

Overview of LD and the Power of Early Literacy
Professor Hodges

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“
Reading is not a natural process it must be taught...”

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Processing Chart


- High Cognitive Functions
- Concept
- Language
- Percept
- Brain Interpretation
- ATTENTION
- SEE, Hear, Feel, Smell, Taste

Pickering, 2016

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Your Brain Has...

- At Least 100 billion nerve cells (neurons)
- Neurons which make between 5,000 & 50,000 connections with other neurons.
- One million billion (one quadrillion) connections between neurons in the cortex.

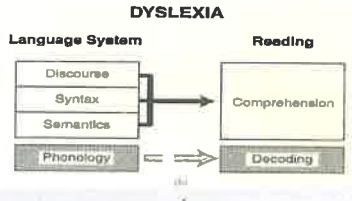


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Dyslexia

In dyslexic children there is a "glitch" within the language system.

DYSLEXIA




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Dyslexia

A phonological weakness blocks decoding, which in turn interferes with word identification.

READING DISABILITY
Going from Text to Meaning



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“While no two brains are alike, the brains of people with dyslexia are distinctively different compared to those without dyslexia.”

-Dr. Gordon Sherman
Schwablearning.org, 2016

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The Dyslexia Brain

BROCA'S AREA
Inferior Frontal Gyrus
(articulation/word analysis)

PARIETO-TEMPORAL
(word analysis)

OCCIPITO-TEMPORAL
(word form)

Shaywitz, 2020

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The Dyslexia Brain

NON-IMPAIRED

DYSLEXIC

Shaywitz, 2020

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Definition of Dyslexia – Adopted by IDA in 2002

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

-<https://dyslexiaida.org/definition-of-dyslexia/>

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Dyslexia Defined

Dyslexia is a specific learning disability that is neurobiological in origin.

The brain is formed differently
works differently

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Dyslexia Defined

It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.

Misread common words, may even misread them in a variety of ways.
Reading is slow, choppy, lacks that prosody heard with same age peers
Spelling- the biggest challenge

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Dyslexia Defined

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.

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Dyslexia Defined

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

Reading comprehension more challenging than listening comprehension

Because reading is more challenging, they are not reading and being exposed to higher level vocabulary.

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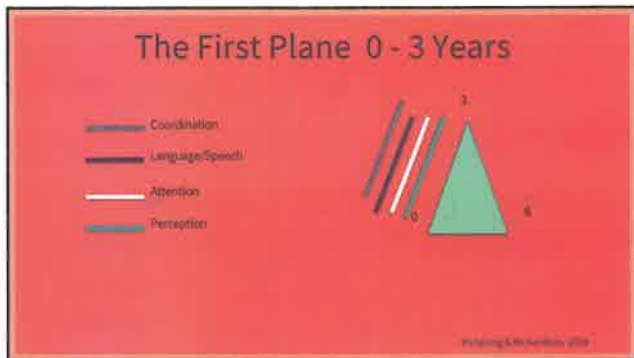
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Four Planes of Development

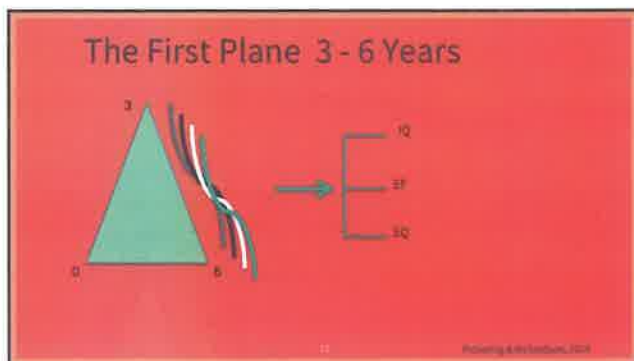


Pikulev & Schindler, 2019

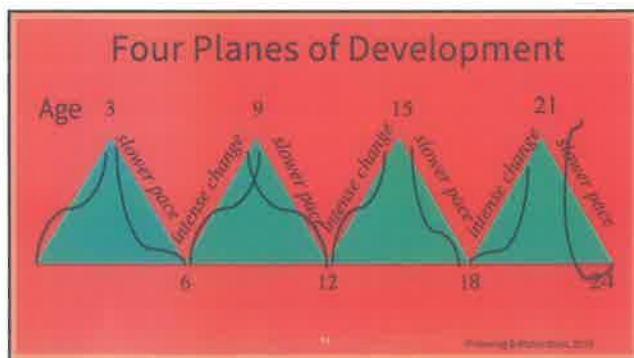
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What to look for

Perceptual Errors

- Visual Discrimination
- Visual Motor
- Auditory Discrimination



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What to look for

Visual Discrimination	Visual Motor	Auditory Discrimination/ Memory
Act, tac, cat	Dictation	"l" vs "e"
Would/World	Written expression	Rhyming
Respt/respect		Blending sounds into words
d/b, p/q, m/w		Wlsp/ Whlsk

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“

“The limits of my language are the limits of my world”

”

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The Dyslexia Dilemma

BROCA'S AREA
Located in the inferior frontal lobe.
Involved in the production of speech.
(Expressive Language)

WERNIKE'S AREA
Located in the posterior section of the temporal lobe.
Involved in understanding written and spoken language.
(Receptive Language)

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The Dyslexia Dilemma

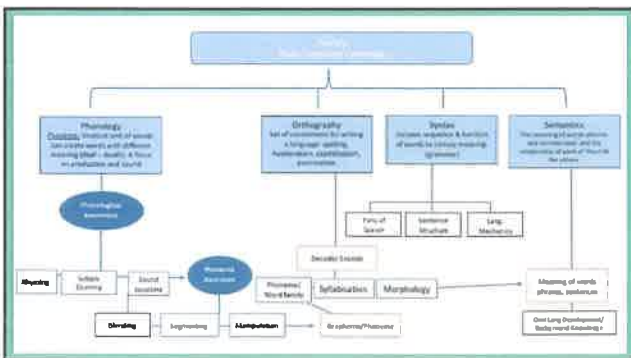
BROCA'S AREA

ARCULATE FASCICULUS

WERNIKE'S AREA

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Extra Resources

The Dyslexia paradox- <https://www.youtube.com/watch?v=kPA3FsFF10I>

How can screeners be improved- <https://www.youtube.com/watch?v=8xp211ezmY>

Baby Brain Study on early identification of Dyslexia
<https://www.youtube.com/watch?v=x9n669-PP>

Full version of FAT City- <https://www.youtube.com/watch?v=Q3UNvJbxk3rs>

Dyslexia: Not a disability but a superpower -
<https://www.youtube.com/watch?v=AMrUxgnMz8g>

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Video Links- Early Intervention and Early Language

<https://hhs.texas.gov/services/disability/early-childhood-intervention-services>
 -Resource for Early Intervention

<https://www.youtube.com/watch?v=y8qc8Aa3weE>
 -Dr. Brenda Fitzgerald- Exposure to early language

<https://www.youtube.com/watch?v=rvf0KqRx1Jo>
 - encouraging child's early language, skills to do at home.

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Reference Page

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Thank you!

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