

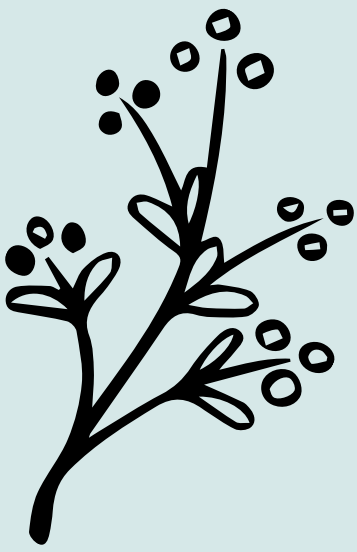
Presented by:
Willamette Valley Dyslexia Center
Lynn Brown, M. ED

DYSLEXIA DECODED

"Dyslexia is not a pigeonhole to say you can't do anything. It is an opportunity and a possibility to learn differently."

-Princess Beatrice





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WHAT IS DYSLEXIA?

Session 1:

- Myths Debunked
- Typical Learning Progression
- Dyslexia Defined

"Every child would read if it
were in his power to do so."

-Betts, 1936



This is session 1 of 3 all about Dyslexia, I am so excited you are here! It is so amazing to make the space in your life and practice to understand Dyslexia and the immense impact it has on an individual, and on our society. This is the start of a very fulfilling journey!

Throughout this course we will cover a lot! This course has grown from my passion and belief that reading is a human right! In this first session together, I will share some startling facts, address the myths surrounding Dyslexia, and finally, define DYSLEXIA.

So let's get started!

Learning to read is NOT natural! Humans were born to talk!



Spoken Language is a “hard-wired” skill. Reading, however, is not a skill that can be picked up automatically, like spoken language. Humans as a species have used spoken language for about 200,000 years. Our brains have become pre-wired to acquire spoken language through exposure alone. (Wolf, 2008)

Reading and writing are different: these are human inventions.

Humans have only been reading for just a few thousand years. This is not long enough for our human brains to have evolved for reading and writing acquisition innately. Our brains are not yet pre-wired to pick up reading through exposure alone (Wolf, 2008). Our language is always evolving, from the inception of the first written manuscripts to text message today, "literacy" as we understand it, is always evolving.

DID YOU KNOW: That the first known samples of writing were discovered in Ancient Sumeria, where writing was used as a long-distance communication tool necessitated by trade! Writing was actually starting to develop in several areas of the world, and each had its own symbols and systems. Over time, these paths crossed and the written languages became more consistent. Written language became more consistent within each culture and region.

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So, how does one learn to read?

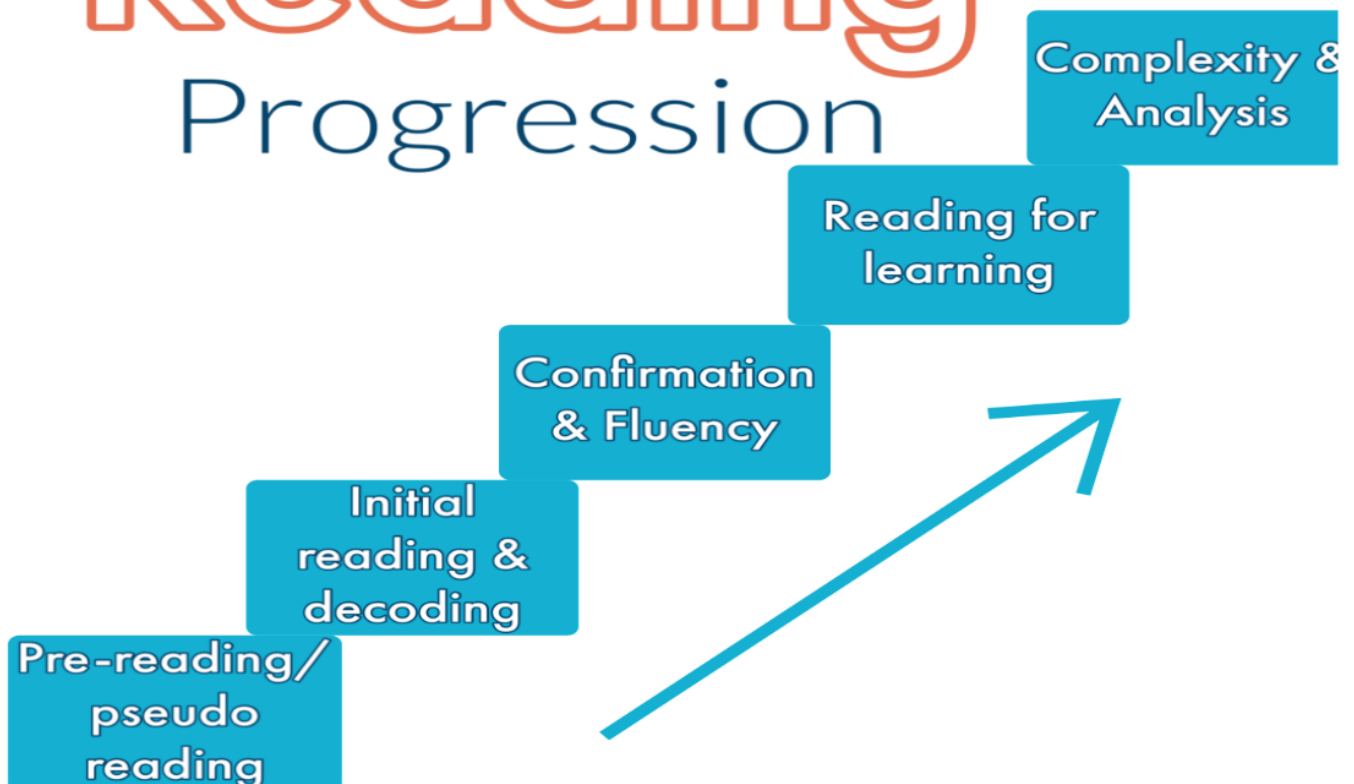
- Learning to read is a higher-level process of executive function and auditory processes working together to understand patterns. Patterns that feel quite inconsistent!
- The existence of the phoneme is not natural or consciously accessible understanding for humans. Remember, people are “wired” to process speech (spoken language) for the meanings it conveys.
- But we know, any word can be read or written using a small set of symbols. This is **The Alphabetic Principle - the idea that letters, and groups of letters, match individual sounds in words.** The ability to apply these predictable relationships to familiar and unfamiliar words is crucial to reading.

- Language can be written down and read if you can match the symbols to the sounds they represent.

NOTES:

Reading

Progression



A typical reading journey starts at a pre-reading or pseudo-reading stage where toddlers are starting to mimic reading. They are opening books and pretending to tell a story. This includes tasks of **Phonological Awareness - the awareness of and ability to work with sounds in spoken language including skills like rhyme, alliteration, syllables, and blending and segmenting sounds.** Essentially setting the stage for decoding, blending, and, ultimately, word reading.

Initial Reading and Decoding is a primitive reading stage where kids are making letter-sound connections and using **DECODABLE** books to read simple stories. Decodable books are crucial in reading development. It empowers kids to read independently!

Fluency is the stage where a child can read almost anything presented whether it has meaning to them or not. Fluency reading is defined as reading with enough accuracy and at a rate that supports comprehension.

Reading for Learning stage is a stage where kids are starting to build mental pictures and make associations between words and meanings. They are capable of reading a passage independently and gaining new learning from it.

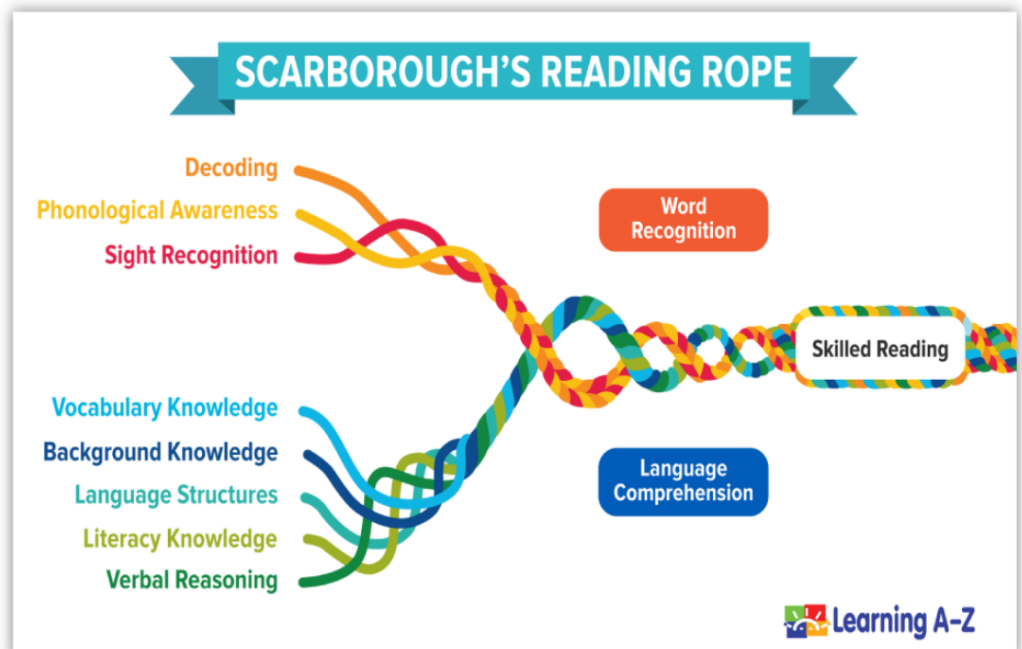
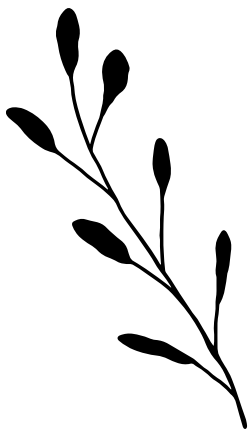
Complexity and analysis are higher-order skills where a student can gain a deeper meaning. Think of poetry, similes, metaphors, etc... students at this level can use written text to understand various viewpoints and form opinions.

The Dyslexia Connection: Struggling readers will struggle to gain reading fluency without explicit and intentional instruction.

NOTES:

Accurate and Fluent Readers are able to:

- Scan the print effortlessly
- Extract meaning and sift through it
- Make connections
- Interpret
- Figure out new words with minimal effort (because the sounds, syllables, and meaningful parts of words are recognized automatically).
- Form a mental model (schema) for the meanings extracted, linking new information to background knowledge.



Accurate and Fluent reading is the crossroads where Phonological Awareness meets sight recognition and decoding.

Simple View of Reading: The reading rope is a demonstration of the widely accepted view that reading has two basic components:

- Word Recognition (decoding)
- Language Comprehension.

The Simple View of Reading Formula ($D+LC=R$) has been supported and validated by several research studies.

This formula also makes clear that strong reading comprehension cannot occur unless both decoding skills and language comprehension abilities are strong.

- We must teach students to decode expertly as early as possible. When students can decode expertly, their reading comprehension capabilities equal their language comprehension abilities.
- We must provide students with strong content knowledge and vocabulary in many domains at all grade levels for them to develop adequate language comprehension abilities.

Why is English SO HARD?

(adapted from Uncovering the Logic of English)

We are in love with the idea of rich vocabularies, and beautiful illustrations! While there is nothing wrong with this, we need to acknowledge that while we can have a vast and beautiful vocabulary it means nothing if we cannot read or write said vocabulary.

We have been led to believe that English is HARD!
I believe that our students struggle because we as educators don't always understand enough of the language. The structure of the language has been dismissed with a simple blanket statement: "ENGLISH is HARD!" Our society has gotten away from the Science of Reading. Our education system has moved away from systemic and explicit phonics instruction, embracing a balanced literacy approach (which we now know, was more damaging than anything). Additionally, we have lost the patterns and rules that make English accessible to all.

Here's the thing... Just because English is hard doesn't mean it has to become a barrier, the obstacle that prevents kids and adults from achieving great things including independent literacy. The simple fact that it is hard, does not justify the lack of understanding and explicit instruction of the "code".

We have so many examples in pop culture that tell us that people who are dyslexic can be quite successful! (A short list includes Kira Knightly, Albert Einstein, Richard Branson, Whoopi Goldberg, and Tom Holland).

So let's shine a light on the pain points of learning our written code:

- The 26 individual letters of the Latin alphabet are inadequate to describe the 44 phonemes (sounds).

- Our current system teaches a 26 letter alphabet, and if you include that vowels have 2 sounds, a short sound and a long sound, it gives the impression that there are only 31 phonemes (sounds).
- A grapheme is a written representation of a sound, that can be a single letter or a combination of letters which represent one or more sounds. (More than one spelling for a spoken sound).
- There are spelling patterns that change the morphological meaning, and are pronounced differently, despite being spelled the same (-ed suffix to indicate past tense pronounced differently in painted /ed/, played /d/, and liked /t/).
- For someone to acquire a fairly complete understanding of English they not only need to master 26 letters, they need to master 75 basic phonograms (spelling patterns).
- Because we have more sounds than letters, we have created letter combos to fill in the gaps, we have also doubled down on some sounds and created extra spellings for other sounds. (The sound /f/ can be spelled with f as in frog, ph as in phone (greek), -ff as in stuff, -gh as in cough, and less common -lf as in calf).
- In addition to graphemes (spellings), there are 31 spelling rules which interplay with the graphemes and affect the pronunciation and spelling of words
- AND, just to make sure you are confused, English has different spelling options to differentiate the meaning of words that sound alike. (Homophones).

Part of why English is so confusing is because English is a collaboration of languages. There is an entire podcast that will talk you through the history and evolution of our modern English Language. Growing from many influences over the years. Additionally, English has a synonym for most of its words, which allows for a vast range of meanings.

DID YOU KNOW:

English has the largest vocabulary in the history of the world? There are over 2 million words in the English Lexicon! The average adult only knows about 40-60,000 words, and a well-educated adult knows closer to 200,000 words!

The truth is the logic of English has been lost over the past 80 years to not only the general public, but also to educators.

The SCIENCE proves that a MAJORITY of children who are presented with English instruction that is systematic, intensive, and provides explicit teaching of the 75 graphemes, and 31 spelling rules IS the most efficient route to mastering English.

DEBUNKING THE MYTHS ABOUT DYSLEXIA:

In this instance what is imperative for SOME, is good for ALL! I am going to present you with the BIGGEST myths that continue to swirl around Dyslexia, even today 20 years after groundbreaking research.

Today, we are seeing the irrefutable truths of what Dyslexia is.

As I share with you these myths and misconceptions, I encourage you to reflect on students you have known.

MYTH: Reading disabilities are caused by visual perception problems.

TRUTH: Dyslexia is a problem with language processing at the phoneme level, not a problem with visual processing. (e.g., Lyon et al., 2003; Morris et al., 1998; Rayner et al., 2001; Wagner & Torgesen, 1987).

- Sometimes people with visual tracking issues also struggle to read. Visual tracking is an eye motor issue where one's eyes don't work together, causing issues with keeping one's place in a line of text, causing headaches, and making it hard to focus on print.

MYTH: Dyslexia only affects people who speak English.

TRUTH: Dyslexia appears in all cultures and languages in the world with written language. In English, the primary difficulty is the accurate decoding of unknown words. (Ziegler & Goswami, 2005).

MYTH: People with dyslexia will benefit from colored text overlays or lenses.

TRUTH: NO, while some may find relief from a colored overlay or a different contrasting color, Irlen Syndrome is a visual processing issue, and colored overlays or tinted glasses are used to relieve the stress on the eyes. (American Optometric Association, 2004; Iovino, Fletcher, Breitmeyer, & Foorman, 1998).

MYTH: Writing letters and words backward are symptoms of dyslexia.

TRUTH: Writing letters and words backwards are common among non-dyslexic and dyslexic children alike (Adams, 1990).

MYTH: If you just give them enough time, children will outgrow dyslexia.

TRUTH: No! There is absolutely no evidence to support “growing out of it” (Francis, Shaywitz, Stuebing, & Fletcher, 1996).

MYTH: More boys than girls have dyslexia.

TRUTH: As many girls as boys are affected by Dyslexia (Shaywitz, Shaywitz, Fletcher, & Escobar, 1990).

MYTH: A person with dyslexia can never learn to read.

TRUTH: This is simply not true! (National Institute of Child Health and Human Development, 2000; Torgesen, 2002). With the proper resources - children with dyslexia can absolutely conquer reading!

Let's see what the data says about literacy today...

- 5% of students learn to read effortlessly.
- Up to 30% learn to read easily with any kind of formal reading instruction.
- 60% find learning to read a challenge
- Up to 20% need intensive help from highly trained educators to learn how to read.

(Lyon, 1997)

Literacy is a social justice issue

- Dyslexia is the leading cause of reading failure and school dropouts in our nation.
- Reading failure is the most commonly shared characteristic of juvenile justice offenders.
- Early intervention is essential for this population.
- 70% of incarcerated adults are unable to read above a 4th-grade level.

"Our children's life outcomes literally depend on solving literacy instruction in our classrooms and allocating the right resources for early identification." - Jeanne Jeup

DYSLEXIA DEFINED -

The International Dyslexia Association (IDA) established the following definition of Dyslexia in 2002, which has since been adopted by many federal and state agencies:

- "Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often expected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and background knowledge."

In other words, assuming average intelligence, a child should reasonably be expected to learn to read. BUT we know that reading is not a natural process. Reading is quite complex to learn, and teaching reading is rocket science, because of the complexities and necessary systems that work together to achieve fluency. An effective reading teacher has established a deep understanding of these systems and is executing some of the most tedious work in education.

Learning to read is not natural or easy for most children. Good readers process the letters of each word in detail, although they do so subconsciously.

The ability to sound out words is a major undertaking that allows rapid recognition of words. (This recognition is so fast that some people mistakenly believe it is happening "by sight").

"Before children can easily sound out or decode words, they must have an implicit awareness of the speech sounds that are represented by symbolic units (letters and their combinations). Children who learn to read well are sensitive to linguistic structure, recognize redundant patterns, and connect letter patterns with sounds, syllables, and meaningful word parts quickly, accurately, and subconsciously. Effective teaching of reading entails these concepts, presenting them in a sequence from simple and consistent to complex and variable." -Dr. Luisa Moates

Additional definitions of Dyslexia:

- NICHD: Dyslexia specifically impairs a person's ability to read. Individuals with dyslexia have normal intelligence, but they read at levels significantly lower than expected. Although the disorder varies from person to person, there are common characteristics: People with dyslexia often have a hard time sounding out words, understanding written words, and naming objects quickly.
- DSM-5: Considers Specific Learning Disability (SLD) to be a type of Neurodevelopmental Disorder that impedes the ability to learn or use specific academic skills (e.g., reading, writing, or arithmetic), which are the foundations for other academic learning.

****NOTE** in the updated manual, the DSM-5 dropped the IQ requirement for SLD.

Often Dyslexia, Learning Disability, and Reading Disorder are all terms that refer to **DYSLEXIA** (American Academy of Pediatrics, 2011).

In other words...

Dys-lex-i-a: From the Greek morphs "dys" & "lex" it translates to meaning a difficulty with words.

A modern understanding of Dyslexia is an unexpected disruption in one's ability to perform skills of reading and writing when compared to observed intelligence.

Also, difficulty in learning to read, write, or spell, despite regular instruction, adequate intelligence, and sociocultural opportunity (T.E.C. code 38.003).

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