

ORAL LANGUAGE IMPAIRMENTS AND DYSLLEXIA

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DISCLOSURES: TIFFANY HOGAN

- MGH Institute of Health Professions, Salary
- National Institutes of Health, Grant Support
- Arizona State University, Grant Consultant
- American Institute for Research - Tools Chart, Paid Consultant
- Scientific Studies of Reading, Elected Board Member (no profit)
- Co-founder of www.DLDandme.org (no profit)
- Host, www.SeeHearSpeakPodcast.com (no profit)

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IDA accredited Reading and Language Online Program

Courses by Semester

Summer Semester	Fall Semester	Spring Semester
<ul style="list-style-type: none"> Language Acquisition Reading & Writing in the Schools Leading Literacy Change Teaching Language & Literacy in ELL 	<ul style="list-style-type: none"> Language Acquisition Development & Disorders of Spoken & Written Language Teaching Narrative & Expository Children's Literature 	<ul style="list-style-type: none"> Diagnostic Methods in Reading/Writing Disorders

<https://www.mghihp.edu/overview/literacy-and-language-certificate>

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PARTNERSHIP WITH SCHOOLS

- Promote early identification of students at risk of language and reading difficulties, including dyslexia
- Understand the language and reading development of students with and without language difficulties, from kindergarten to second grade
- Determine the effectiveness of small-group interventions for students with language difficulties
- Support regular and special education

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THANK YOU to our teachers, staff, and over 100 families at our partner schools:

Worcester Public Schools
 Amesbury Public Schools
 Pentucket Regional School District
 Winthrop Public Schools
 Missoula County Public Schools

OUR TEAM

First row from left to right: Co-PIs Tiffany Hogan and Julie Wolter; Co-PIs Annie Roberts and Yasmin Petcher



Acknowledgements

National Institute of Health, National Institute on Deafness and Other Communication Disorders
 NIH R01 (R01 DC016895): Orthography and phonology in word learning as a predictor of dyslexia in children with language impairment, 2018-2023


Second row from left to right: Rouzana Komesidou, Mary Kauer, Xue Bai, Melissa Feller, Tim DeLuca, Kate Radville, and Colie Putman

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Large scale tier 2 intervention within schools with students in 1st grade who fail language comprehension screening

OUR TEAM
From left to right:
Co-PIs:
Tiffany Hagan
Shayne Parris
Mindy Bridges
Co-I:
Kandace Fleming
Project
Manager:
Maura Curran


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**PUBLICATIONS SHOWCASING PARTNERSHIP...
MORE FORTHCOMING**

<https://onlinelibrary.wiley.com/doi/abs/10.1111/1467-9817.12381>

Journal of Research in Reading

Special Issue Article
Educators' perceptions of barriers and facilitators to the implementation of screeners for developmental language disorder and dyslexia

Researcher(s): Tiffany Hagan, Julie A. Miller, Jesse Roberts, Mary G. Roemer, Julie A. Palmer, Tiffany Hagan


On 23 January 2022 | <https://onlinelibrary.wiley.com/doi/abs/10.1111/1467-9817.12381>

Read the full text >

Abstract
Developmental language disorder (DLD) and dyslexia are common but under-identified conditions that affect children's ability to read and comprehend text. Universal screening is a promising solution for improving early identification of DLD and dyslexia. However, we lack evidence for how to effectively implement and sustain screening procedures in schools. In the current study, we solicited input from educators in the United States around perceived barriers and facilitators to the implementation of researcher-developed screeners for DLD and dyslexia. Using thematic analysis, we identified barriers and facilitators within five domains: (1) features of the screeners, (2) preparation for screening procedures, (3) administration of the screeners, (4) demands on educators, and (5)

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[HTTPS://INFO.MGHIHP.EDU/ISFORALL](https://info.mghihp.edu/isforall)



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THANK YOU TO HUGH CATTS



Episode 40: Language basis of reading, dyslexia, and reading comprehension with Hugh Catts
SpeechTalk Podcast - Jan 15



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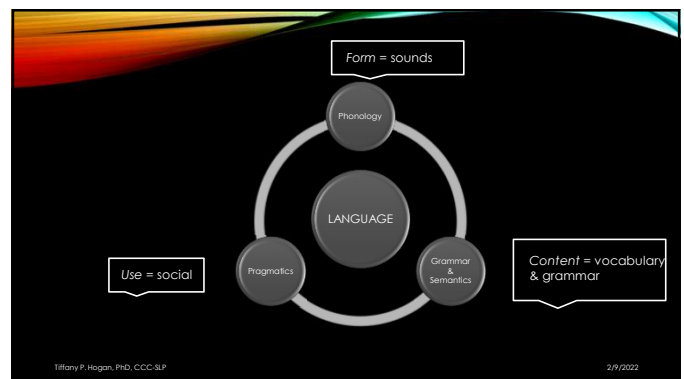


**FROM BIRTH,
WHAT **LANGUAGE SKILLS** ARE
CHILDREN
DEVELOPING TO
HELP THEM
COMPREHEND
TEXTS LATER?**

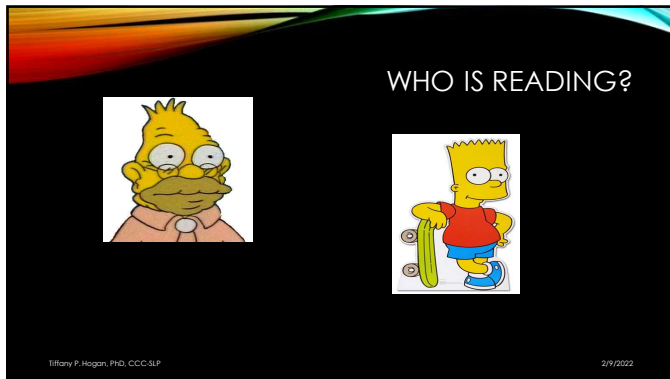
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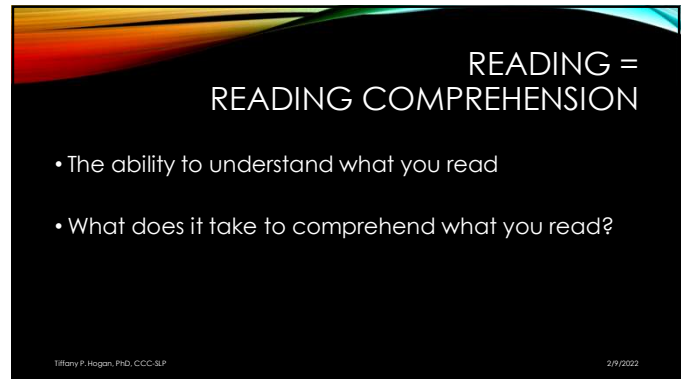
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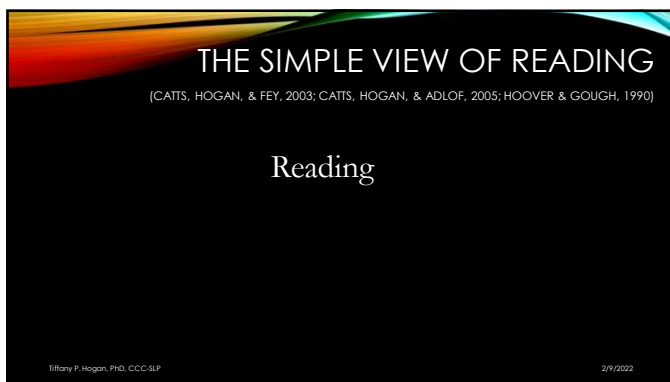
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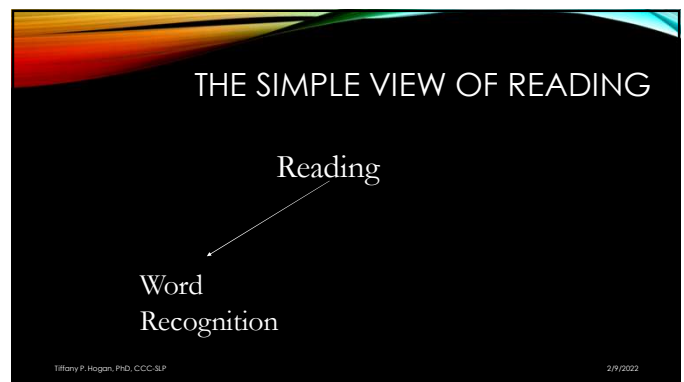
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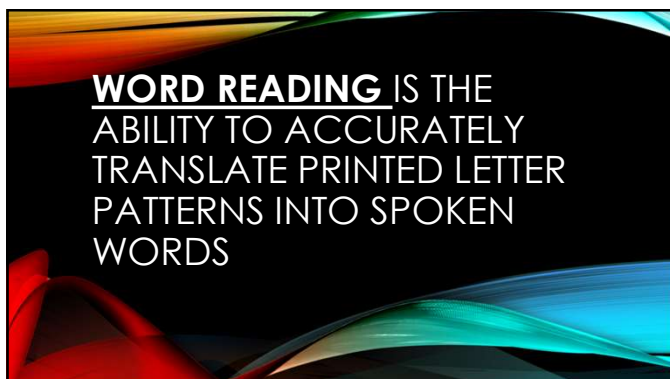
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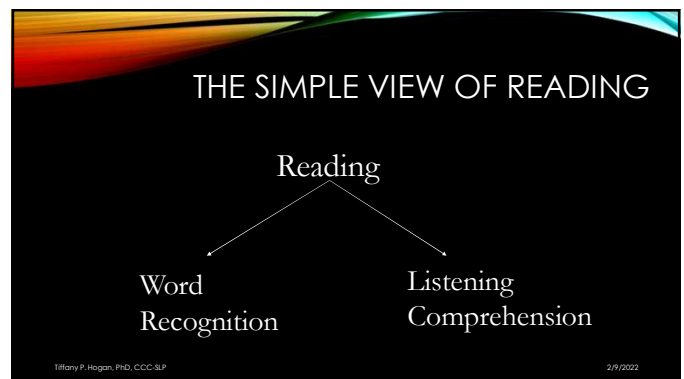
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LISTENING COMPREHENSION IS THE ABILITY TO UNDERSTAND SPOKEN LANGUAGE

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WORD READING VS LISTENING COMPREHENSION

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SIMPLE VIEW COMPONENTS



- Word identification
 - Word reading
 - Nonword reading
- Listening comprehension
 - Narrative comprehension
 - Receptive language skills

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WRMT-R WORD ATTACK SUBTEST

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Adjex

Yeng

Zirdn't

gaked

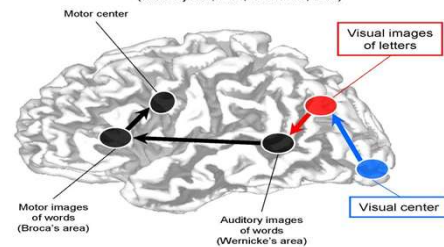
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WHAT IS NEEDED FOR WORD RECOGNITION?

- Phonological awareness
 - Awareness of sounds in language independent of meaning
- Concept of alphabetic principle
- Orthographic (letter) knowledge
- Practice, practice, practice

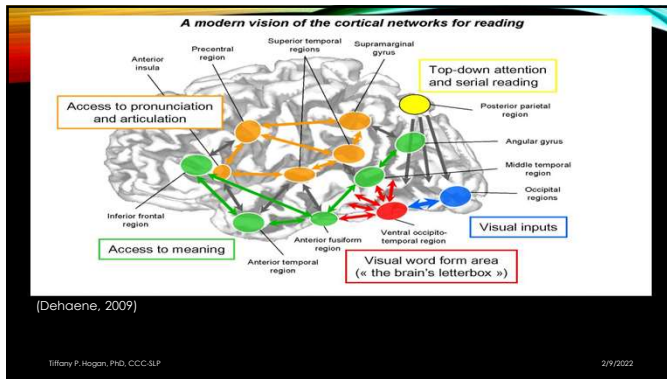
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The old neurological model of reading (After Dejerine, 1892; Geschwind, 1965)



(Dehaene, 2009)

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LISTENING COMPREHENSION EXAMPLE

A Lucky Bear (from the CELF-4)

The big, black bear walked slowly through the burned-out forest, sniffing the ground. The bear's stomach growled now as he remembered eating his last meal of berries. That had been before he swam across the river and fell asleep, exhausted. Yesterday, the lightning had come out of the sky, and the animals had to escape from the fire. The bear was very hungry. Suddenly, he caught the faintest smell of something familiar. Could it be acorns? The scent led the bear to a hole under a fallen tree.

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QUESTIONS

- What happened to the forest?
- Why was the bear sniffing the ground?
- What had the bear last eaten?
- What did the bear do after he swam across the river?
- What do you think the bear was going to do with the acorns?

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LISTENING COMPREHENSION QUESTIONS

- Literal interpretation – information found in text
- Inferences – connect what is found in the text with experience
- Sequential information

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LISTENING COMPREHENSION COMPONENTS

- Vocabulary
- Background knowledge

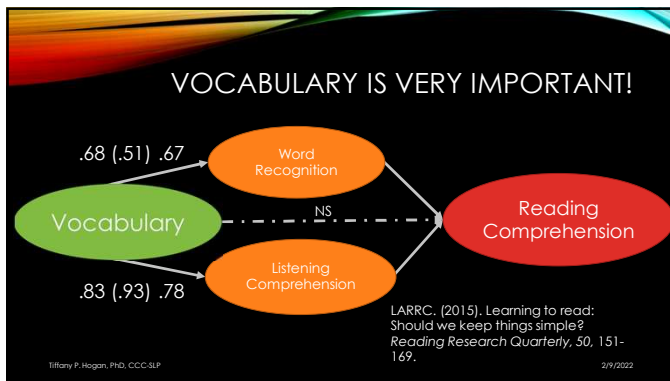
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The procedure is actually quite simple. First you arrange things into different groups. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run this may not seem important but complications can easily arise. A mistake can be expensive as well.

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In Grades 1-3, children who learned vocabulary words had the most gains in listening and reading comprehension.

Language and Reading Research Consortium (LARRC), Jiang, H., & Logan, J. (2019). Improving reading comprehension in the primary grades: Mediated effects of a language-focused classroom intervention. *Journal of Speech, Language, and Hearing Research*, 62, 2812-2826.

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ACCESS TO FREE LESSONS

Pre-K to Grade 3
<https://larrc.ehe.osu.edu/>

Middle School
<https://www.meadowscenter.org/library/resource/pact-plus-sample-lessons>

Middle School
<http://stari.serpmedia.org/index.html>

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LISTENING COMPREHENSION COMPONENTS

- Vocabulary is important
- Background knowledge is needed

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Sally first let loose a team of gophers. The plan backfired when a dog chased them away. She then threw a party but the guests failed to bring their motorcycles. Furthermore, her stereo system was not loud enough. Obscene phone calls gave her some hope until the number was changed. It was the installation of the blinking neon lights across the street that finally did the trick. Sally framed the ad from the classified section and now has it hanging on her wall.

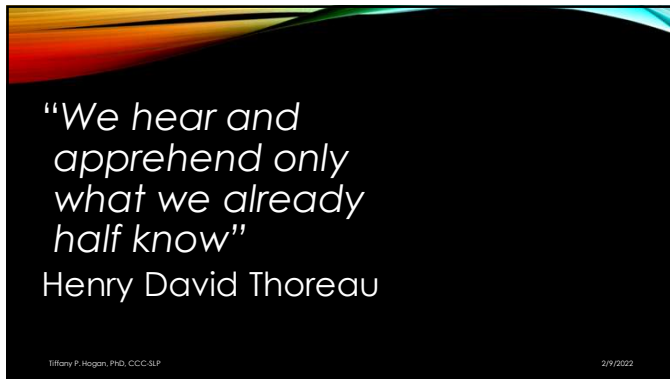
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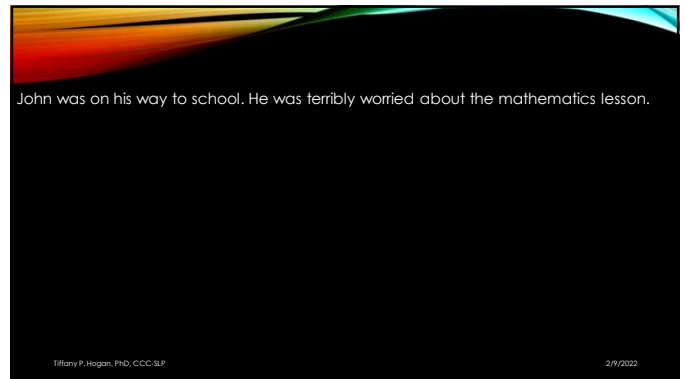
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1. Where did Sally put the gophers?
 2. Why did Sally want the guests to bring their motorcycles?
 3. What did the ad say?
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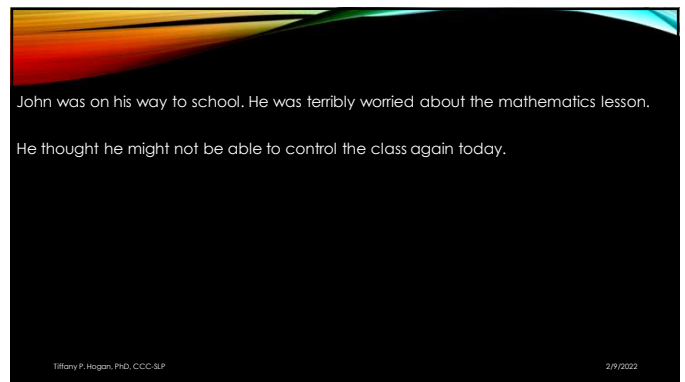
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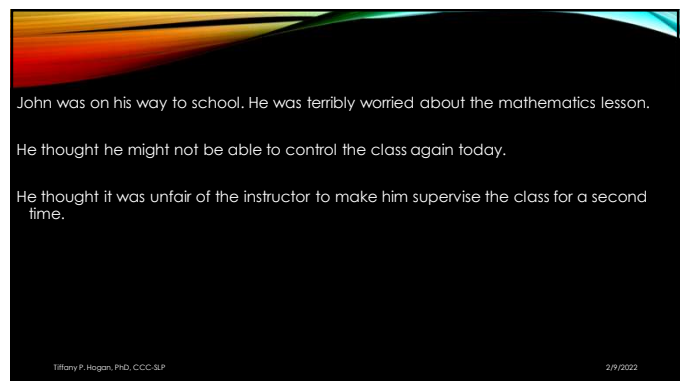
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WHO IS JOHN?

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John was on his way to school. He was terribly worried about the mathematics lesson.

He thought he might not be able to control the class again today.

He thought it was unfair of the instructor to make him supervise the class for a second time.

After all, it was not a normal part of the janitor's duties.

(Sanford & Garrod, 1981, p. 132)

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International Journal of Speech-Language Pathology, 2014; 16(3): 199–207

informa
healthcare

INVITED ARTICLE

On the importance of listening comprehension

TIFFANY P. HOGAN¹, SUZANNE M. ADLOF² & CRYSTLE N. ALONZO¹

¹MGH Institute of Health Professions, Communication Sciences and Disorders, Boston, MA, USA, and ²University of South Carolina, Communication Sciences and Disorders, Columbia, SC, USA

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4681499/>

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SIMPLE VIEW CONCLUSIONS

- Both components need to be considered when thinking of “reading”

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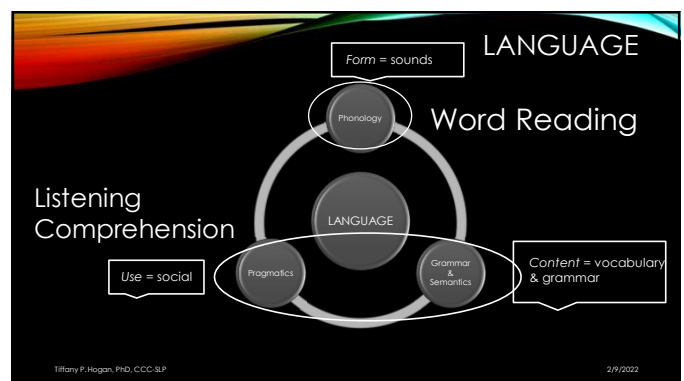
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WHAT'S LANGUAGE GOT TO DO WITH IT?

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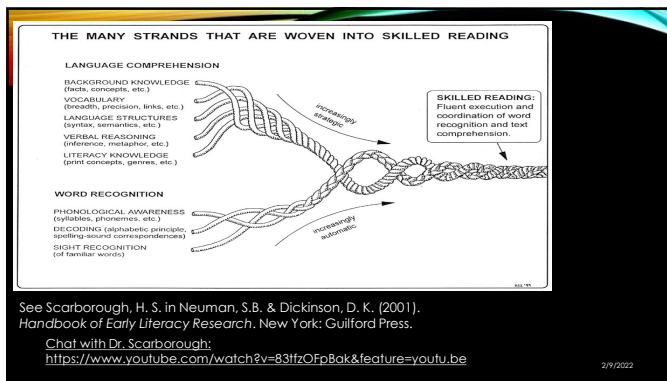
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IMPLICATIONS OF LONGITUDINAL DATA ON SIMPLE VIEW

- Early identification of both word reading and listening comprehension
- Separate skills
- Need to stimulate both!

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WHY SOME CHILDREN STRUGGLE TO UNDERSTAND TEXT

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SUBGROUPING POOR READERS

- Poor readers are not all the same...
- Simple view can be used to subgroup poor readers based on individual differences

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POOR READER SUBGROUPS
 (CATTS, HOGAN, & ADLOF, 2005; CATTS, HOGAN, & FEY, 2003)

		Word Recognition	
		Poor	Good
Listening Comprehension	Good		
	Poor		

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		Word Recognition	
		Poor	Good
Listening Comprehension	Good	Dyslexia	
	Poor		

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DYSLEXIA IS A WORD-READING DEFICIT

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FACTS ABOUT DYSLEXIA

- A person is born with dyslexia, persists across the lifetime
- Cuts across SES and other disorders
- Brain difference
- Key deficits in phonological (sound) and orthographic (letter) processing
- Risk can be identified early and remediation improves reading
- Not a medical diagnosis; poor word reading relative to peers identified by teachers, reading specialist, special educators, SLPs
- Better identification if strong classroom word reading instruction
- Many laws require early screening (Snowling, 2019)

Check out Nadine Gaab (@GaabLab) on Twitter: She busts 1 myth a day about dyslexia in the month of October (Dyslexia Awareness Month)

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RESOURCES

Video: <https://dyslexicsinsight.com/videos-explaining-dyslexia/>
 Dyslexia Foundation Webinars
<https://dyslexiafoundation.org/>
 International Dyslexia Association (IDA)
<https://dyslexiaida.org/>
 The Reading League
<https://www.thereadingleague.org/>
 What SLPs need to know about dyslexia
<https://academy.pubs.asha.org/2018/10/10/shss-clinical-forum-what-slp-need-to-know-about-dyslexia/>

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Word Recognition

		Poor	Good
Listening Comprehension	Good	Dyslexia	
	Poor		Developmental Language Disorder (DLD)

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DEVELOPMENTAL LANGUAGE DISORDER

- Developmental Language Disorder is when a child or adult has difficulties talking and/or understanding language

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FACTS ABOUT DEVELOPMENTAL LANGUAGE DISORDERS

- A person is born with DLD, persists across the lifetime
- Cuts across SES and other disorders
- Brain difference
- Key deficits in vocabulary and grammar learning & use
- 50% can read well; so they read words but fail to understand the text, especially struggle with shift from 'learning to read' to 'reading to learn'
- Often 'missed' because it's a 'hidden' deficit
 - Only ~50% identified in the early grades
- Diagnosed by SLP if language skills lower than peers
- Risk can be identified early and remediation improves reading
- Public awareness is low...working to change that (McGregor, 2020)

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Research
The term language disorder is used in clinical settings to refer to children with delays in language acquisition. This term is typically used in educational settings that serve children birth to eight years old.

Clinical Terminology
In clinical settings, there are three IDEA terms that a child with DLD could be given:

Developmental Delay
This includes children with delays in language acquisition. This term is typically used in educational settings that serve children birth to eight years old.

Speech or Language Impairment
This includes children with a communication disorder, including language impairment, that affects their educational performance. This term can also be abbreviated as SLI or S/LI, which is not to be confused with Specific Language Impairment.

Specific Learning Disability
Not to be confused with the DSM-5 label "Specific Learning Disorder," this educational term refers to children with trouble understanding or using spoken or written language, which affects their reading, writing, spelling, math, or other areas.

Insufficient
Educational labels are particularly important because they are the basis for determining whether your child qualifies for intervention services and accommodations in school. Of note, educational labels can differ by country.

All of these terms could potentially be used to describe a child with DLD. Because of this, there has been a worldwide push to decide on a common term. Fueled by the CATALISE Consortium (Bishop et al., 2016), "developmental language disorder" is becoming more and more prominent as the preferred term. As research in DLD continues to move forward, having a common term will help bring together the many researchers, clinicians, and educational policymakers who want to support children with DLD.

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DLD FACTS

<https://radld.org/wp-content/uploads/2019/04/DLD-Fact-Sheet-English.pdf>

- Translated in 20 languages!!!
- <https://radld.org/about/dld/dld-fact-sheet/>

DEVELOPMENTAL LANGUAGE DISORDER (DLD) FACT SHEET

There are three things you need to know about DLD:

- Developmental Language Disorder is when a child or adult has difficulties taking and/or understanding language.
- DLD is a hidden disability that affects approximately two children in every classroom, affecting literacy, learning, friendships, and emotional well-being.
- Support from professionals, including speech and language therapists and teachers, can make a real difference.

DLD Diagnostic terminology, frequency, causes

- Consensus on terminology:** The recommendation for the use of the diagnostic term Developmental Language Disorder has been published (Bishop et al., 2016, 2017), with an account of how consensus was reached.
- Frequency:** DLD affects approximately two children in every classroom. A recent epidemiological study across the UK (Bishop et al., 2016) found that 28% of children had DLD at some point in their lives.
- Causes:** DLD seems to run in families. Twin studies indicate strong genetic influence on DLD, but this seems to reflect the combined impact of many genes rather than a specific mutation (Bishop, 2016). The

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DLDANDME.ORG

WHAT IS DLD? WHO WE ARE RESOURCES

Welcome to DLD and Me!
Spreading the word about Developmental Language Disorder

What is DLD? Latest Articles

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WHAT IS DLD? WHO WE ARE RESOURCES

What is DLD?
Developmental language disorder (DLD) is 50 times more prevalent than hearing impairment and 5 times more prevalent than autism. Yet, DLD often goes undiagnosed. Read about identifying DLD and evaluating communication.
Read More >

Differences Between DLD and Autism Spectrum Disorder
How is Developmental Language Disorder different from Autism Spectrum Disorder (and Other Neurodevelopmental Conditions)? "Neurodevelopmental conditions" is a name doctors and scientists give to diff. [...]
Read More >

What are the Social Impacts of DLD?
We socialize verbally all the time without giving it too much thought. Talking is how we start and keep friendships, resolve differences, and get the things we want. For children with DLD, weak language skills can make socializing difficult.
Read More >

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Developmental Language Disorder (DLD) Awareness Day Oct 18, 2019

radld.org

2021: Oct 15

Woodman Life Tower, Omaha, Nebraska University of Limerick, Republic of Ireland

Nagara Falls, Ontario, Canada Zakim Bridge, Boston, Massachusetts

Melbourne Bridge and Sky Bridge, Perth, Australia British Airways 180 Tower, Brighton, United Kingdom

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SEEHEARSPEAKPODCAST.COM

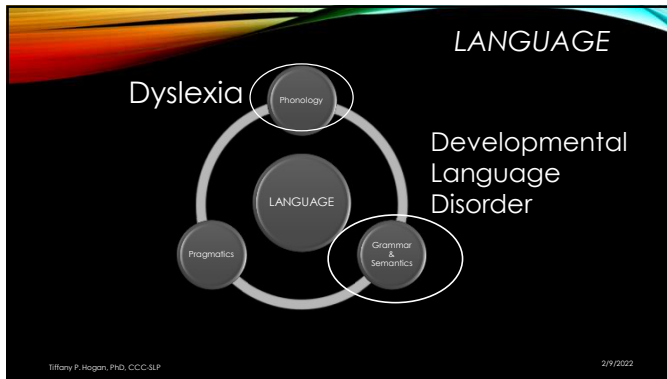
- 5 episodes devoted to DLD
 - Episodes 15-19
- History of DLD
- Awareness campaigns for DLD
- DLD & Working Memory
- DLD & ADHD
- A parent's perspective on DLD

See • Hear • Speak

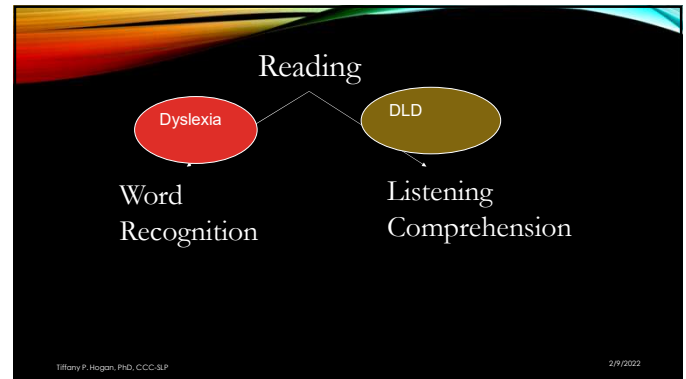
Interesting conversations with people who care about reading, language, and speech in the developing child.

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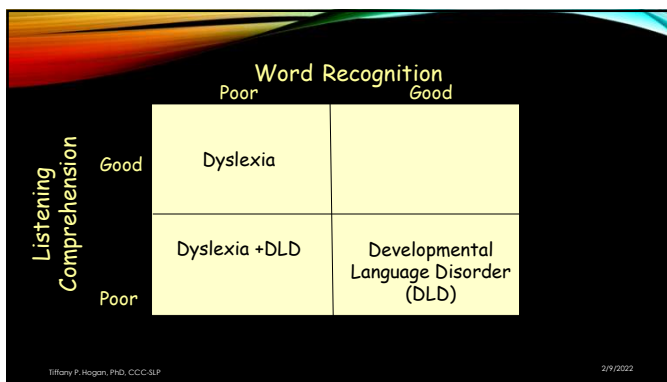
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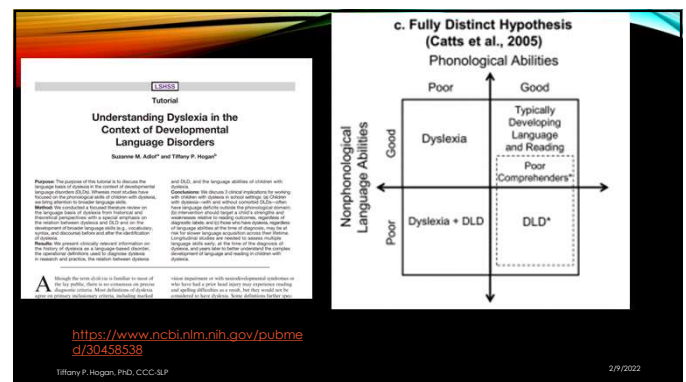
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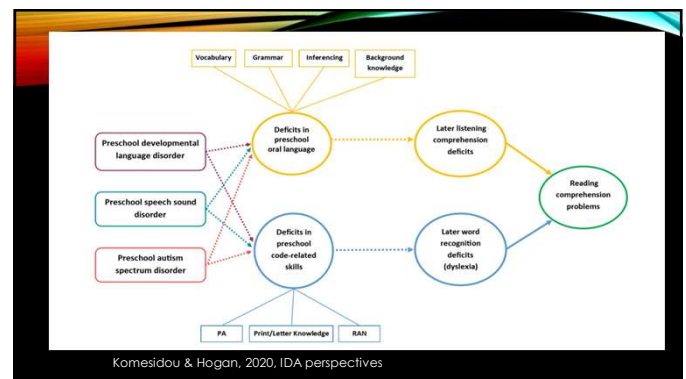
Take home messages

- Children with dyslexia have a deficit in word reading, ranging from mild to severe
- Children with DLD have a deficit in listening comprehension, ranging from mild to severe
- 50% of children with dyslexia have DLD so those children have deficits in both word reading and listening comprehension
- Both children with dyslexia and DLD have language deficits, but their language deficits are different.
- Almost all poor readers have some early speech and language delays. (Adolf & Hogan, 2018)

DYSLEXIA VERSUS DEVELOPMENTAL LANGUAGE DISORDER

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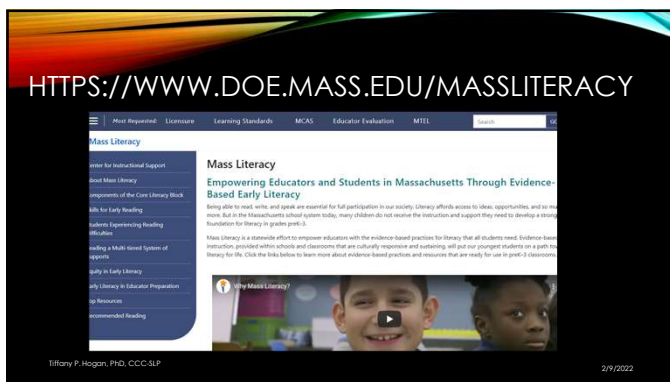
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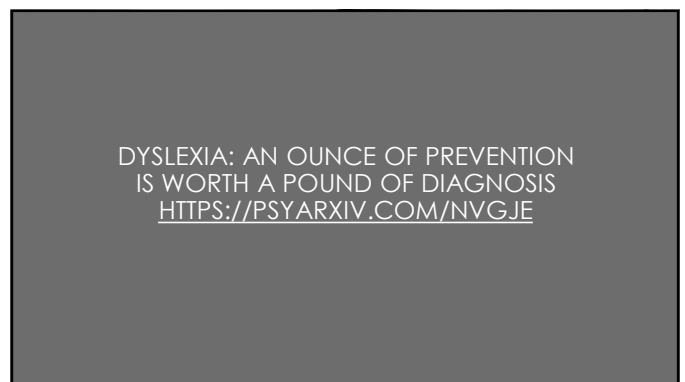
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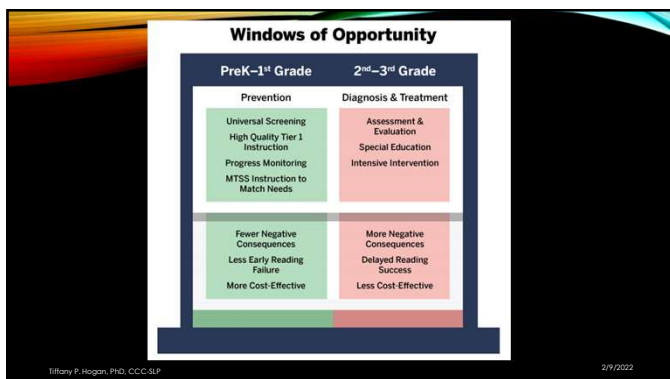
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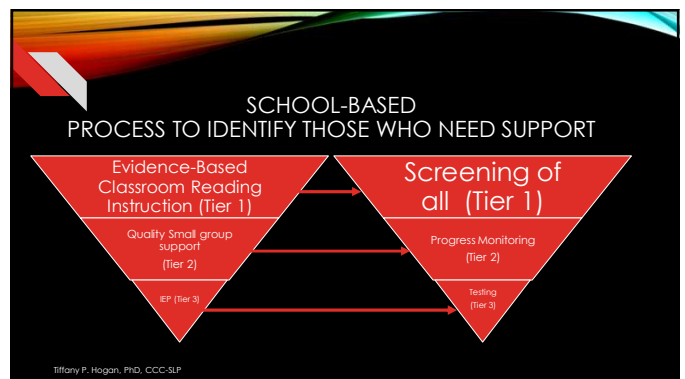
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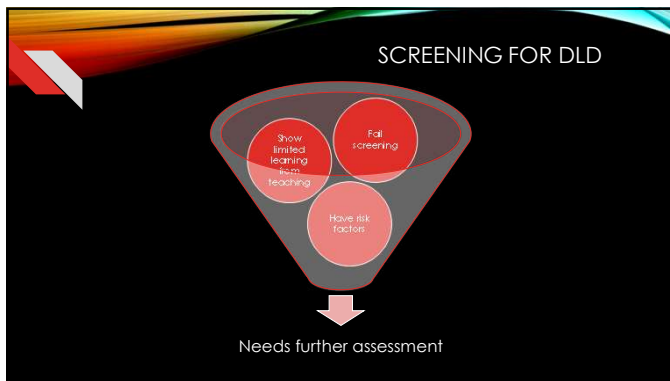
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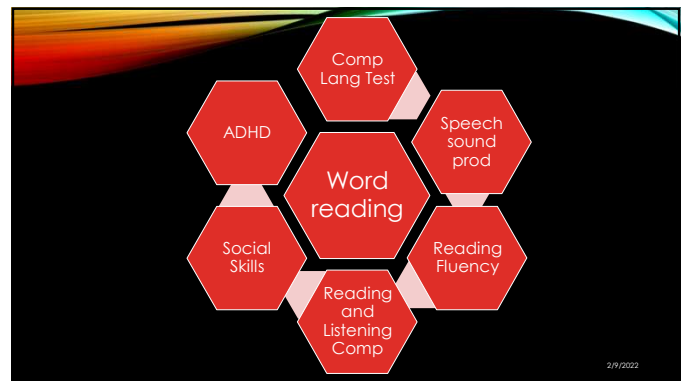
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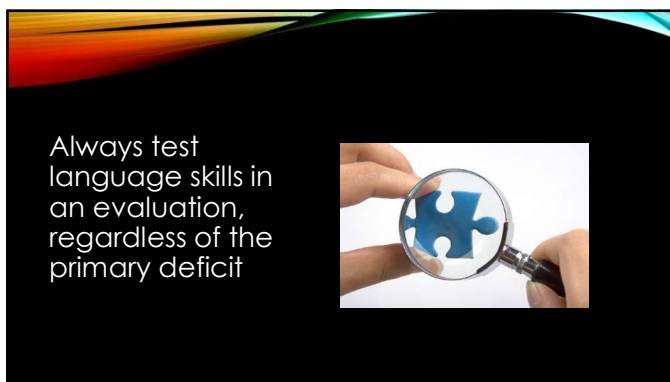
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POOR READERS CAN BE SUBGROUPED

- Using components of reading, you can
 - Better understand individual reading deficits
 - Create targeted intervention leading to improved outcomes

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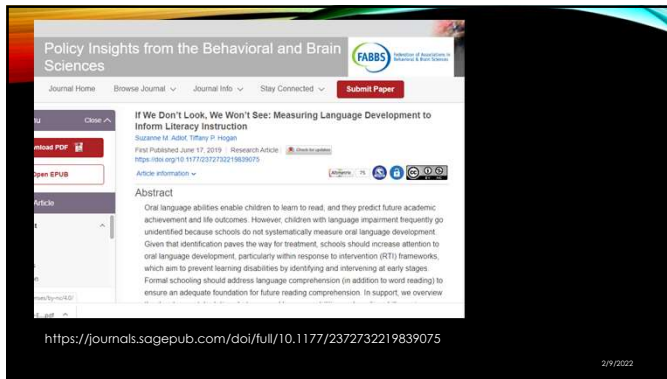
EVIDENCE-BASED INTERVENTION FOR DYSLEXIA

- **Systematic and Cumulative**
 - Logical order, builds on learned skills
- **Explicit Instruction**
 - Clear explanation and examples
- **Diagnostic Teaching**
 - Individualized instruction

<https://dyslexiaida.org/effective-reading-instruction-for-students-with-dyslexia/>

2/9/2022

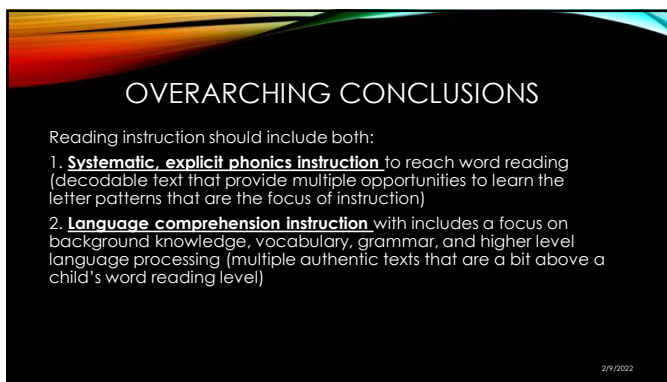
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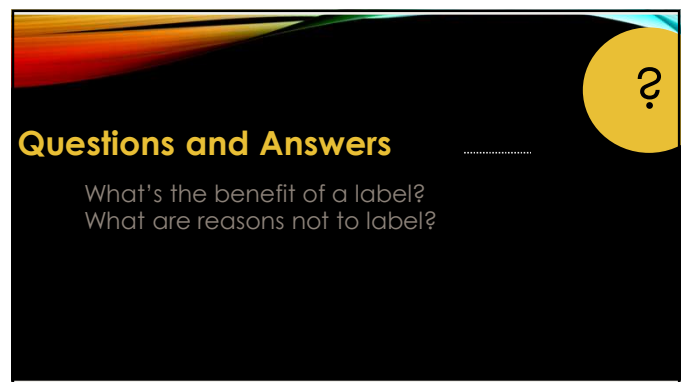
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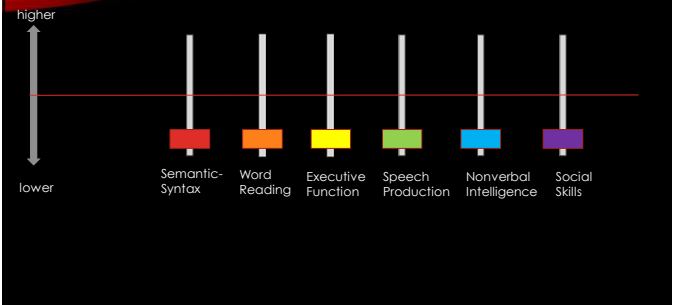
WHAT IS NEURODIVERSITY?

Coined in the late 1990s by Australian sociologist Judy Singer and American journalist Harvey Blume

- Variation in the human brain in cognitive-linguistic-social emotional skills in a non-pathological sense.
- Challenged prevailing views that certain neurodevelopmental disorders are inherently pathological
- adopts the social model of disability, in which societal expectations are the main contributing factor to determining that someone has a 'disability'

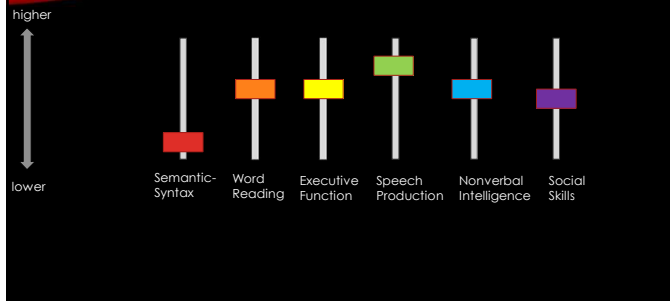
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A CHILD'S COGNITIVE-LINGUISTIC FINGERPRINT



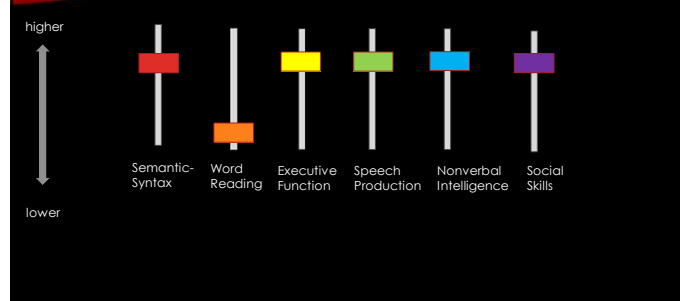
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DLD



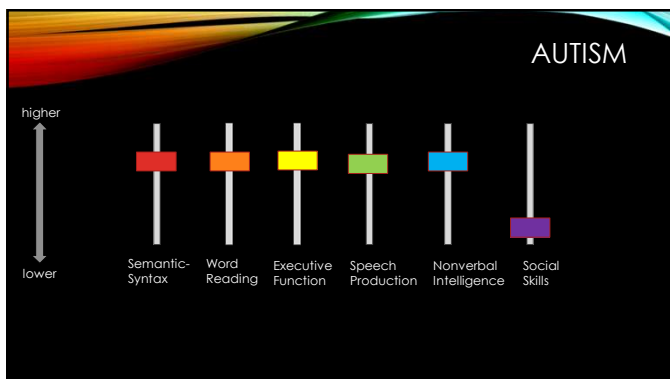
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DYSLEXIA



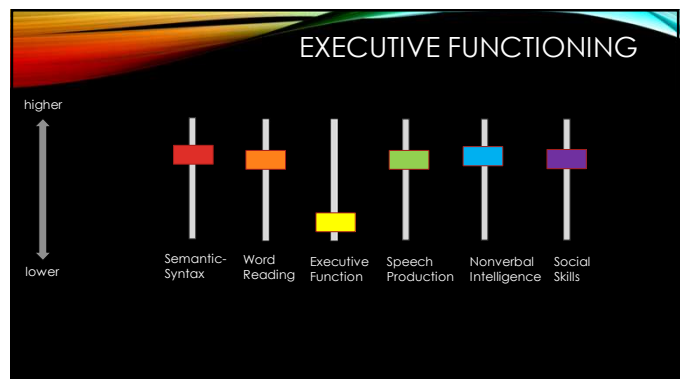
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AUTISM

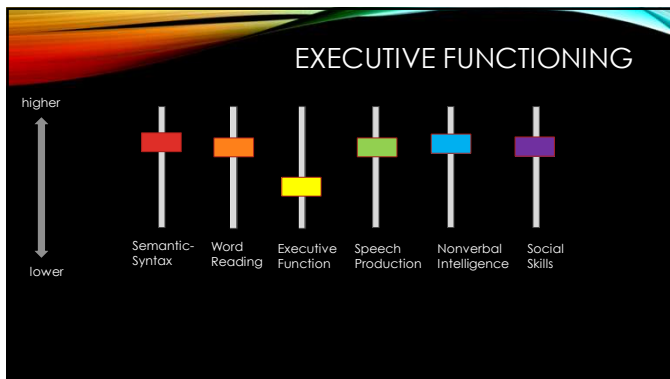


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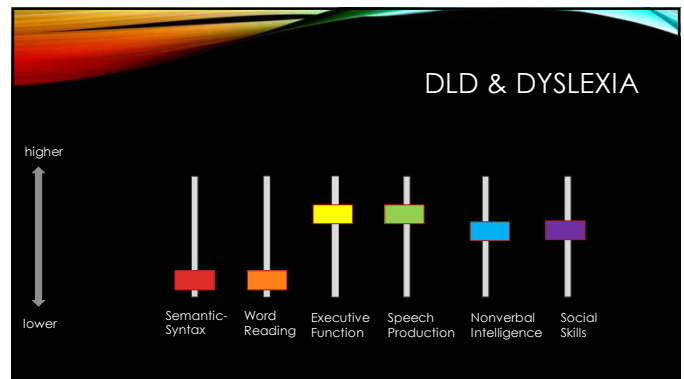
EXECUTIVE FUNCTIONING



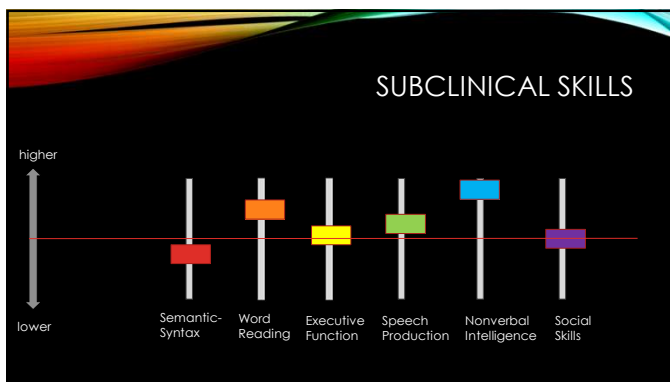
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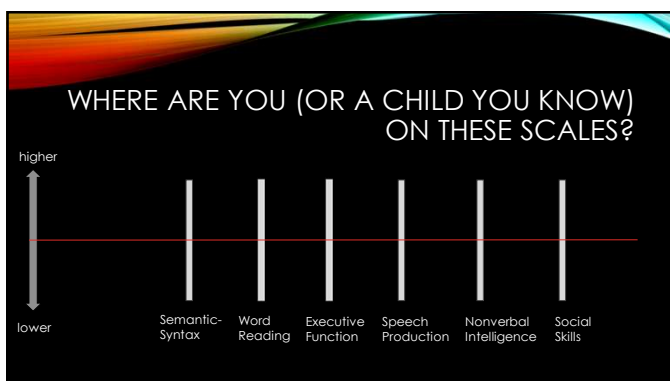
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- Grit
- Resilience
- Perseverance
- Supporters
- School
- Family
- Nutrition/Exercise

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- ### #GOALS – MUCH MORE WORK TO BE DONE
1. routine screening (and testing) for word reading difficulties (dyslexia) and language comprehension difficulties (DLD) in early grades,
 2. evidence-based instruction in both word reading and language comprehension for all children,
 3. developmentally appropriate instruction across the grades,
 4. Build an understanding of neurodiversity

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THANK YOU & GOOD LUCK!
CHANGE THE WORLD
ONE CHILD AT A TIME...



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 @sailliteracylab

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