with dyslexia will likely struggle with some speech based skills.

Consider dyslexia when speech concerns are largely related to:

- phonological speech errors such as final consonant deletion, voicing, gliding, stopping, or omitting sounds
- saying words with difficult sound patterns (animal -> animal)
- frequent slips of the tongue (brue->blue)
- reciting rhymes, songs, ABCs, or repeating an unfamiliar sentence with increasing length and

Explaining the implications when a student has a Developmental Speech or Language Disorder and a reading concern:

Children who have or have had difficulties with speech or language are less likely to be proficient at phonological awareness skills than their typical aged peers.

This is a big deal!

Phonological awareness abilities are **critical** to the development of early reading skills because they help **connect spoken language to written language**.

The American Speech-Language-Hearing Association (ASHA) states that Speech-Language Pathologists play a critical and direct role in the development of literacy for students with communication disorders.

By better understanding dyslexia's relationship with Developmental Speech and Language Disorders, SLPs can be more active in the screening, treatment, and advocacy processes for students with dyslexia.

Consider the many ways SLPs who are treating struggling readers may help:

- ❑ Screening for dyslexia and documenting, & reporting concerns
- ❑ Working closely with classroom teachers on identifying concurrent speech/language and reading concerns
- ❑ Incorporating foundational phonological awareness into speech and language goals
- ❑ Using phonological approaches to speech sound development, such as the Cycles or Metaphon Approach in lieu of Articulation strategies
- ❑ Targeting Minimal Pairs
- ❑ Incorporating print enhancement during oral speech and language

Semantic Truths & Considerations:

Truth: Phonological (global sound) and phonemic (word level sound) awareness skills have causal relationships with literacy achievement; early mastery of these skills is the **best predictor** of later reading comprehension and written expression abilities.

Consider phonological and phonemic awareness skills when a student has a speech or language disorder and a reading concern; consider implications when fundamental phonological and phonemic awareness deficits are not adequately addressed.

References

Birsh, J. R. (2011). Multisensory teaching of basic language skills. Baltimore: Paul H. Brookes Pub. Co.

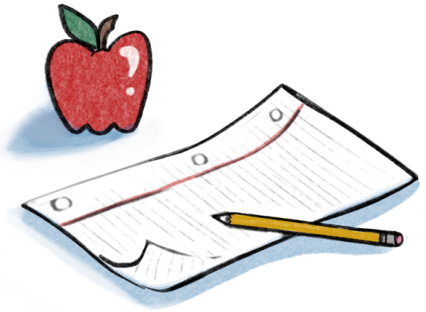
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Shaywitz, S. (2003). Overcoming Dyslexia: A new and complete science-based program for reading

Check out these trusted resources :

Dyslexia is a legislative information site that reports and tracks dyslexia related pending legislation in the United States. <https://dyslexia.com>

Language and Reading Research Consortium (LARRC) is a group of researchers at Ohio State University that developed a FREE explicit English and Spanish language curriculum for Pre-K to 3rd grade called "Let Know". <https://larrc.ehe.osu.edu/curriculum/>



Considering a Dual Diagnosis:

Speech-Language Disorders & Dyslexia for Educational Based Speech-Language Pathologists

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Understanding the connection between semantics and dyslexia:



Did you know... the core deficit in dyslexia is a problem accessing and processing the individual sounds of spoken language?

Dyslexia seems like a reading disability because it affects readings so substantially, but the origins of dyslexia impact many areas of one's ability to understand, access, use, and manipulate the sounds that form words.

Did you know... with careful attention, we can recognize when a child has difficulty accessing, using, and manipulating sounds in spoken language?

Children who have difficulty with sound processing often have speech & language difficulties early on and/or word retrieval difficulties later on. When deficits are noted in the areas of word finding and expressive vocabulary ability, SLPs recognize that these may be concerns for dyslexia.

Did you know... dyslexia makes it more difficult for someone to remember names and words?

Many times, people with dyslexia have a general idea of what the name or word is, but the difficulty is accessing, using, and sequencing the sounds for the desired word. In effect, this makes it difficult to remember and recall many vocabulary words, even though the word may have the necessary semantic connections. This can mean that a child receptively understands or remembers a word, but struggles more to expressively access, use, and produce the word or name.

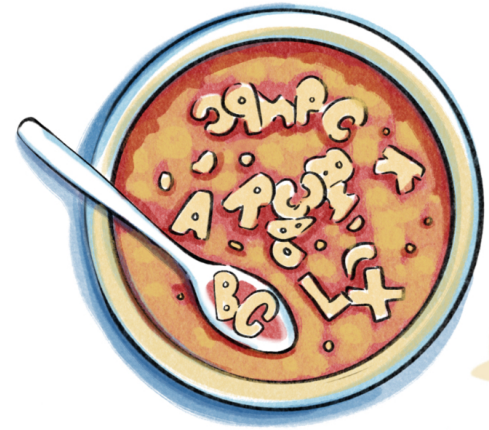
Did you know... dyslexic readers have to use less efficient pathways to figure out a word's meaning?

This takes much longer and consumes much more energy compared to the energy it takes a non-dyslexic person to read for meaning or read to learn. Highly -abled dyslexic readers often require accommodations for increased time, so they have the necessary time to decode and process the meaning of words, phrases, and sentences.

SLPs* recognize the implications of semantic deficits. Many SLPs already screen and treat the semantic areas that are being impacted by the core deficits inherent in a diagnosis of dyslexia.

SLPs recognize and incorporate semantic goals that may be markers for a diagnosis of dyslexia, such as goals related to:

- Convergent and divergent naming
- Defining, explaining, expressing function
- Naming parts of a whole
- Descriptive naming tasks
- Synonyms and antonyms, homophones



By understanding how dyslexia impacts semantic processing, Speech-Language Pathologists can more effectively help students connect the orthographic and semantic properties of words.

Consider connecting print and spoken forms to allow readers to more readily access a word's meaning.

Consider incorporating print and kinesthetic modalities when semantically targeting words through activities that target:

- Category & relationship naming
- Listing items in a category or by a characteristic
- Comparing and contrasting
- Naming what does not belong
- Sorting items
- Identifying associations
- Multiple meaning words
- Similar sounding words
- Synonyms and antonyms
- Parts of a whole
- Vocabulary learning

Semantic Truths & Considerations:

Truth: Text in children's books contains more rare words than oral language.

Consider the effects on semantic processing when a struggling reader encounters a new word in written text.

Truth: The more a word is practiced, the more readily the meaning of the word will be accessed

Consider the effects on timing, energy, and comprehension when a reader struggles to access the semantic properties of a written word

Check out this trusted resource : The Gaab Lab is a multidisciplinary team of researchers at Boston Children's Hospital's Laboratories of Cognitive Neuroscience; this resource has endless amounts of valuable resources for pre-markers of developmental dyslexia in the pre-reading brains of infants of preschoolers. <https://www.qaablab.com>

References

Birsh, J. R. (2011). Multisensory teaching of basic language skills. Baltimore: Paul H. Brookes Pub. Co.

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Dyslexia & Semantics*

Implications for Educational Based Speech-Language Pathologists

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*Semantics- the meaning of a word, phrase, sentence, or text

Understanding the Phonology to Dyslexia Connection:

**Phonology- the study of sound patterns in a language*



When students and educators study sound patterns (Phonology), then they better understand the implications and benefits of strong **phonological processing*** skills and they are aware of important questions such as:

- **Phonological Processing*** – How efficiently are sounds used during spoken and written language tasks?
- **Phonological Awareness** – How efficiently is oral language noticed, identified, and manipulated?
- **Phonemic Awareness** – How well are sounds in words noticed, identified, and manipulated?
- **Phonological Decoding/Encoding**- How efficiently are sounds accessed during reading and spelling tasks?
- **Phonological Recoding**: How efficiently are sounds remaining and being retrieved in working memory?

Phonology Truths and Considerations:

Truth: Phonological (global sound) and phonemic (word level sound) awareness skills have **causal** relationships with literacy achievement; early mastery of these skills is the best predictor of later reading comprehension and written expression abilities.

Consider the **effects** on reading comprehension and written expression abilities when fundamental phonological and phonemic awareness deficits are not adequately addressed.

Truth: There is not one standard definition for dyslexia. The most commonly accepted definition was adopted by the International Dyslexia Association in 2002 and since then has been validated by more than 30 internationally proclaimed researchers in the field of dyslexia.

"Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction..."

Consider observing **causal relationships** with **phonological language** when concerns for word recognition, spelling, and decoding skills are noted.

P/PA* Observations and Dyslexia in the Classroom:

Educators are able to spot early indicators of dyslexia in typical classroom activities.

Consider **phonological proficiency** when observing **classroom concerns** related to:

- Reciting and the alphabet
- Learning rhyming words and nursery rhyme skills in preschool and kindergarten
- Learning classmates names and matching it to initial letter sounds
- Using invented spelling for words in kindergarten and first grade

P/PA* Phonological and Phonemic Awareness



P/PA* Quick Screener:

P/PA* Phonological and Phonemic Awareness

□ Rhymes:

- Does 'dog' rhyme with 'log'?
- Another word that rhymes with dog is _
- Which word rhymes with 'dog': cut, hog, sit
- Which word does not rhyme with 'dog'? log, dig, fog

□ Blending:

- /ta/(pause) /ble/= _____
- /j/ (pause) /e/ (pause) /t/= _____

□ Segmenting and Counting:

- Counts words: "The boy has a blue hat"
- Counts sounds "cat", "it" "go"
- Say "man" one sound at a time

□ Deletion:

- Say "cowboy" without "boy"
- Say "carpenter" without "car"
- Say "cat" without the "/t/"
- Say "cat" without the "/k/"

□ Isolation:

- What is the beginning sound in 'dog'?
- What is the ending sound in 'dog'?
- What is the middle sound in 'dog'?

SLPs* are often one of the first educators to identify phonological concerns.

Consider P/PA* awareness ability when phonological speech struggles errors are noted, so that CAUSAL relationships for reading struggles may be addressed BEFORE reading becomes a concern.

Check out these trusted resources :

Intervention Central has FREE intervention, screening, and assessment resources to help struggling readers.

<https://www.interventioncentral.org/home>

Reading Rockets is a national multimedia reading initiative that examines why reading struggles exist and how anyone can help. Reading Rockets has a PBS series that teaches how parents and educators can help children become better readers.

<https://www.readingrockets.org/>

References

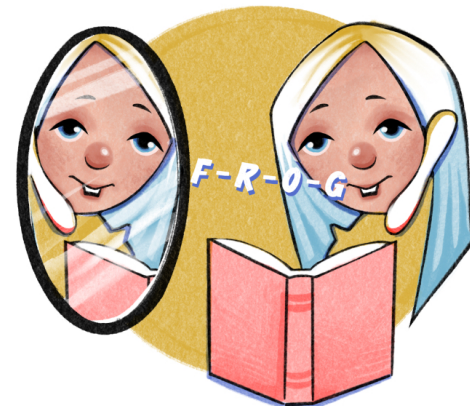
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