Dyslexia Myths and Misconceptions

● It is seeing letters and words backwards.
● “She is in the third grade. She has already outgrown her dyslexia.”
● “Dyslexia is caused by a bump on the head.”
● “Dyslexia isn’t real.”
● “Dyslexia is just an umbrella term.”
● “We don’t work with dyslexia.”
● “Dyslexia isn’t part of Special Education law.”

What is dyslexia?

Dyslexia is NOT:

■ Caused by poor eyesight or hearing problems
  ● Vision Therapy or Color Overlays will not help.
  ● Poor tracking, etc is usually the result of dyslexia, not the cause
■ Seeing words or letters backwards
■ A Developmental Disability (affecting IQ)
■ Acquired Alexia, Aphasia or Anomia – these are caused by some type of head injury (ie: stroke)
■ A degenerative disease
■ Lack of educational opportunity
■ The result of a lack of effort or laziness on the part of the student
■ A medical condition
Let’s Talk About Letter Reversals

- *Reading in the Brain*, Stanislaus Dehaene
  - Letter reversals are normal through the first grade, after that they become a red flag.
  - Letter reversals are the result of the brain trying to unlearn directionality.

What is dyslexia: IDA Definition

Dyslexia is a specific learning disability that is neurological in origin… It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.

Continued…

These difficulties typically result from a deficit in the phonological component [and orthographic components] of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.

Continued…

Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

(Adopted by the International Dyslexia Association (IDA) and the National Institute for Child Health and Human Development (NICHD).)
Dyslexia Affects Reading

Over Simplified Brain Basics

Dyslexia Affects Writing... Even More
Lifelong Condition

74% of poor readers in 3rd grade remain poor readers in the 9th grade. Often they can't read well as adults either.  
~International Dyslexia Association

Don’t forget: Children with dyslexia
come adults with dyslexia

- Dyslexia persists throughout the life span of an individual once they are diagnosed with dyslexia.
- Reading speed remains delayed.
- Require time to input the visual word, decode the word and gain automatic meaning.
- The speed of decoding generally remains a slower, tedious process for the dyslexic student and adult.

Dyslexia does not “go away”!

*S[qe[.s. 1999 Dec; 104(6) 1351-9
Persistence of Dyslexia: The Connecticut Longitudinal Study at Adolescence; Shaywitz, et al. Dept of Pediatrics, Yale University of Medicine
Identifying Dyslexia

Identifying Dyslexia

Identify: What are the signs?

‘unexpected’

“Dyslexia is a weakness in a sea of strengths.”
~ Sally Shaywitz, MD

First:
Identify the Needs of the Student

● Determine if dyslexia is the cause of the reading and spelling difficulties.
● Make an educated guess about the severity of the dyslexia.
● Identify the strength and weaknesses

Common weaknesses

- Difficulties with
  - decoding/reading new words
  - reading nonsense words: chim, grib, trop
  - reading fluency
  - reading comprehension
  - spelling, spelling, spelling
  - written composition
What do his miscues tell us?

Pets like the sun.
Cats play in the sun.
Dogs run in the sun.
Do pets have fun?
Yes! Pets like the sun.

Pets do not like the rain.
Cats get wet. Dogs get wet.
Do pets have fun?
No! No! Not in the rain.

Middle and High School

- Spelling is still behind their peers.
- Starting to experience anxiety and depression.
- Often told they are not trying hard enough.
- Often told they need to be more motivated.
- Gifted students often have a harder time keeping up with classwork.
- Accommodations are imperative.

Third Grade

Spelling is difficult and challenging hard.

Everything I need to know about a student’s understanding of the English writing system is in his or her spelling.
Sixth grade

- Graduate college
- Jump out of a plane
- Visit Paris
- Have 100 squishes
- Be an actor
- Go to Hollywood
- Go to a Taylor Swift concert
- Go to the Wacks Museum
- Drink a lime

In his own words

Ninth grade

So day we went over to Freds then I cold a soda.
So I try to went swimming and got a fish.
I had to many costs to pay.
I had a lot of food.
There was a big snowball
That very much.
I sat on a cool wave
We ate crab no dinner.
I got really a string bag.

Common Comorbid Conditions

- Dysgraphia
- Dyscalculia
- ADD/ADHD
- Executive Functioning Deficit
- Speech Deficits
Dysgraphia

- Dysgraphia is a condition that causes trouble with written expression. The term comes from the Greek words *dys* ("impaired") and *graphia* ("making letter forms by hand"). Dysgraphia is a brain-based issue. It’s not the result of a child being lazy.

- For many children with dysgraphia, just holding a pencil and organizing letters on a line is difficult. Their handwriting tends to be messy. Many struggle with spelling and putting thoughts on paper.[1] These and other writing tasks—like putting ideas into language that is organized, stored and then retrieved from memory—may all add to struggles with written expression.
How to help

First: You have to...

- believe they can learn.
- believe they want to learn about their language.
- understand that it is the instruction that needs to change, not the child.
- take the time to learn how English is really structured.

\[\text{struct + ure + ed}\]

For Remediation - Structured Literacy

- We need to teach - Structure of English Language
  - Phonemic Awareness
  - Phonological Awareness
  - Phonics - Phoneme/Grapheme (Sound/Symbol) Relationships
  - Morphology - bases, roots, prefixes, suffixes
  - Syllables - Unit of oral or written language with one vowel pattern
  - Spelling Rules
  - Syntax - grammar, sentence variations, mechanics
  - Semantics - meaning based

- We need to use Structured Literacy, an approach that is:
  - Systematic
  - Explicit
  - Multisensory
  - Examples: Orton-Gillingham, Slingerland Based, or Structured Word Inquiry

Orton-Gillingham (OG)

- Is an method, not a program
- Programs available based on OG (ie: Wilson, Barton, Take Flight, Language!)
- Based on Alphabet Principle
  - Spoken syllables / Sound it out
  - Explicitly teaches
  - Syllable Types (6 or 7)
  - Syllabication Rules
  - Spelling Rules
  - Exceptions that follow a pattern (ie: ank, ink, ang, ing)
  - Special technique for memorizing “Sight Words” (words that do not follow any OG rules)
- Has a specific progression
- Uses real & nonsense words, and controlled text
- Teacher driven instruction
7 Syllable Types

- Closed (cvc): cat, upset
- Open (cv): me, table
- Vowel-Consonant-e (vce): make, mistake
- Vowel Teams (vv): boat, peanut
- r-Controlled (vr): cart, ever
- Consonant-le (cle): sparkle, griddle

Decoding A Word Using OG

Example of how a student can learn a word when they know the first two syllable types, their associated rules, and one spelling rule:

Example: ūnrēspōnsīve

- Spelling Rule: The letter <v> does not end a word in English, so the letter <e> goes after the <v> to be the final letter.

Structured Word Inquiry (SWI)

Based on:
- English is morphophonemic – Primary function of the spellings of words in the English language is to represent meaning.
- Principles of scientific inquiry
  - Make a hypothesis, then investigate to find evidence to support or falsify your hypothesis.
  - Morphology – structure and sequence of meaning; morphemes (bases, prefixes, suffixes)
  - Etymology – interrelation of sense and meaning; history of the word (roots)
  - Phonology – units of speech that construct meaning (graphemes, phonemes)

Does not have exceptions or sight words
Does not have a specific progression
Does not use nonsense words or controlled text
Teacher and student driving instruction

SWI: 4 Questions
(for Scientific Inquiry)

1. What does it mean?
2. How is it built? (Make your hypothesis)
3. What are its relatives?
4. What aspects of the pronunciation are represented in the spelling?
Word Matrix and Word Sums

do + es → does
do + ing → doing
do + ne → done
re + do → redo
re + do + es → redoes
re + do + ing → redoing
re + do + ne → redone
un + do → undo
un + do + es → undoes
un + do + ing → undoing
un + do + ne → undone

go + es → goes
go + ing → going
go + ne → gone

How many of the words above are often taught as “sight words”? (words that don’t follow rules)

See it in action

act + ion → action
act + ion + s → actions
act + s → acts
act + ed → acted
act + ing → acting
act + or → actor
act + ive → active
act + ive + ist → activist
act + ive + ly → actively
re + act → react
re + act + ion → reaction
re + act + ive → reactive
act + u + al → actual
act + u + al + ly → actually

Word Analysis: OG vs SWI

<table>
<thead>
<tr>
<th>Complete Word</th>
<th>Divide by Syllables</th>
<th>Divide by Morphemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>elevate</td>
<td>el + e + vate</td>
<td>e + lev + ate</td>
</tr>
<tr>
<td>elevation</td>
<td>el + e + va + tion</td>
<td>e + lev + ate/ + ion</td>
</tr>
<tr>
<td>circular</td>
<td>cir + cu + lar</td>
<td>cir + ule/ + ar</td>
</tr>
<tr>
<td>thermometer</td>
<td>ther + mom + o + ter</td>
<td>therm + o + meter</td>
</tr>
<tr>
<td>explosion</td>
<td>ex + plo + sion</td>
<td>ex + plose/ + ion</td>
</tr>
<tr>
<td>motivation</td>
<td>mo + ti + va + tion</td>
<td>mote/ + ive/ + ate/ + ion</td>
</tr>
<tr>
<td>blaming</td>
<td>blame/ + ing</td>
<td>blame/ + ing</td>
</tr>
</tbody>
</table>

What’s the same & different between OG & SWI

● Structured, Explicit, Multisensory
● Phonemes / Graphemes
  ● OG – progression/instructor decide when to teach
  ● not all graphemes & phonemes options appropriately identified
  ● SWI – identified through discovery
● Some Conventions
  ● Example - Both: Every written syllable must have a vowel present
  ● Example - Both: will teach the final Double lj, ll, ss, zz rule
  ● Example - All the functions of final < e > are discovered in SWI. OG doesn’t explicitly teach all of them.
● Morphology
  ● OG – addresses it later in the progression
  ● SWI – addresses it from the first word studied
● Word Families
  ● OG – rhyming families (at, bat, cat, fat, sat, …)
  ● SWI – base (ike, likes, liking, liked, dislike, dislikes, …)
Students with dyslexia, need to see the sense in the language.

They need the opportunity to deeply understand it.

After proper remediation the brain scans of individuals with dyslexia show that they are utilizing more of the left side of their brain and less reliant on the right side than before remediation.

- Accommodations do not replace remediation
- Remediation does not replace accommodations
- Some students may need accommodations throughout school even when they have had effective instruction
  - Dyslexia is remediated, but isn’t gone
  - Student may fatigue faster than their peers when reading or writing
  - Increase in grade levels means increase in amount of reading and writing required and decrease in the timeframe to complete. If student fatigues easily, they may need continued accommodations to continue to level the playing field.
  - Conduct extended fluency reading check (4-10 minutes). Captures fatigue effect.
Accommodation & Remediation

Accommodation – tools or modifications to assist the student to be successful in the classroom (or work) environment

Remediation – direct, explicit instruction to assist the student with learning the phonemes, phonology and phonics rules in a structured, systematic, sequential, multi-sensory program

Importance of Accommodations

- Give ACCESS to grade level content & ABILITY TO PRODUCE grade level content because they are intellectual capable
- They even the playing field, not give advantages
- Student should have an Assistive Technology (AT) assessment if they have an IEP or 504Plan
- Biggest reasons for students not using accommodations:
  - LACK of training!
  - AT assessment includes training for student, teachers, parents/caregivers
  - Afraid of what teachers and peers may think

Accommodation Examples

- To be used in a classroom & home
- books in an audio format (Bookshare, Learning Ally)
- text-to-speech software (webpages, documents)
- speech-to-text and/or predictive software
- grammar check
- reduced pencil/paper work – (ie: oral responses, scribe)
- revised assignments – classwork & homework
- note taker or notes supplied
- Organization structures (ie: graphic organizers, word webs)
- specific seat assignment
- extra time to complete tasks (test, quizzes, classwork, homework)
- spelling not marked off
- record classroom lectures

Resources:
- www.atdyslexia.com
- www.headstrongnation.org

Need more time to process new information and recall known information.
MEET JEREMIAH

Resources

- **Training**
  - Dyslexia Training Institute Online Courses
  - 4 week courses & 2 Certificate Programs
  - Free webinars on Learning Ally
  - Structured Word Inquiry

- **Books**
  - Dyslexia Advocate by Kelli Sandman-Hurley
  - Overcoming Dyslexia by Sally Shaywitz
  - Proust and the Squid by Maryanne Wolf
  - Reading in the Brain by Stanislas Dehaene
  - The Dyslexia Empowerment Plan by Ben Foss
  - The Dyslexic Advantage by Dr. Eides

- **Videos & Documentaries**
  - Videos
    - Youtube Gina Cooke (3 Videos)
  - Documentaries
    - Embracing Dyslexia by Luis Macias
    - The Big Picture: Rethinking Dyslexia by James Redford
    - Dislecksia the Movie by Harvey Hubble

- **Organizations**
  - International Dyslexia Association – interdys.org
  - Decoding Dyslexia – www.decodingdyslexia.net
Resources

- Websites
  - DTI Blog - www.dyslexiatraininginstitute.org/blog
  - Yale Center for Dyslexia & Creativity – www.dyslexia.yale.edu
  - Dyslexic Advantage – www.dyslexicadvantage.org
  - WordWorks Literacy Centre - http://wordworkskingston.com