

THE LANGUAGE BASIS OF DYSLEXIA: *IMPLICATIONS FOR SPEECH-LANGUAGE PATHOLOGISTS*

Tiffany P. Hogan, PhD, CCC-SLP

MGH Institute of Health Professions, Boston, MA, USA

Harvard University

thogan@mghihp.edu

 @tiffanyphogan

 @seehearspeakpodcast

 @sailliteracylab

ACKNOWLEDGEMENTS

National Institute of Health, National Institute on Deafness and Other Communication Disorders

Co-Principal Investigator, National Institutes of Health R01 (R01 DC018823): *Translating research into school-based practice via small-group, language-focused comprehension intervention*, Co-PI Shayne Piasta, Co-Is: Mindy Bridges & Kandace Fleming.

Co-Principal Investigator, National Institutes of Health R01 (R01 DC016895): *Orthography and phonology in word learning as a predictor of dyslexia in children with language impairment*, 2018-2023. Co-PI Julie Wolter, Co-Is: Jessie Ricketts & Yaacov Petscher.

Co-Investigator, National Institutes of Health R01 (R01 DC010784): *Working memory and word learning in children with typical development and language impairment*, 2011-2016, PI: Shelley Gray; Co-Is: Mary Alt, Nelson Cowan, & Sam Green

Graduate Student, National Institutes of Health P50 (P50 DC2746): *Collaboration on specific language impairment*, 2001-2004, PI: J. Bruce Tomblin

Institute of Education Sciences, Reading for Understanding Initiative

Co-Investigator, Institute of Education Sciences Reading for Understanding Research Initiative (R305F100002): *The Language Bases of Reading Comprehension*, 2010-2016, PI: Laura Justice; Co-Is: Shelley Gray, Hugh Catts, & Kate Cain

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
- Lexia Learning, Paid Consultant
- DESE: MA, VA, RI, CO Paid Consultant
- This talk, honorarium
- (unpaid) New York City Literacy Council
- (unpaid) Scientific Studies of Reading, Elected Board Member
- (unpaid) Host, SeeHearSpeak Podcast
- (unpaid) Co-founder of DLDandme.org



Speech & Language Literacy Lab

MGH Institute of Health Professions • Boston

The SAiL Literacy Lab's goal is to increase educational opportunities for children and adults by improving early intervention and remediation of reading disabilities.

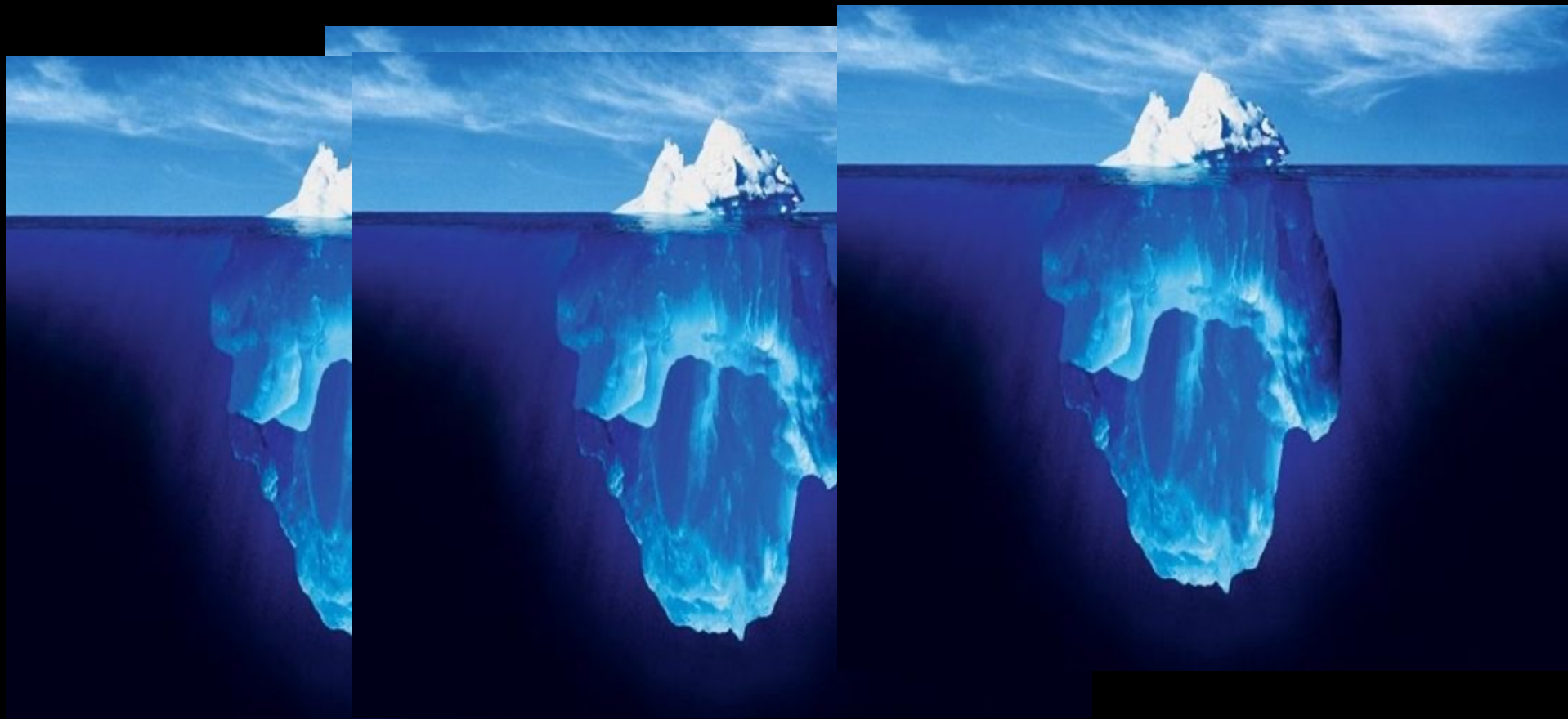


IDA accredited Reading and Language Online Program

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

Evidence to Impact



PLEASE TELL ME
ABOUT YOURSELF
IN THE CHAT BOX





WHO IS
READING?



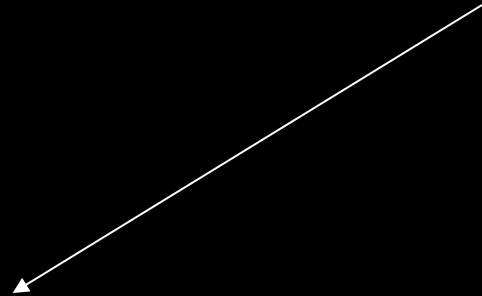
THE SIMPLE VIEW OF READING

(CATTS, HOGAN, & FEY, 2003; CATTS, HOGAN, & ADLOF, 2005; HOOVER & GOUGH, 1990)

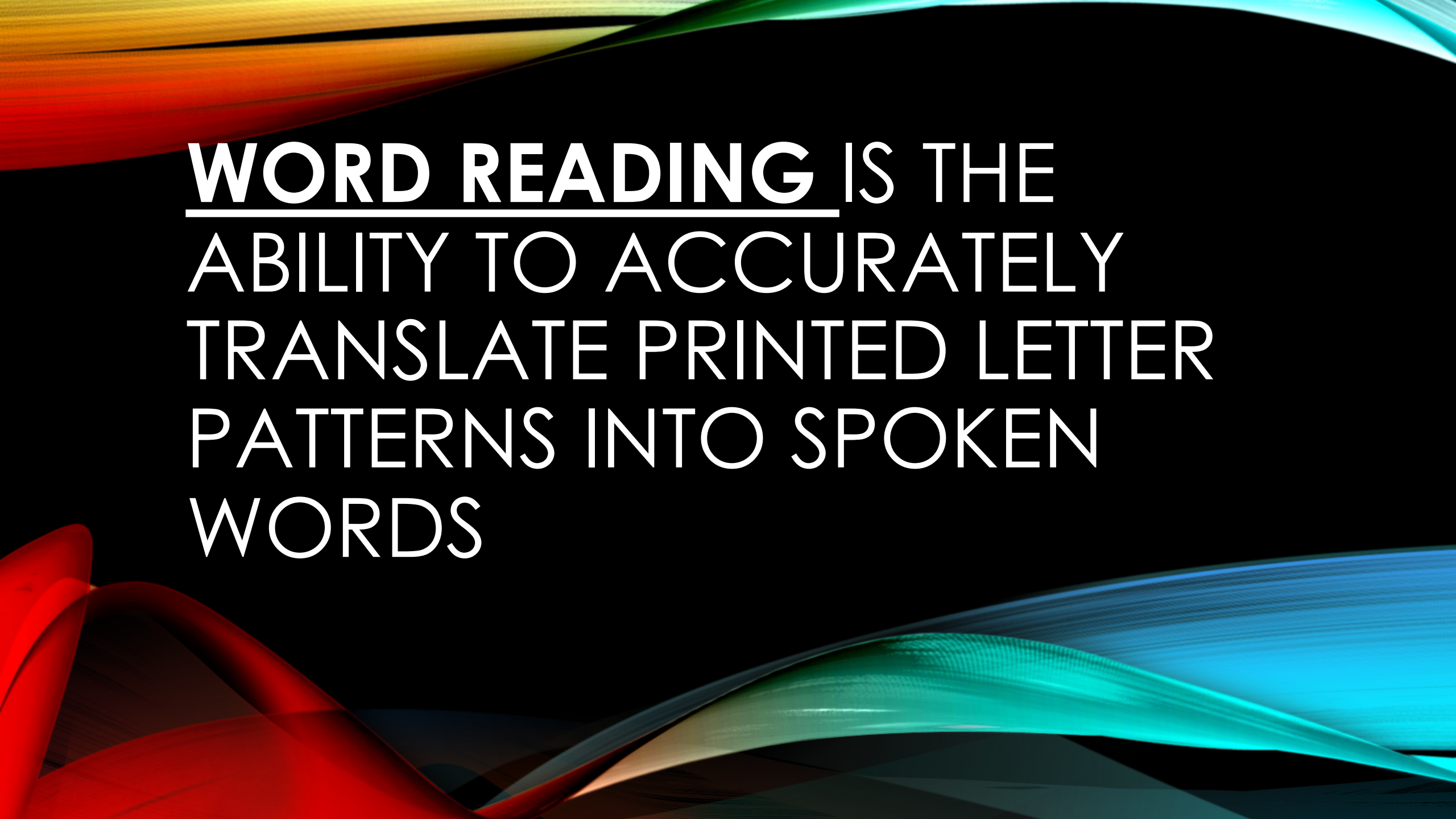
Reading

THE SIMPLE VIEW OF READING

Reading



Word
Recognition



**WORD READING IS THE
ABILITY TO ACCURATELY
TRANSLATE PRINTED LETTER
PATTERNS INTO SPOKEN
WORDS**



Laip

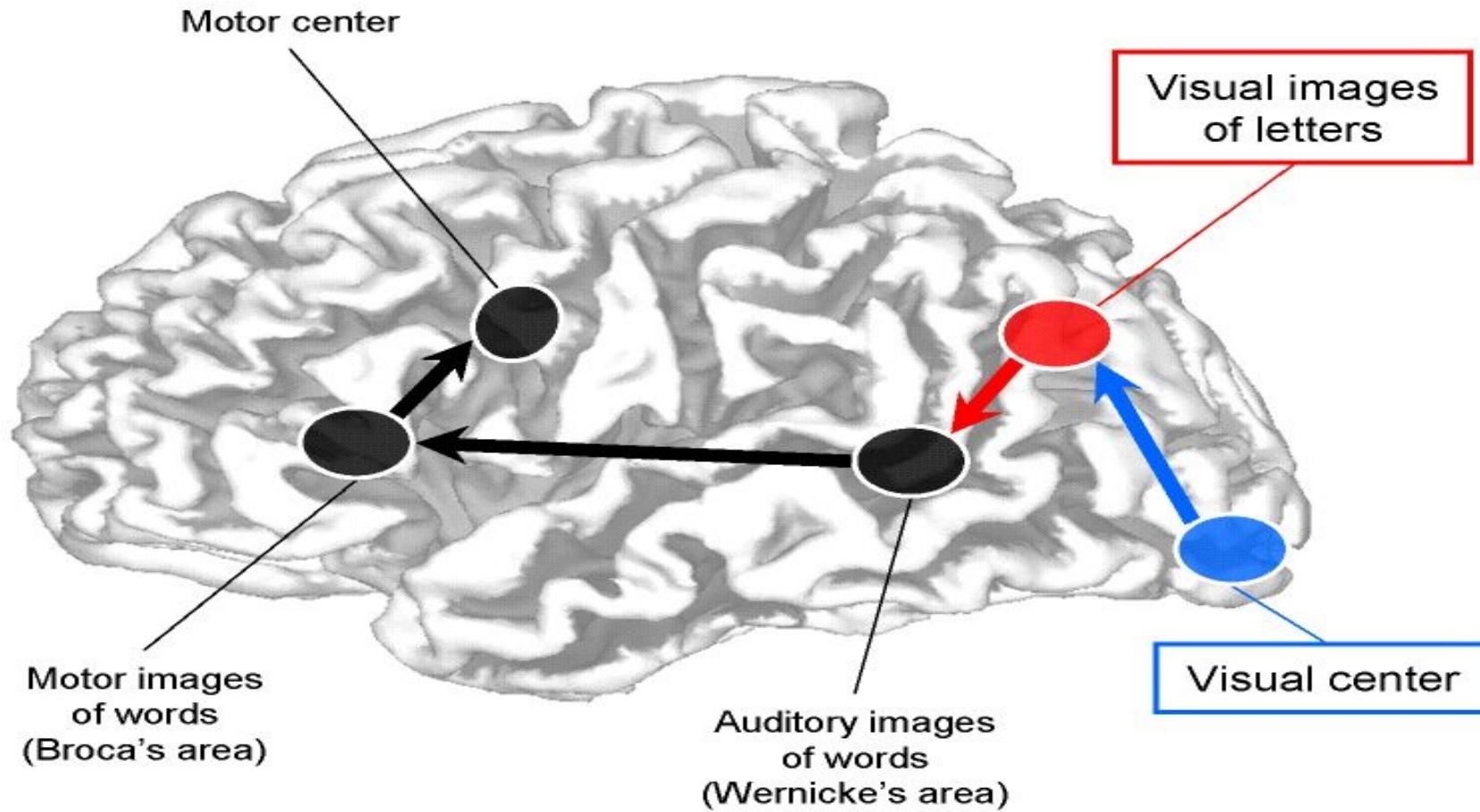
Adjex

Yeng

Zirdn't

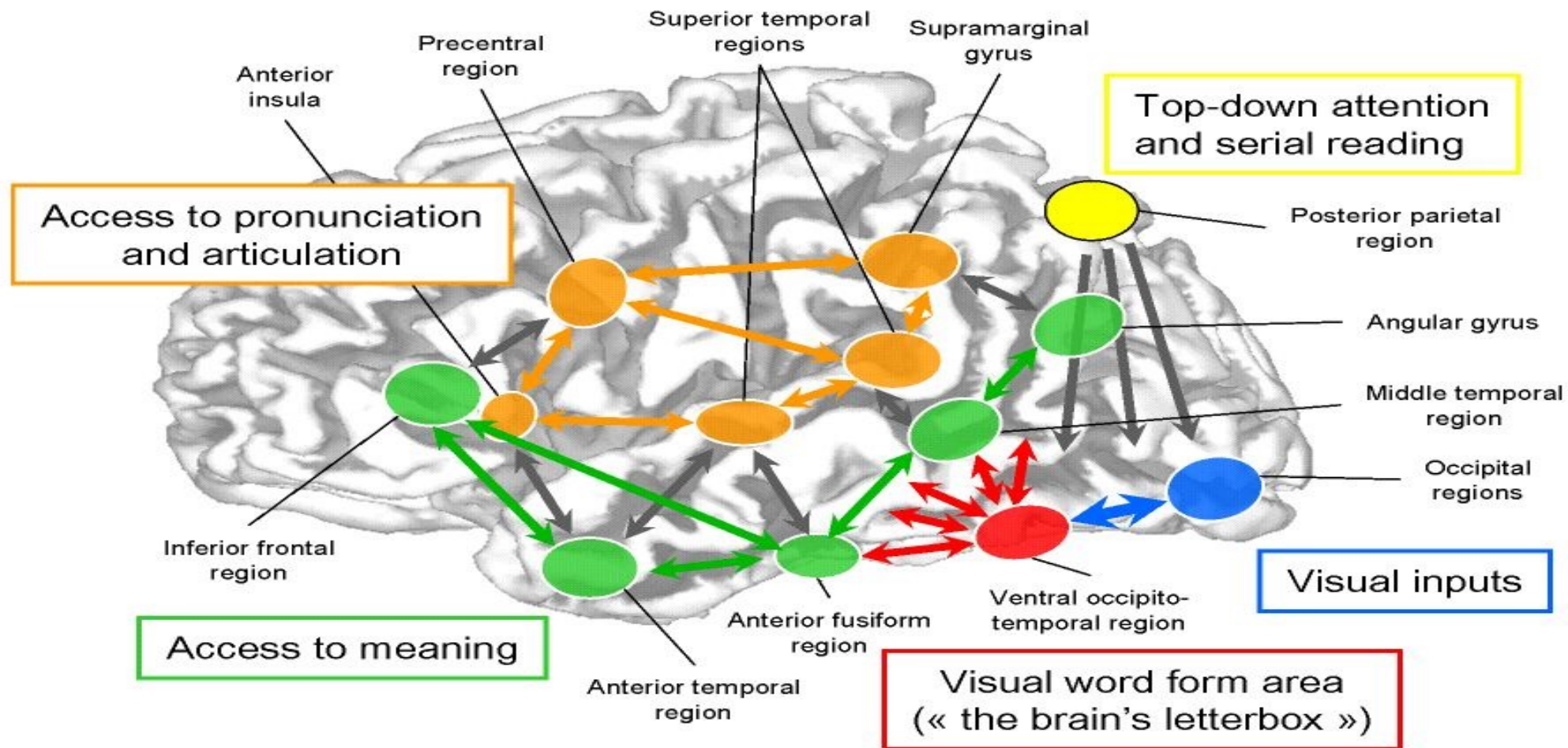
gaked

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



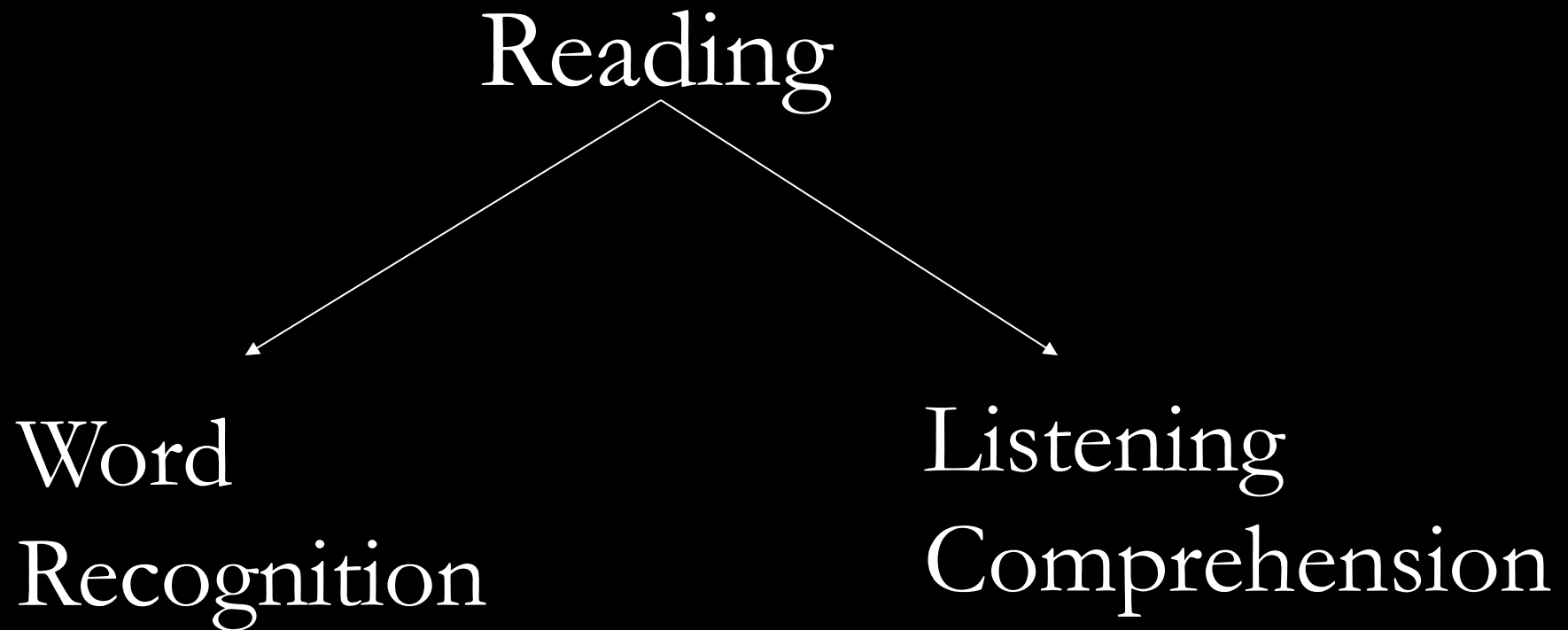
(Dehaene, 2009)


A modern vision of the cortical networks for reading



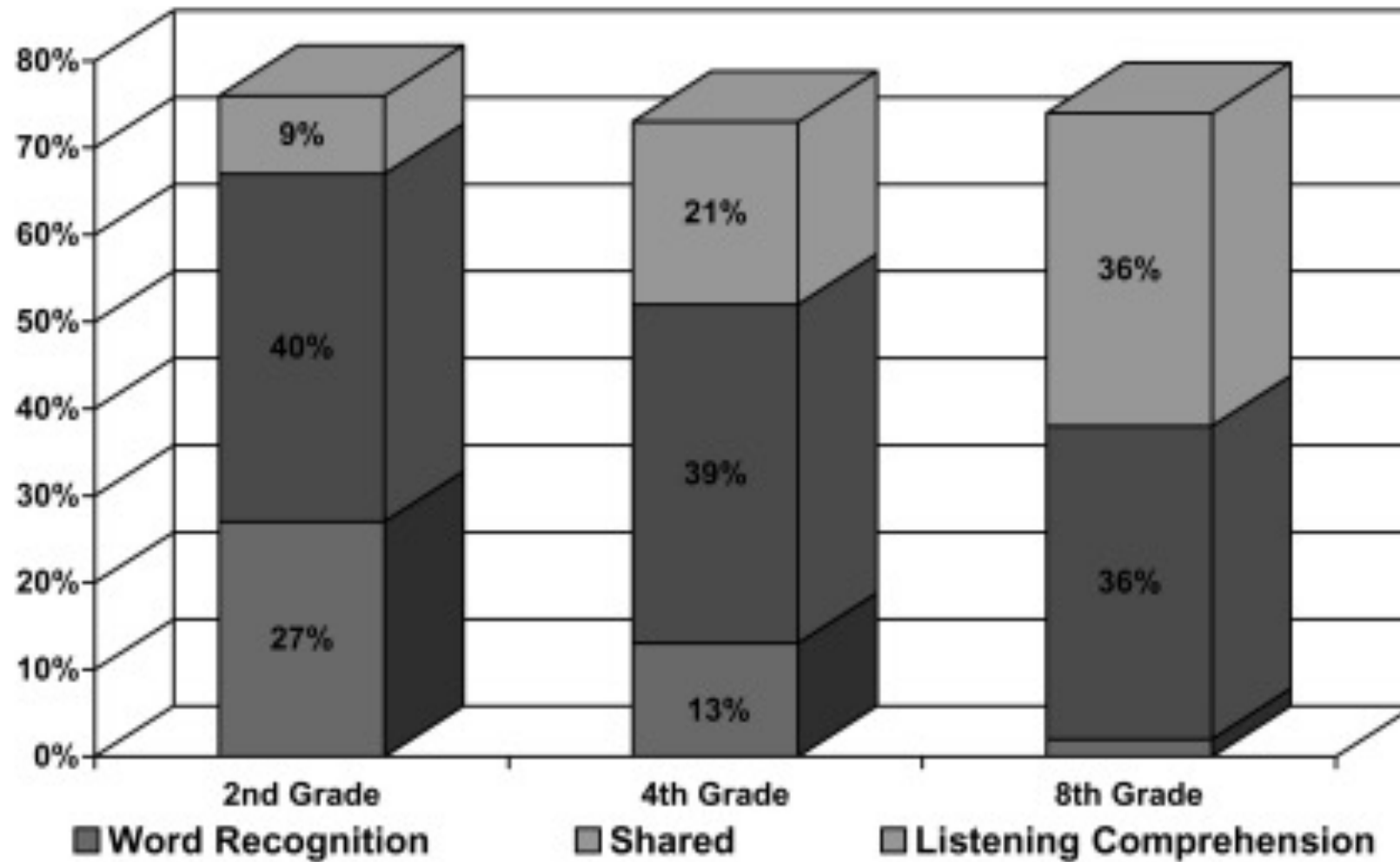
(Dehaene, 2009)

THE SIMPLE VIEW OF READING



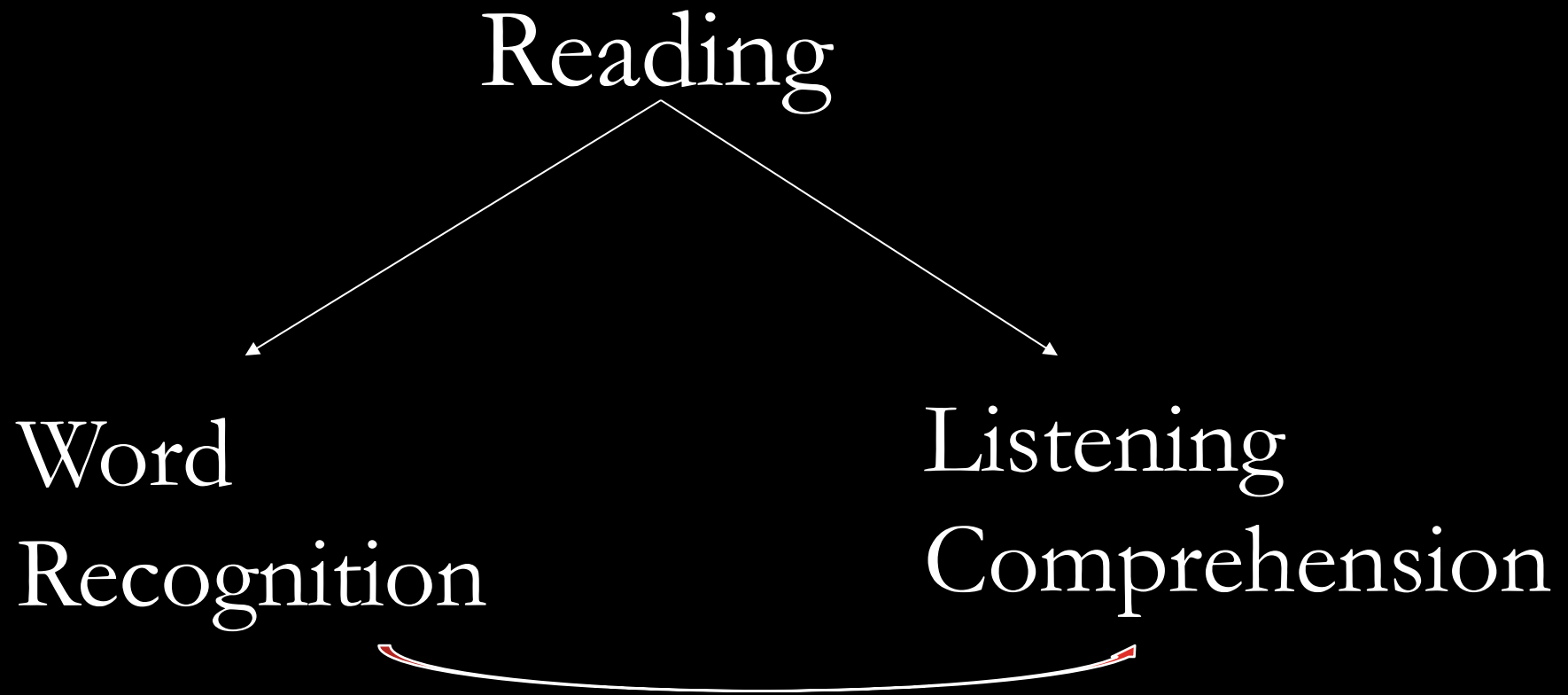


LISTENING COMPREHENSION IS
THE ABILITY TO UNDERSTAND
SPOKEN LANGUAGE

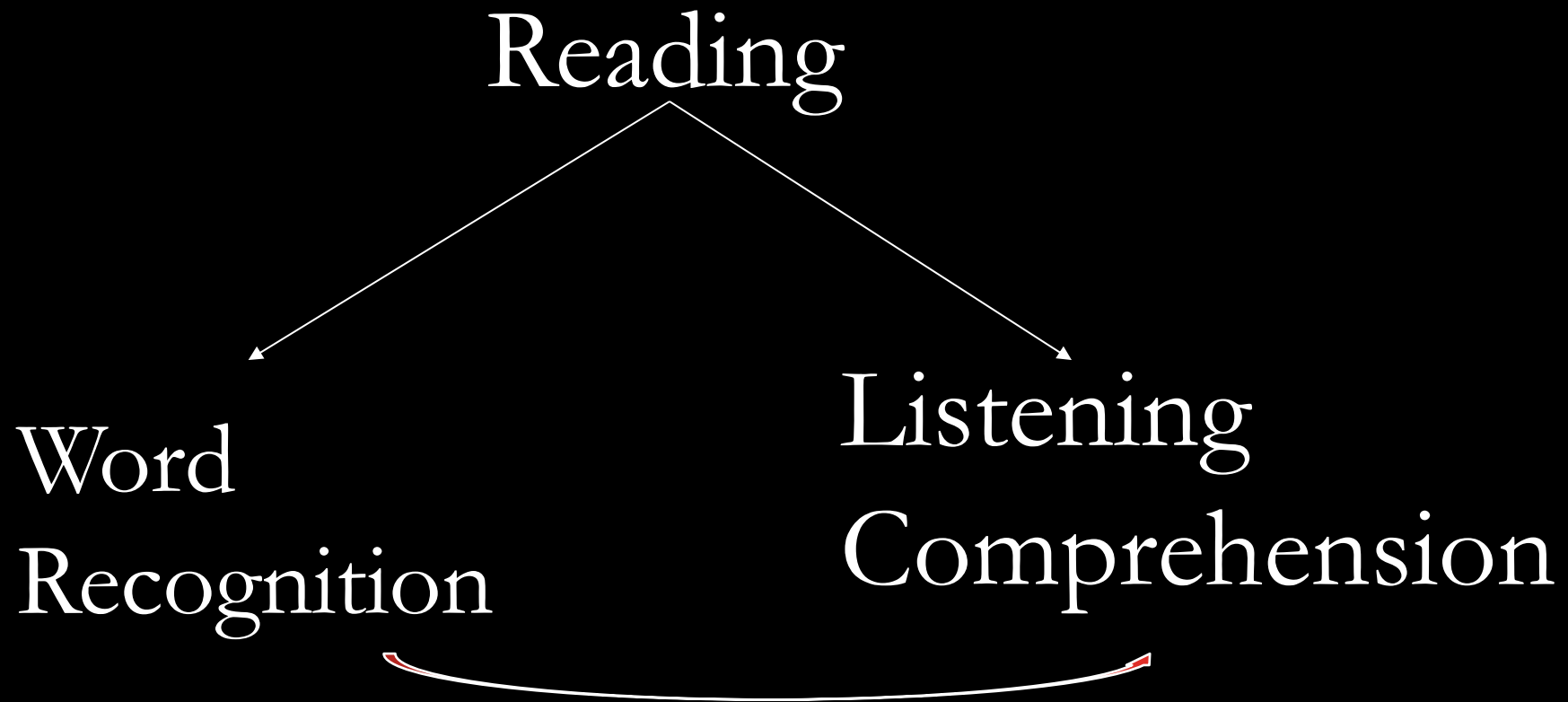


Catts, Hogan, & Adlof, 2005

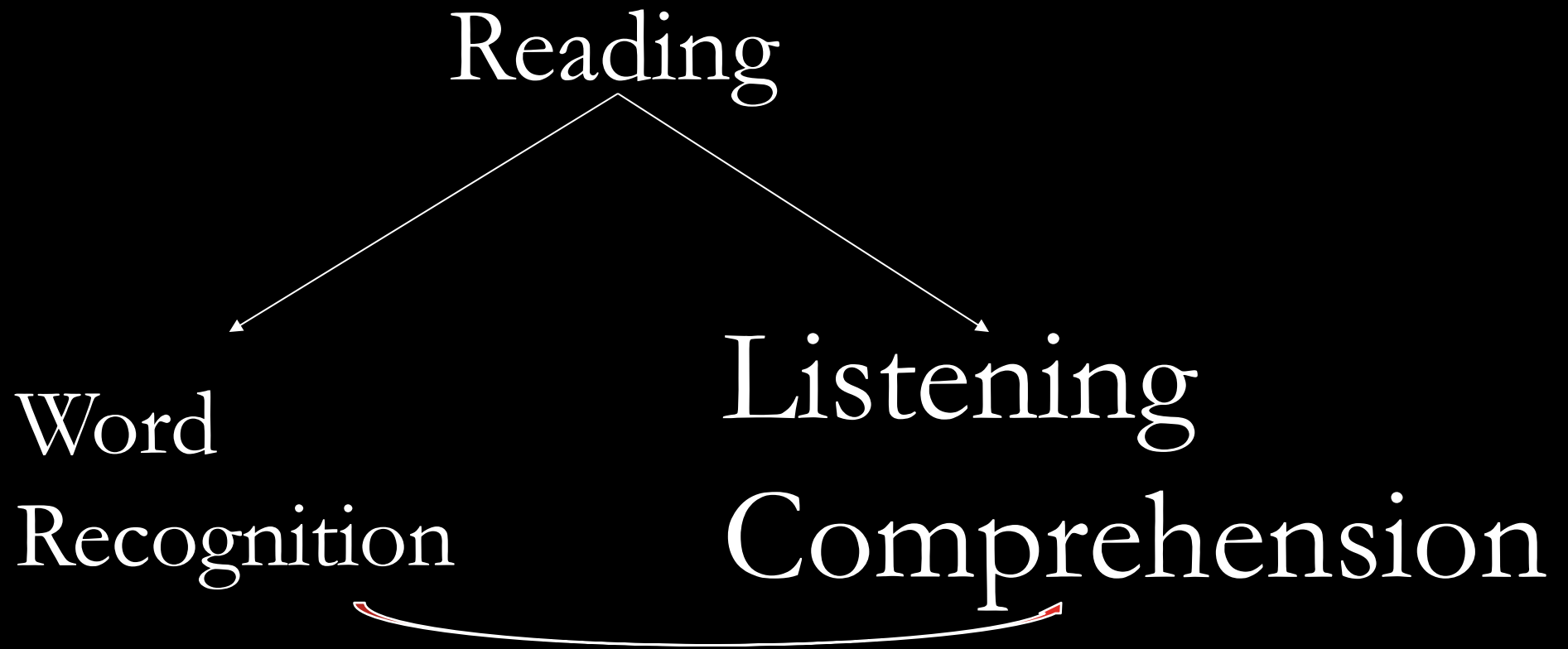
THE SIMPLE VIEW OF READING



THE SIMPLE VIEW OF READING

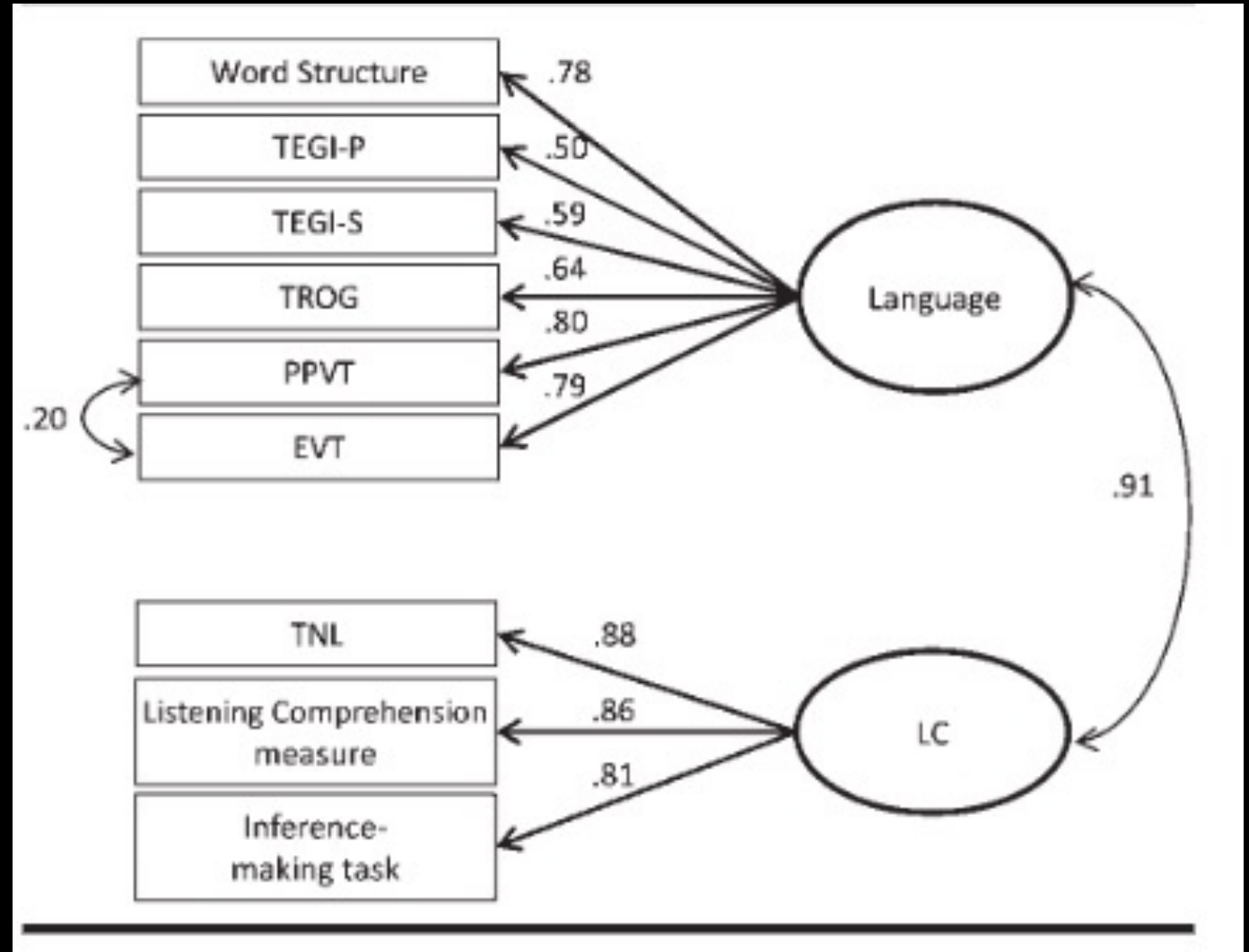


THE SIMPLE VIEW OF READING



LISTENING OR LANGUAGE COMPREHENSION?

- Used interchangeably because they are the same on construct (LARRC, 2017)
- But measured differently





LISTENING COMPREHENSION

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.

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?

LISTENING COMPREHENSION QUESTIONS

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

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?

LISTENING COMPREHENSION QUESTIONS

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

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?

LISTENING COMPREHENSION QUESTIONS

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


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?





AN EXAMPLE

Word reading without listening comprehension



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.

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



*“We hear and
apprehend only
what we already
half know”*

Henry David Thoreau



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



WHO IS JOHN?

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

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

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

SIMPLE VIEW CONCLUSIONS

- Both components need to be considered when thinking of “reading”
(Hogan et al., 2014)

A NOTE ON THE 'READING WARS'

(CASTLES, RASTLE, & NATION, 2018)

Whole language focused on stimulating language comprehension...but whole language is not an evidence-based approach to teach word reading (3 cuing)



WWW.SEEHEARSPEAKPODCAST.COM

Episode 1: The Reading Wars with Anne Castles and Kate Nation
SeeHearSpeak Podcast • Oct 26, 2018

00:03 57:18

Share

This is a screenshot of a podcast player interface. On the left, there are two portrait photos of women. The main title is 'Episode 1: The Reading Wars with Anne Castles and Kate Nation'. Below the title, it says 'SeeHearSpeak Podcast • Oct 26, 2018'. There is a play button icon and a progress bar showing '00:03' out of '57:18'. A 'Share' button is located on the right side.

Season 1, Episode 1
The Story Behind 'Sold a Story'

All for Literacy
PODCAST
hosted by Dr. Liz Brooke
Level 3 School Learning Officer

All For Literacy
Emily Hanford Reveals We Were "Sold A Story"

0:00 -0:00

52:48

This is a screenshot of a podcast player interface. On the left, there is a portrait photo of a woman with long brown hair. The main title is 'The Story Behind 'Sold a Story'' under the heading 'Season 1, Episode 1'. Below the photo is a blue box with the text 'All for Literacy', 'PODCAST', and 'hosted by Dr. Liz Brooke, Level 3 School Learning Officer'. The main title of the episode is 'Emily Hanford Reveals We Were "Sold A Story"'. There is a play button icon and a progress bar showing '0:00' out of '-0:00'. At the bottom, there is a green play button icon and the text 'Emily Hanford Reveals We Were "Sold A Story"' with a duration of '52:48'.



WHAT'S LANGUAGE GOT
TO DO WITH IT?

LANGUAGE

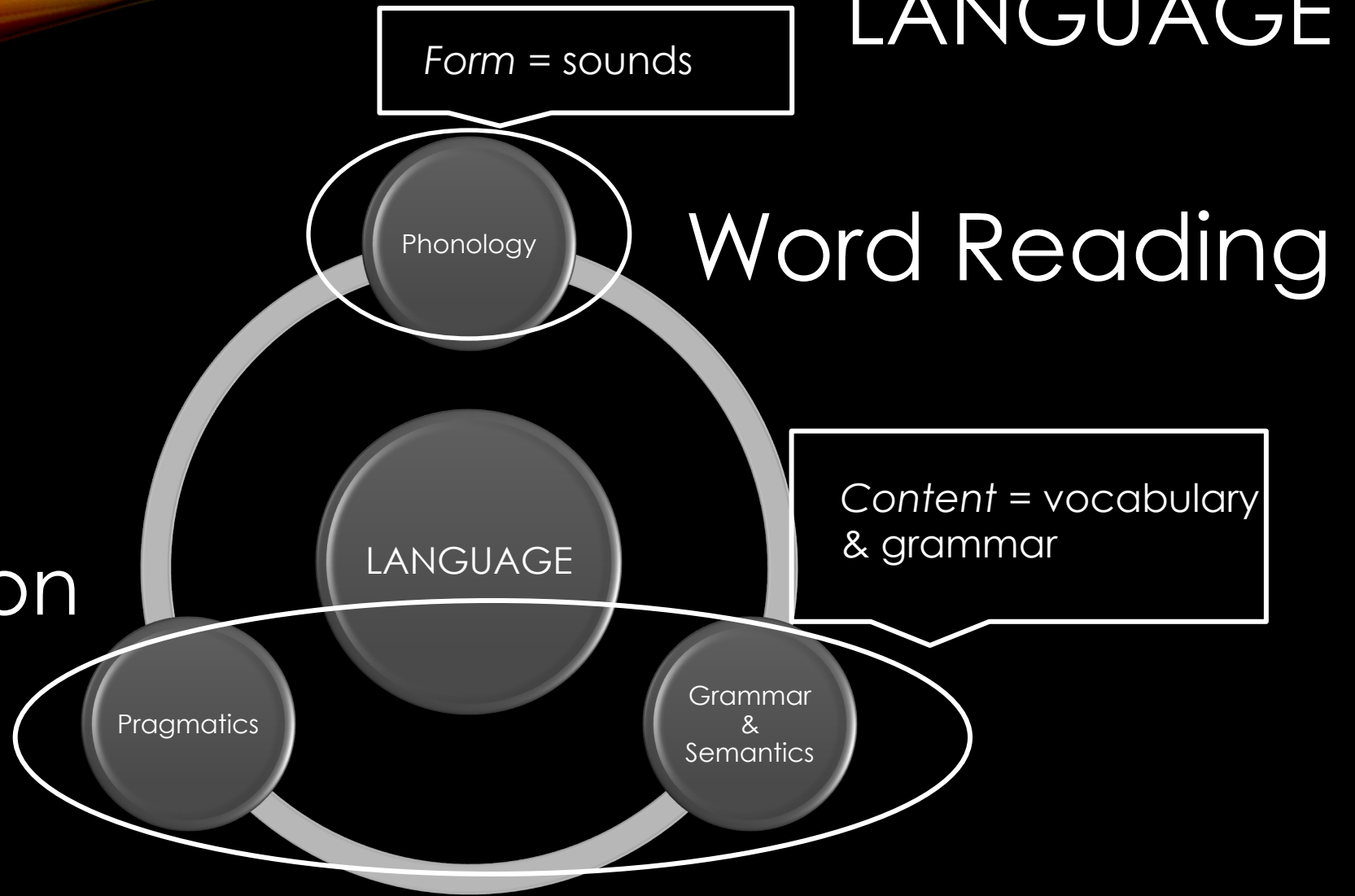
Form = sounds

Word Reading

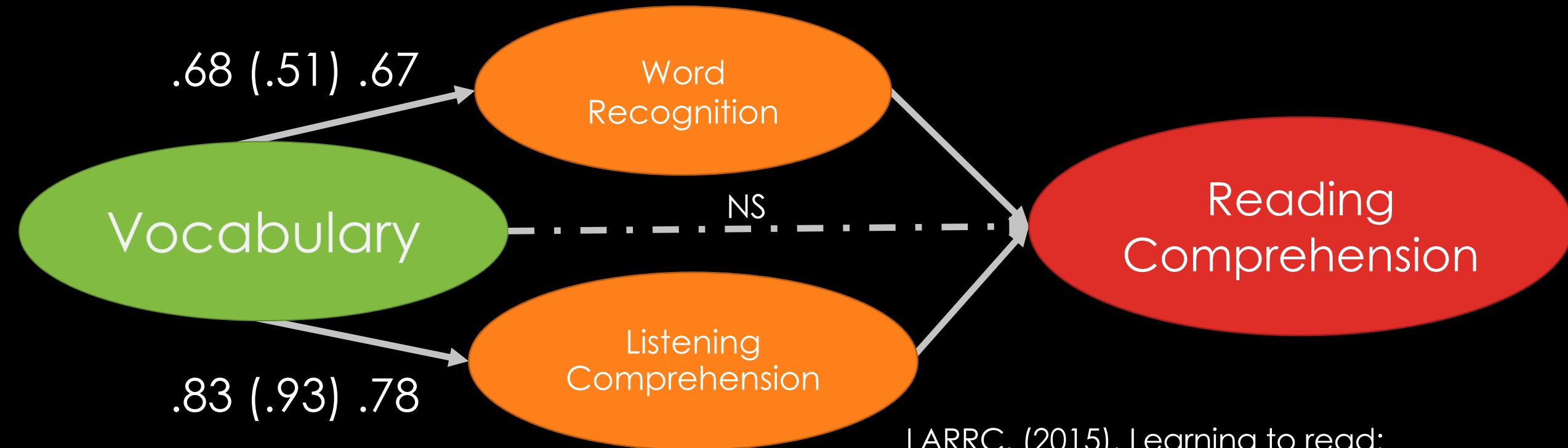
Listening Comprehension

Use = social

Content = vocabulary & grammar

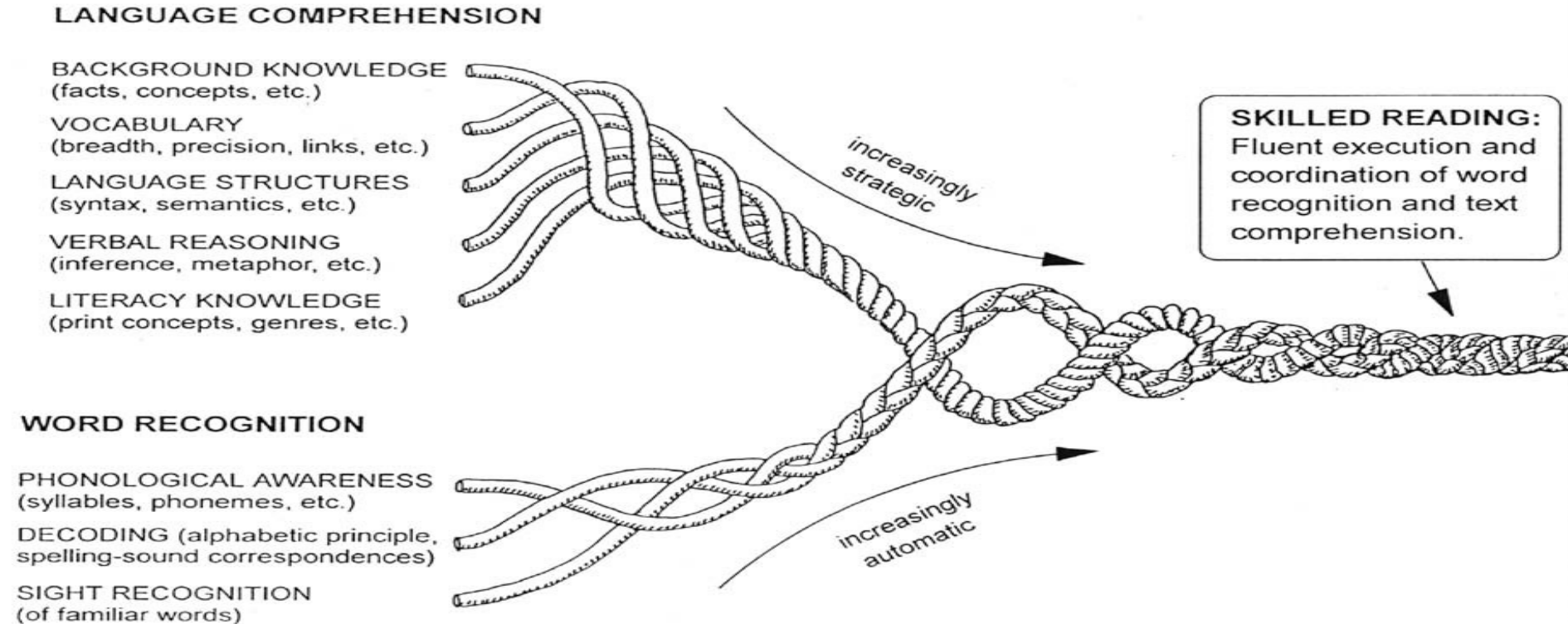


LANGUAGE IS VERY IMPORTANT!



LARRC. (2015). Learning to read: Should we keep things simple? *Reading Research Quarterly*, 50, 151-169.

THE MANY STRANDS THAT ARE WOVEN INTO SKILLED READING



See Scarborough, H. S. in Neuman, S.B. & Dickinson, D. K. (2001).
Handbook of Early Literacy Research. New York: Guilford Press.

Chat with Dr. Scarborough:

<https://www.youtube.com/watch?v=83tfzOFpBak&feature=youtu.be>

SUBGROUPING POOR READERS

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



POOR READER SUBGROUPS

POOR READER SUBGROUPS

(CATTS, HOGAN, & ADLOF, 2005; CATTS, HOGAN, & FEY, 2003)

Word Recognition

Poor

Good

Listening
Comprehension

Good

Poor

Word Recognition

Poor

Good

Listening
Comprehension

Good

Dyslexia

Poor

- Dr. W. Pringle Morgan, reported characteristics in a young patient who had never learned to read

W. Pringle Morgan, M.B.



A CASE OF CONGENITAL WORD BLINDNESS

By W. PRINGLE MORGAN, M.B.,
Seaford, Sussex.

PERCY F.—a well-grown lad, aged 14—is the eldest son of intelligent parents, the second child of a family of seven. He has always been a bright and intelligent boy, quick at games, and in no way inferior to others of his age.

His great difficulty has been—and is now—his inability to learn to read. This inability is so remarkable, and so pronounced, that I have no doubt it is due to some congenital defect.

He has been at school or under tutors since he was 7 years old, and the greatest efforts have been made to teach him to read, but, in spite of this laborious and persistent training, he can only with difficulty spell out words of one syllable.

PERCY F.

- Dr. Morgan, 1896, wrote about a 14 year old boy
 - “He has always been a bright and intelligent boy.....
 - “His great difficulty has been- and is now- his inability to read.”
 - “.....in spite of this laborious and persistent training, he can only with difficulty spell out words of one syllable.....”
 - “I might add that the boy is bright and of average intelligence in conversation. His eyes are normal....and his eyesight is good.”

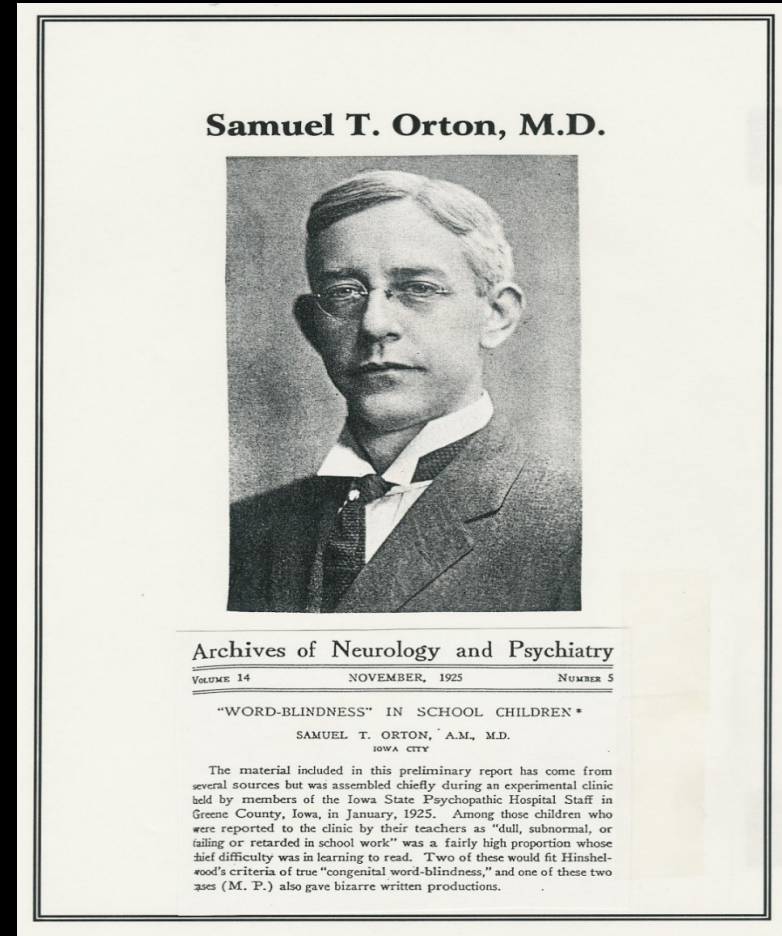
WORD BLINDNESS

- Dr. Morgan noted “word-blindness” as a *developmental disorder* found in children that are otherwise healthy

SAMUEL ORTON

“Word Blindness in School Children” (1925)

- Examined 1000+ children in Iowa
- Orton thought prevalence rate was much higher than what was currently reported (1:1000)
 - “somewhat over 10% of the total school population” (Orton, 1939, p. 59) had reading disabilities
- Dyslexia on a graded continuum with no clear diagnostic between individuals
 - Severity could vary but all individuals had the same underlying word reading deficiency



DYSLEXIA AS A LANGUAGE DISORDER

- Orton was also one of the first to consider dyslexia as “part of a larger set of developmental language disorders” (Catts & Kamhi, 1999)
 - Noted many with reading problems also had history of language problems

- Dyslexia is one kind of language-based problem that can fall anywhere on the spectrum of annoyance to severe limitation. It affects more than reading and is usually experienced for life. It is more common than any other kind of learning disability. And, it responds to expert, informed instruction- the provision of which remains our greatest challenge

(Moats, 2008)

DYSLEXIA IS A WORD-READING DEFICIT

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
- Many laws require early screening

(Snowling, 2019)

EARLY IDENTIFICATION OF DYSLEXIA



EARLY SIGNS OF RISK FOR DYSLEXIA

- Family history of reading or language impairment
- Difficulty learning the letter names and sounds
- Reversal errors vs. substitution errors
 - “aminal” for animal rather than “wabbit” for rabbit

- Consistent use of unusual or nondevelopmental errors

- Multisyllabic words especially difficult
(Catts, 1986; 1989; Dodd, et al., 1995; Magusson & Naucler, 1990, Larrivee & Catts, 1999; Leitao & Fletcher, 2004)

NOT EARLY SIGNS OF DYSLEXIA

- Reversing letters when writing
 - This is typical till ~2nd grade
- Common errors on long words
 - pasketi (spagetti)

IQ – WORD READING LINK

- Example case
 - 1: Child didn't meet IQ discrepancy in 2nd grade
 - Word reading = 80 standard score
 - Full scale IQ = 92
- Could the child's IQ be lower because of lack of knowledge gained through reading experience?
- Without help, the word reading scores will likely lower and the child will show discrepancy next year.
 - Crucial services delayed by a year!

RTI

(THE END OF IQ DISCREPANCY?)

- Neuroscience adds strong evidence to converging behavioral work showing that dyslexia is independent of IQ

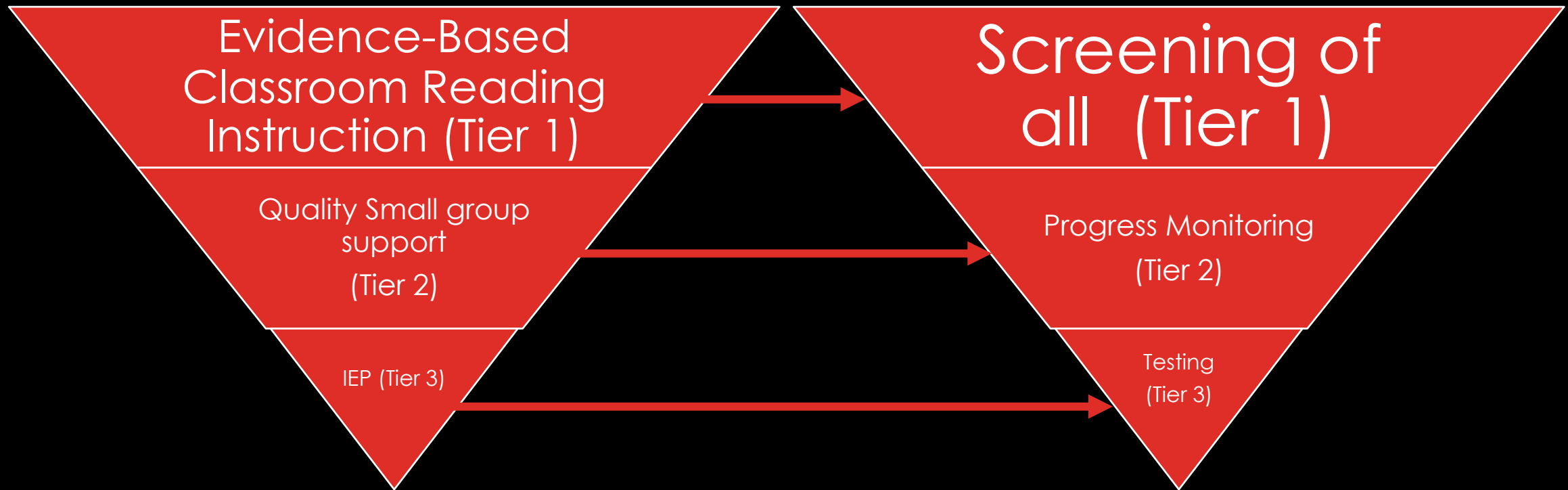
H. Tanaka, J.M. Black, C. Hulme, L.M. Stanley, S.R. Kesler, S. Whitfield-Gabrieli, A.L. Reiss, J.D. Gabrieli, F. Hoefft. The brain basis of the phonological deficit in dyslexia is independent of IQ. *Psychol. Sci.*, 22 (2011), pp. 1142-1451, [10.1177/0956797611419521](https://doi.org/10.1177/0956797611419521)

- Currently, Response to Intervention (RTI) is alternative way to diagnose reading problems

RESPONSE TO INTERVENTION

- Measurement of early pre-reading skills
- Monitor progress in learning skills
- Those who don't learn at the same rate as others will receive services
- No IQ scores used in RTI

SCHOOL-BASED PROCESS TO IDENTIFY THOSE WHO NEED SUPPORT



RESOURCES

Video: <https://dyslexicinsight.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/lshss-clinical-forum-what-slps-need-to-know-about-dyslexia/>

HOT OFF THE PRESS!

The Speech-Language
Pathologist's

Guide to Dyslexia



Word Recognition

Poor

Good

Listening
Comprehension

Good

Dyslexia

Poor

Poor Comprehender

Good	Dyslexia	
Poor		Poor Comprehender

Word Recognition

Poor

Good

Listening
Comprehension

Good

Dyslexia

Poor

Developmental
Language
Disorder (DLD)

DEVELOPMENTAL LANGUAGE DISORDER

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

THE FACTS ABOUT DLD

- A person is born with DLD, persists across the lifetime
- Cuts across SES and other disorders
- Brain difference
- Hallmarks are difficulty learning new words and remembering them (vocabulary) and grammar learning & use

(McGregor, 2020)

Labels used to qualify for services

A STORY

DD

Developmental
Delay

CI

Communication
Impairment

SLD

Specific
Learning
Disability

Where does DLD fit?

Diagnosis

Developmental Language Disorder

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

1. Developmental Language Disorder is when a child or adult has difficulties talking and/or understanding language.
2. DLD is a hidden disability that affects approximately two children in every classroom, affecting literacy, learning, friendships and emotional well-being.
3. 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 in the UK, the SCALES study (Norbury et al. 2016), found that 7.5% of children had DLD with no associated biomedical condition.
- **Causes:** DLD tends 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, 2006). The

MYTHS ABOUT DLD

([HTTPS://DLDANDME.ORG/MYTHS-ABOUT-DLD/](https://dldandme.org/myths-about-dld/))

MYTH: People with DLD mispronounce speech sounds.

TRUTH: People with DLD have trouble understanding and using language, when they are reading and when they are talking with someone.

Language is the words and grammar that people use to communicate ideas. Speech is moving the mouth, throat, and lungs to make words. DLD is not a speech problem. It is a problem using language. A person with DLD may have clear speech but still have a hard time understanding the words that she hears or reads or a hard time figuring out the right words and grammar to say what she wants.

MYTH: People with DLD don't speak proper English.

TRUTH: People with DLD have trouble learning English (or any other language).

There are many different dialects of English and they are all valid systems for communicating. DLD is not a dialect. The person with DLD will produce language that is incomplete, inconsistent, or immature compared to peers within his OWN dialect community.

MYTH: People with DLD are not smart.

TRUTH: DLD affects people at all levels of intellectual ability.

DLD is not an intellectual disability. People with DLD may be very smart but they will sometimes have difficulty expressing what they know.

MYTHS ABOUT DLD

([HTTPS://DLDANDME.ORG/MYTHS-ABOUT-DLD/](https://dldandme.org/myths-about-dld/))

MYTH: Bilingualism causes DLD.

TRUTH: Bilingualism is beneficial.

DLD affects people who speak only one language and people who speak more than one language. There are social and cognitive benefits to becoming bilingual and parents who want to raise their children to be bilingual should not worry that they will cause DLD.

MYTH: Poor parenting causes DLD.

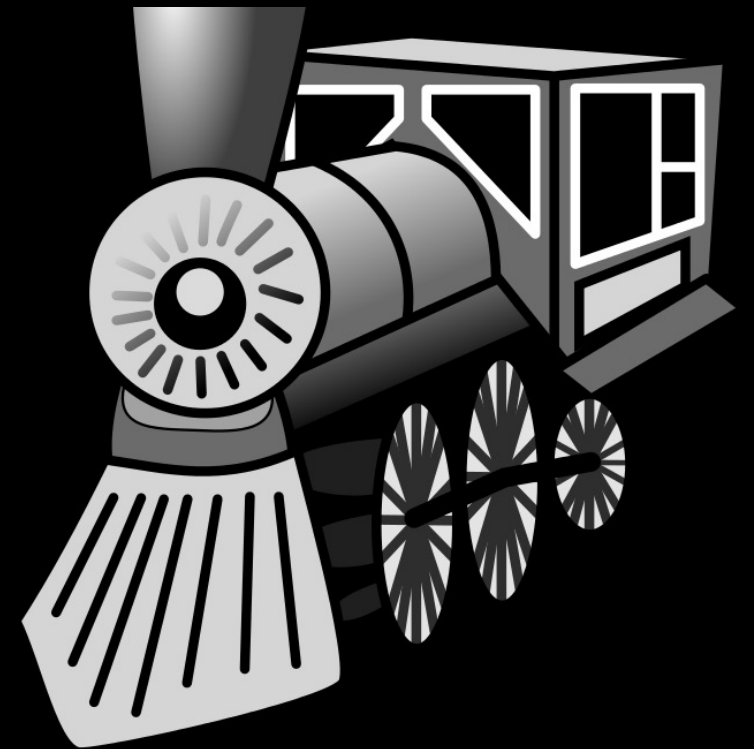
TRUTH: Genetic influences on brain development cause DLD.

The ways that parents speak or read to their children do not cause DLD. That said, sometimes it is hard to talk to a child who has limited language abilities. A speech-language pathologist can teach parents how to adapt their own talking and reading to enhance their child's language development and to maintain positive communicative interactions with their child. Parents don't cause the problem, but they can be part of the solution.

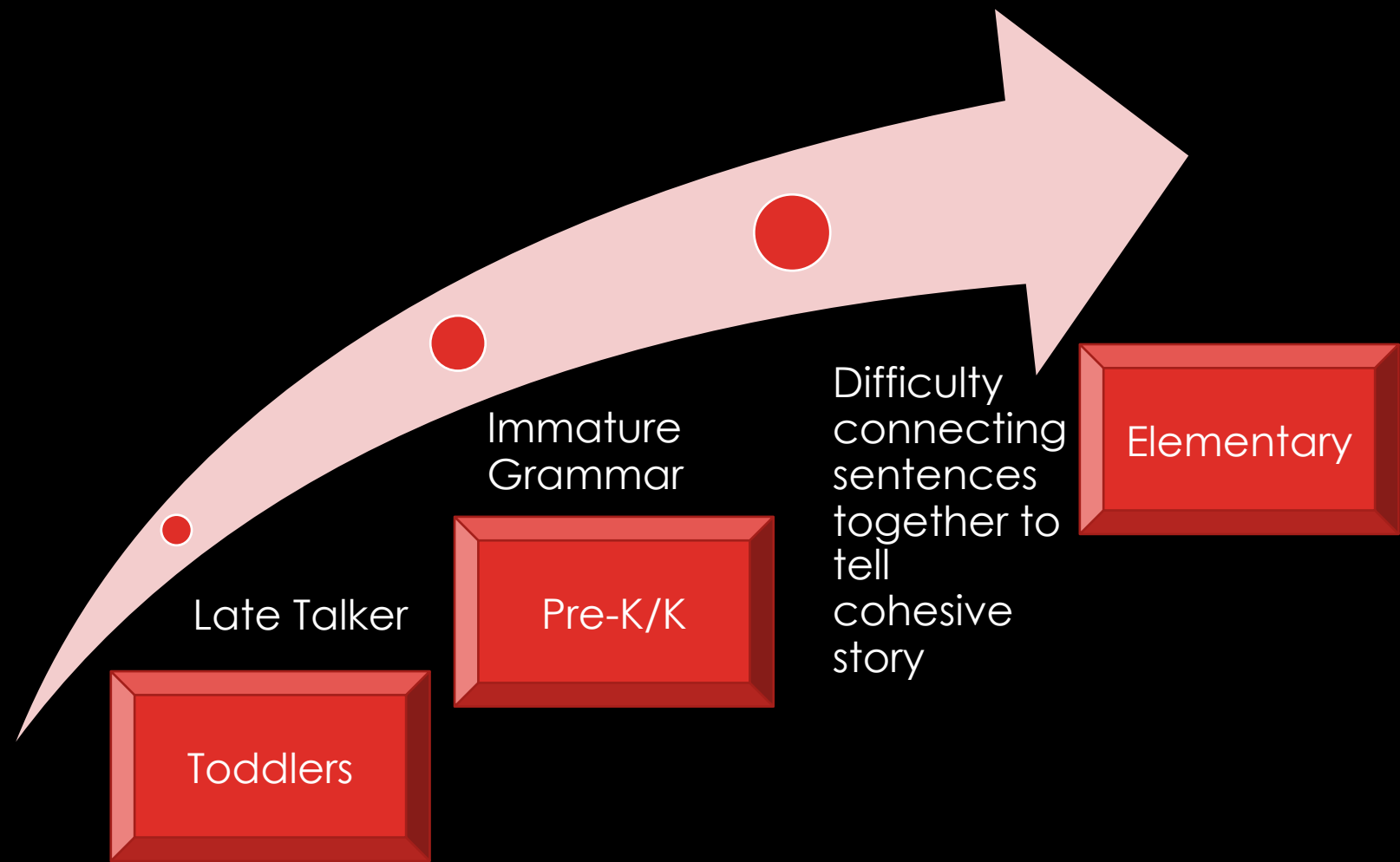
HOW DOES LANGUAGE DEVELOPMENT PROGRESS IN CHILDREN WITH DLD?

[https://cldp.ku.edu/sites/cldp.ku.edu/files/docs/
OpenAccessE-BookOctober2018.pdf](https://cldp.ku.edu/sites/cldp.ku.edu/files/docs/OpenAccessE-BookOctober2018.pdf)

Mabel Rice: A train leaving the station late...the trajectory and sequence is very similar, but there are persistent delays



WHY? DLD IS DEVELOPMENTAL



GROWING WITH DLD

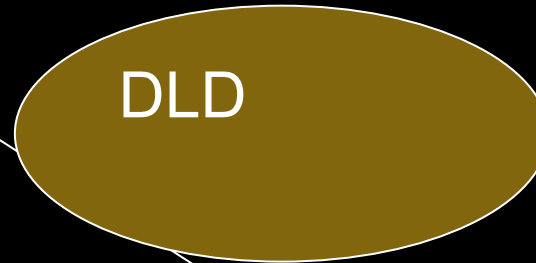


- <https://www.youtube.com/watch?v=ooORu9vVBpE>

Reading



Word
Recognition



Listening
Comprehension

Word Recognition

Poor

Good

Listening
Comprehension

Good

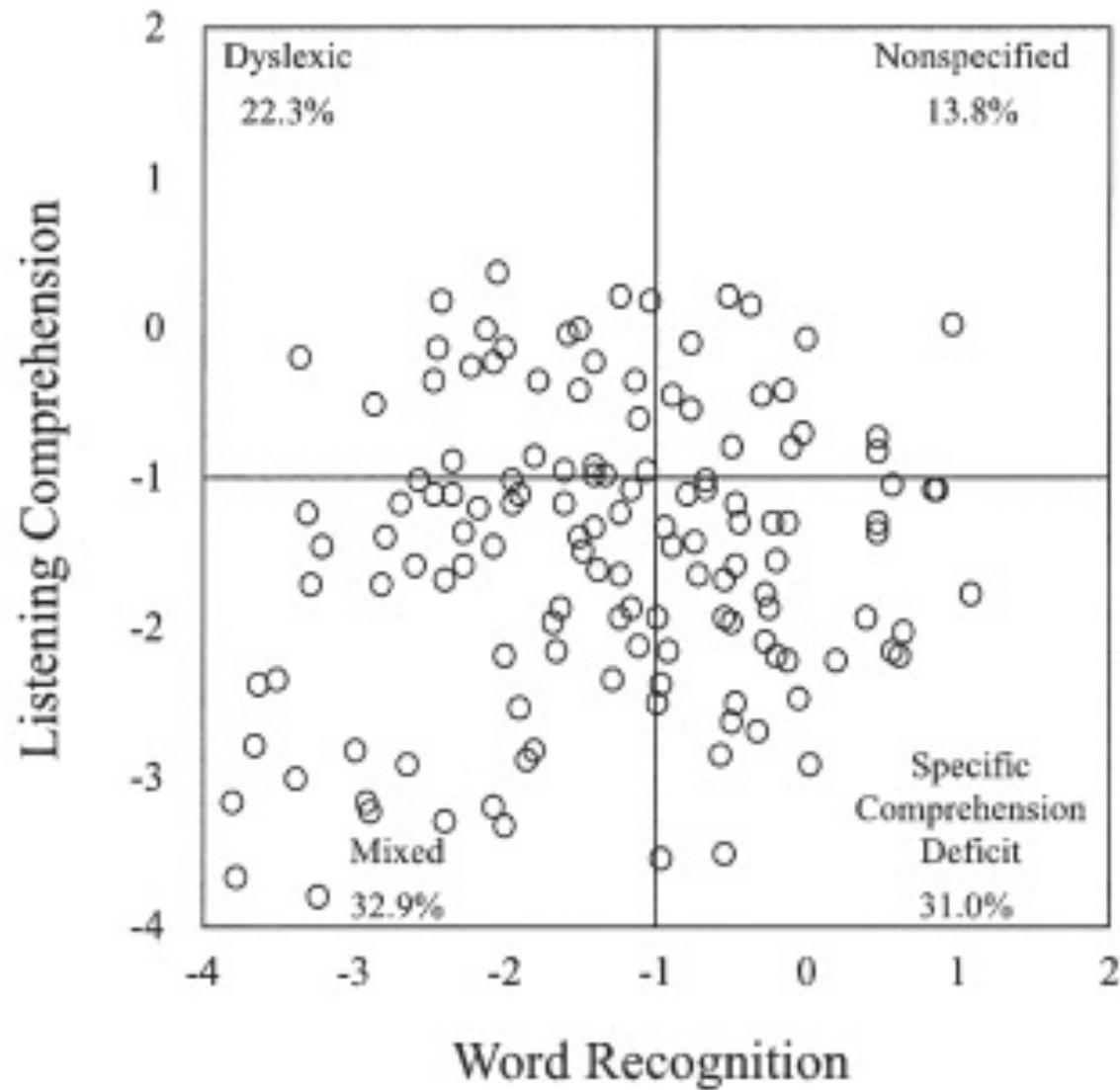
Dyslexia

Poor

Dyslexia +DLD

Developmental
Language Disorder
(DLD)

4th Grade



Catts, Hogan, & Adlof, 2005



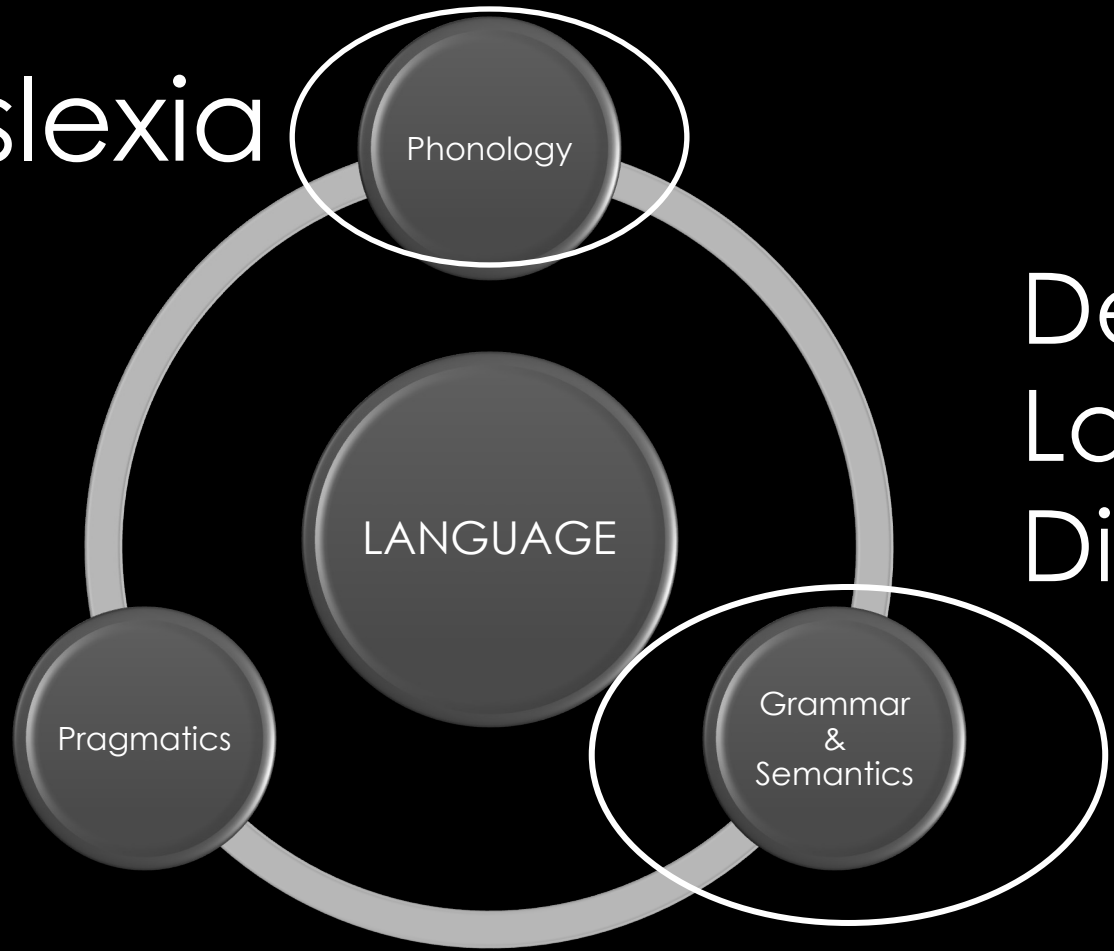
Question



Is dyslexia a language disorder?

LANGUAGE

Dyslexia



Developmental Language Disorder

Understanding Dyslexia in the Context of Developmental Language Disorders

Suzanne M. Adlof^a and Tiffany P. Hogan^b

Purpose: The purpose of this tutorial is to discuss the language basis of dyslexia in the context of developmental language disorders (DLDs). Whereas most studies have focused on the phonological skills of children with dyslexia, we bring attention to broader language skills.

Method: We conducted a focused literature review on the language basis of dyslexia from historical and theoretical perspectives with a special emphasis on the relation between dyslexia and DLD and on the development of broader language skills (e.g., vocabulary, syntax, and discourse) before and after the identification of dyslexia.

Results: We present clinically relevant information on the history of dyslexia as a language-based disorder, the operational definitions used to diagnose dyslexia in research and practice, the relation between dyslexia

and DLD, and the language abilities of children with dyslexia.

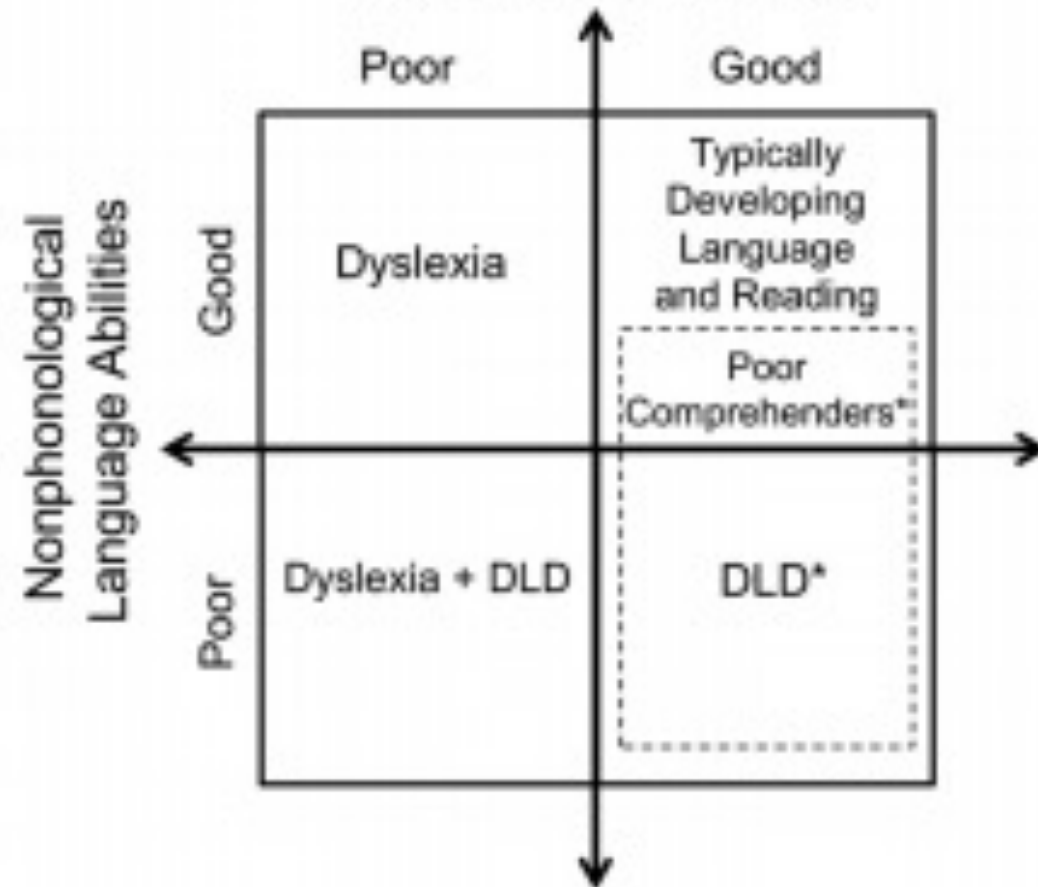
Conclusions: We discuss 3 clinical implications for working with children with dyslexia in school settings: (a) Children with dyslexia—with and without comorbid DLDs—often have language deficits outside the phonological domain; (b) intervention should target a child's strengths and weaknesses relative to reading outcomes, regardless of diagnostic labels; and (c) those who have dyslexia, regardless of language abilities at the time of diagnosis, may be at risk for slower language acquisition across their lifetime. Longitudinal studies are needed to assess multiple language skills early, at the time of the diagnosis of dyslexia, and years later to better understand the complex development of language and reading in children with dyslexia.

Although the term *dyslexia* is familiar to most of the lay public, there is no consensus on precise diagnostic criteria. Most definitions of dyslexia agree on primary inclusionary criteria, including marked

vision impairment or with neurodevelopmental syndromes or who have had a prior head injury may experience reading and spelling difficulties as a result, but they would not be considered to have dyslexia. Some definitions further spec-

c. Fully Distinct Hypothesis (Catts et al., 2005)

Phonological Abilities



Take home messages

- Children with dyslexia have a deficit in word reading, ranging from mild to severe
- Children with DLD have a deficit in language, ranging from mild to severe
- 50% of children with DLD have dyslexia
- 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.*

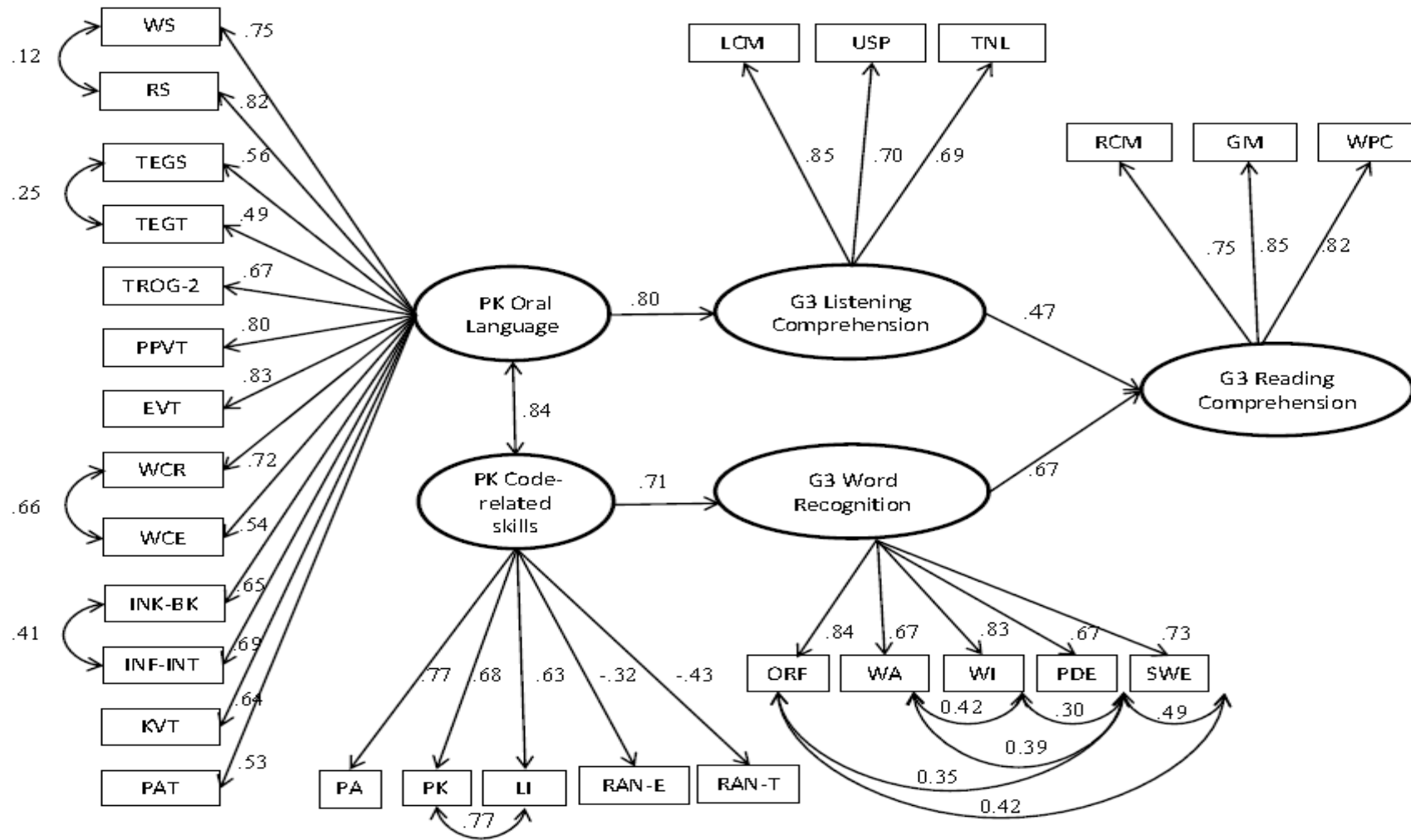
(Adlof & Hogan, 2018)

DYSLEXIA VERSUS
DEVELOPMENTAL
LANGUAGE
DISORDER

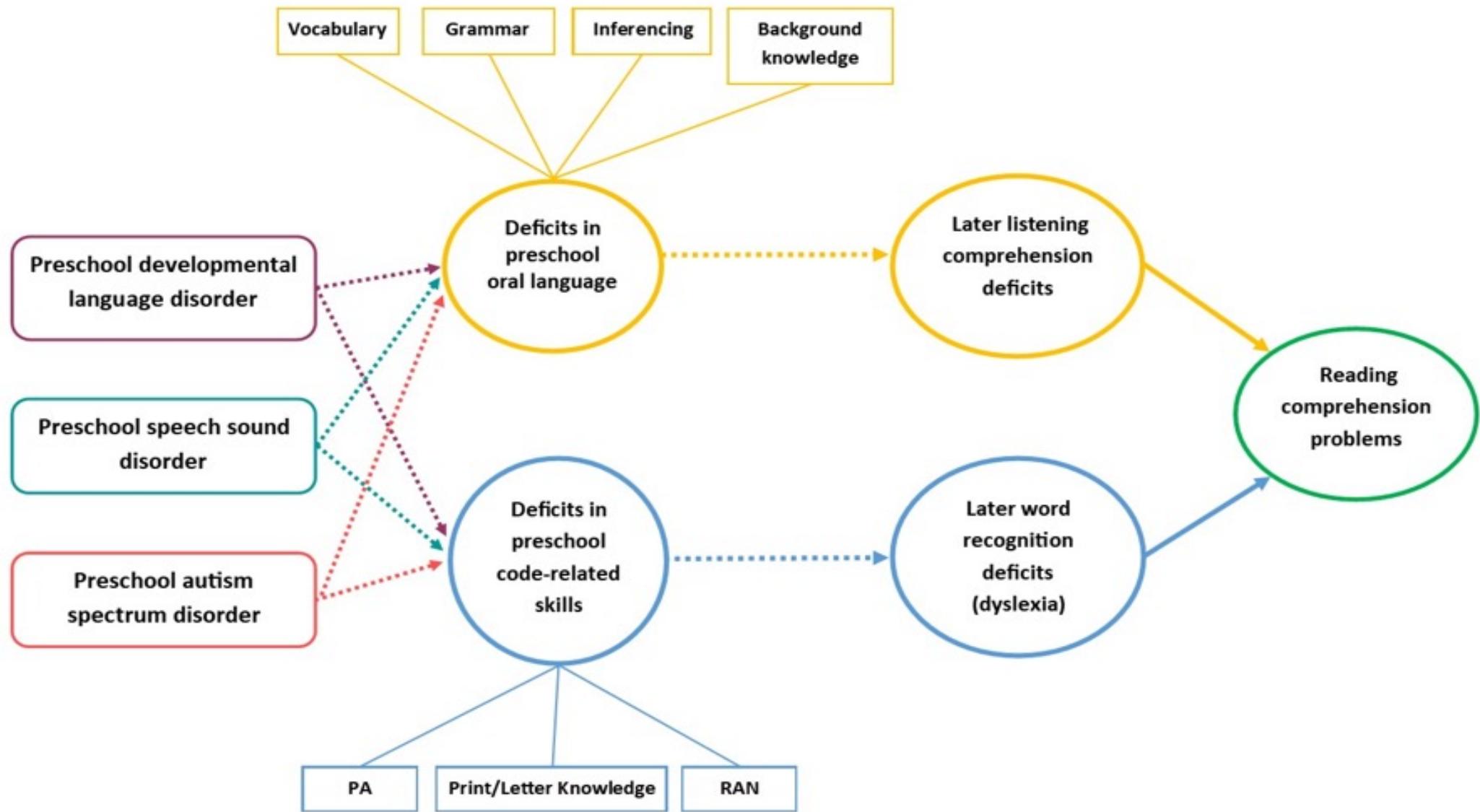


SIMPLE VIEW
ACROSS
DEVELOPMENT

Model D



Language and Reading Research Consortium (LARRC) and Chiu, Y. D. (2018). The Simple View of Reading across development: the prediction of grade 3 reading comprehension by prekindergarten skills. *Remedial and Special Education, 39*(5), 289-303.



IMPLICATIONS OF LONGITUDINAL DATA ON SIMPLE VIEW

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



WHY ISN'T DLD
BETTER KNOWN?

WHY ISN'T DLD BETTER KNOWN?

It affects approximately 1 in 10 children! (Tomblin et al., 1997)

Maybe because...

- Language is hard to explain
- Language difficulties are easier to conceal, and misunderstood
- Language development is not well understood
 - Kids don't 'catch up' by waiting another year, instead Mathew effect kicks in
- Late talkers confuse matters (~25% go on to have DLD)
- Language has been the domain of SLPs.
- It has been called by many names: <https://dldandme.org/terminology/>

Research

Developmental

The term language because c

Specific

One of the DLD with among re literature

Primary

While this different v confused

Language

This term While mo

Developmental

DLD is cur early in de

Clinical Terminology Educational

In clinical Disorders: disorders

Language

This refer

Specific

This refer spoken la children v

Insurance

In the U.S however, clinician v language

In U.S. educational policy, the Individuals with Disabilities Education Act (IDEA) has its own names and categories of disabilities. 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.

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.

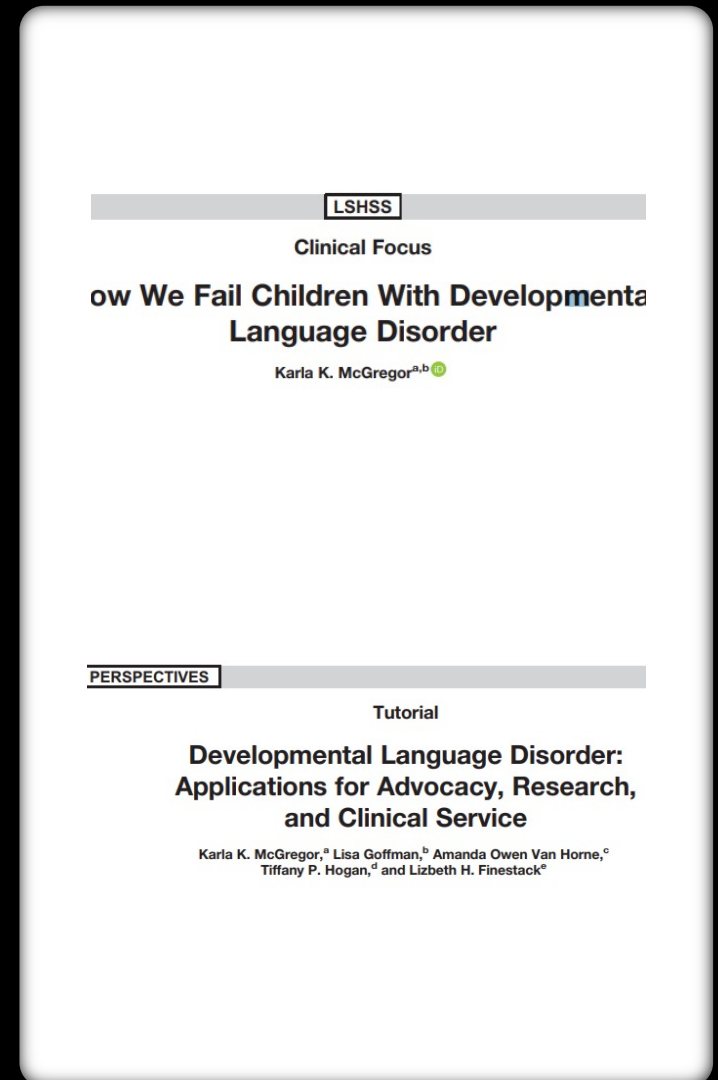
DLD ADVOCACY

Karla McGregor et al, 2020:

https://pubs.asha.org/doi/full/10.1044/2019_PERSP-19-00083

Karla McGregor 2020:

https://pubs.asha.org/doi/full/10.1044/2020_LSHSS-20-00003



USA

Home > USA

RADLD USA NATIONAL COMMITTEE

Welcome to the RADLD USA National Committee page. Here you will find:

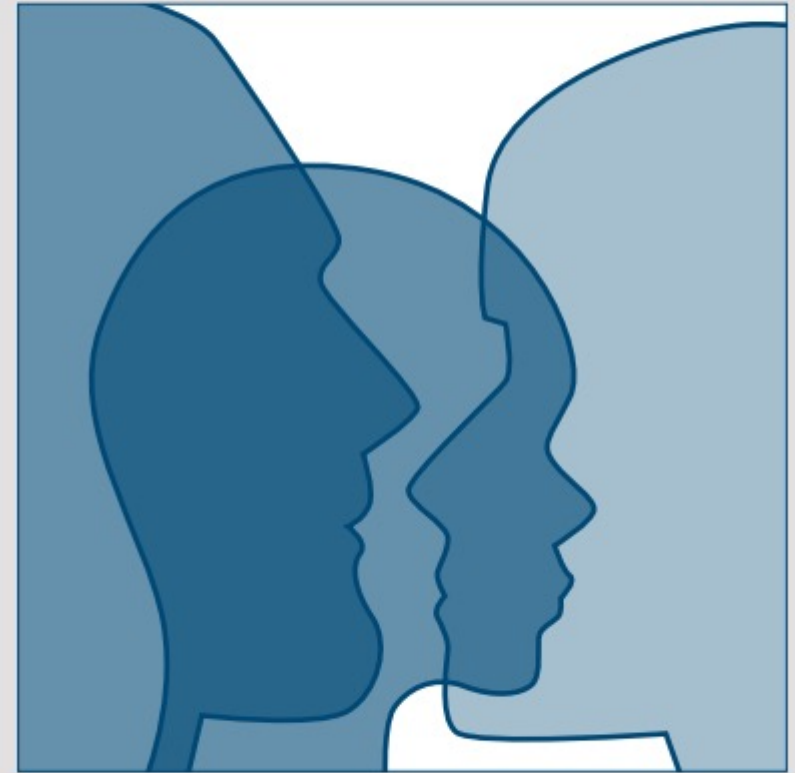
<https://radld.org/usa/>

YOU CAN HELP

<https://radld.org/wp-content/uploads/2022/11/DLD-A-guide-for-parents-and-families-2.pdf>

DLD

DEVELOPMENTAL LANGUAGE DISORDER



A GUIDE FOR PARENTS AND FAMILIES

By Jeanne Tighe, SLPD, CCC-SLP, BCS-CL

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](#)

Wh
and
Ab
and

Sean
Wilde
do w
devel
atten
resear
[...]

Read

Diagnosing and Treating Developmental Language Disorder (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 diffe [...]

[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 >](#)

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

radld.org

2020: Oct 16
2021: Oct 15
2022: Oct 14

Woodmen Life Tower, Omaha, Nebraska



University of Limerick, Republic of Ireland



Niagara Falls, Ontario, Canada



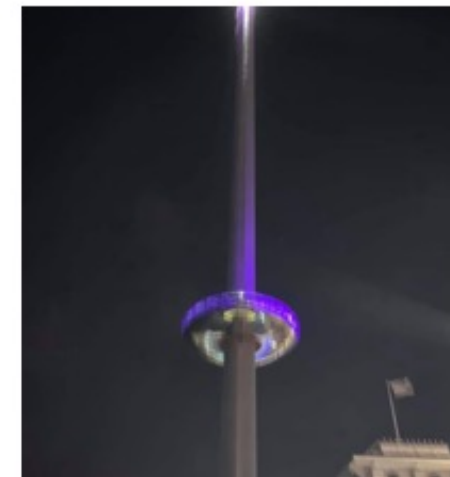
Zakim Bridge, Boston, Massachusetts



Matagarup Bridge and Sky Ribbon,
Perth, Australia



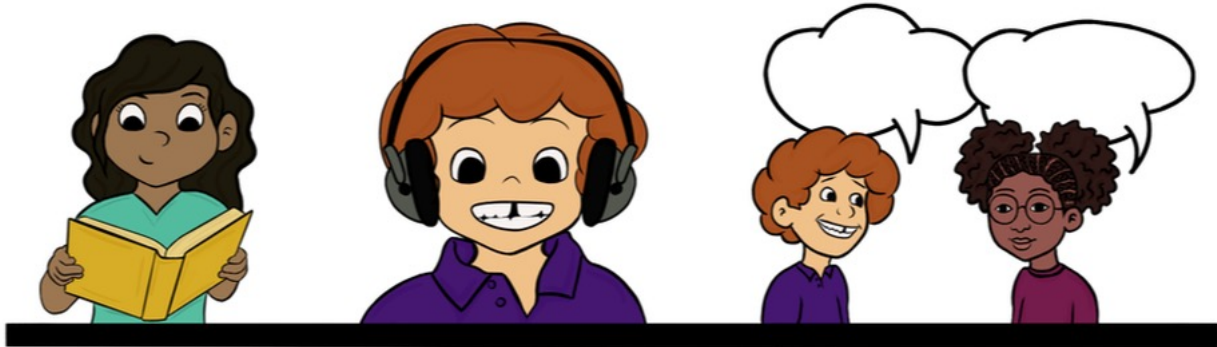
British Airways i360 Tower,
Brighton, United Kingdom



SEEHEARSPEAKPODCAST.COM

- History of DLD
- Awareness campaigns for DLD
- DLD & Working Memory
- DLD & ADHD
- A parent's perspective on DLD

EPISODES ABOUT SIGN UP FOR EMAIL ALERTS



See • Hear • Speak

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

WHEN IS DLD IDENTIFIED?

What percentage of children with DLD are identified as having language difficulties in Kindergarten?

1. 90%
2. 75%
3. 50%
4. 20%

DLD: COMMON, BUT HIDDEN, DISORDER

- Only ~20% of children with DLD are identified in early childhood / early elementary school (see Adlof & Hogan, 2019 for review)
- Who is identified? (Wittke, Spaulding, & Schechtman, 2013)
 - Those with executive functioning deficits
 - Those who have mothers with high SES
- Long term impact of having DLD (with lack of validation...and education)
 - Low self esteem
 - Shame
 - Unable to negotiate with language
 - Reading deficits...which lead to knowledge deficits
 - Juvenile delinquency
 - Higher rate of sexual assault

Lieser AM, Van der Voort D, **Spaulding TJ**. You have the right to remain silent: The ability of adolescents with developmental language disorder to understand their legal rights. *Journal of Communication Disorders*.

<http://pamelasnow.blogspot.com/2018/06/behaviour-as-form-of-communication.html>

<https://www.gse.harvard.edu/news/19/12/harvard-edcast-bringing-hidden-language-disorder-light>

“Adults with a history of DLD who received targeted intervention during their school years reported less contact with their local police service compared with AMPs at age 24.”

“There is a need for early identification of children with DLD. Early intervention aimed at ameliorating such difficulties could possibly have distal outcomes in relation to offending.”

The screenshot shows the top portion of a research report page. At the top, there is a blue header with the journal title "International Journal of Language & Communication Disorders" and the logo of the Royal College of Speech & Language Therapists. Below the header, the text "Research Report" is followed by "Open Access" and Creative Commons icons. The main title of the report is "More or less likely to offend? Young adults with a history of identified developmental language disorders*". The authors listed are Maxine Winstanley, Roger T. Webb, and Gina Conti-Ramsden. Below the authors, it states "First published: 21 November 2017" and provides a DOI link: "https://doi.org/10.1111/1460-6984.12339" along with "Citations: 4". A note indicates that a free Video Abstract is available at "https://youtu.be/lpuwoOEaurQ". A navigation bar includes "SECTIONS", "PDF", "TOOLS", and "SHARE". On the right side, there is a sidebar with "Metric" and "Citation" sections, and a "Detail" section at the bottom.

WHY ISN'T DLD CAUGHT EARLIER IN SCHOOLS?



School-based screenings are common. For example, schools regularly screen for hearing loss or vision difficulties. Screenings help parents and teachers find problems that may negatively affect learning. Unfortunately, screening of language skills is not a common practice in schools. Why? Three myths get in the way.

Myth 1: Language screenings are time-consuming.

Truth: There are language screeners that can be given quickly and easily in the classroom.

Myth 2: Language screenings are not reliable.

Truth: There are highly reliable language screeners for children in kindergarten and higher grades.

Myth 3: Schools already screen for language when they screen for reading.

Truth: It is great that school's regularly screen children's reading skills but reading screeners (like the DIBELS) screen for written language problems. Oral language problems, which may be contributing to the reading problem or to problems in classroom participation, go undetected.

<https://dldandme.org/school-language-screening/>



'READING' CHANGES OVER TIME

The Simple View is not so
simple....

'READING' CHANGES OVER TIME

(CATTS, HOGAN, & ADLOF, 2005)

Reading Comprehension

```
graph TD; A[Reading Comprehension] --> B[Word Recognition]; A --> C[Listening Comprehension]
```

Listening
Comprehension

Word
Recognition

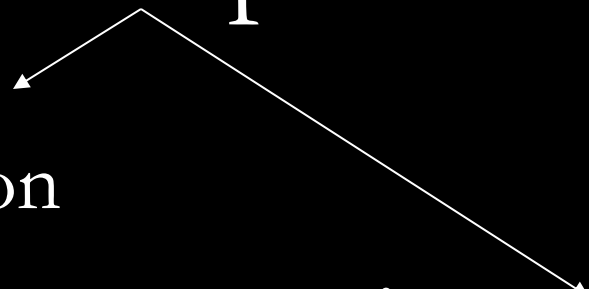
'READING' CHANGES OVER TIME

(CATTS, HOGAN, & ADLOF, 2005)

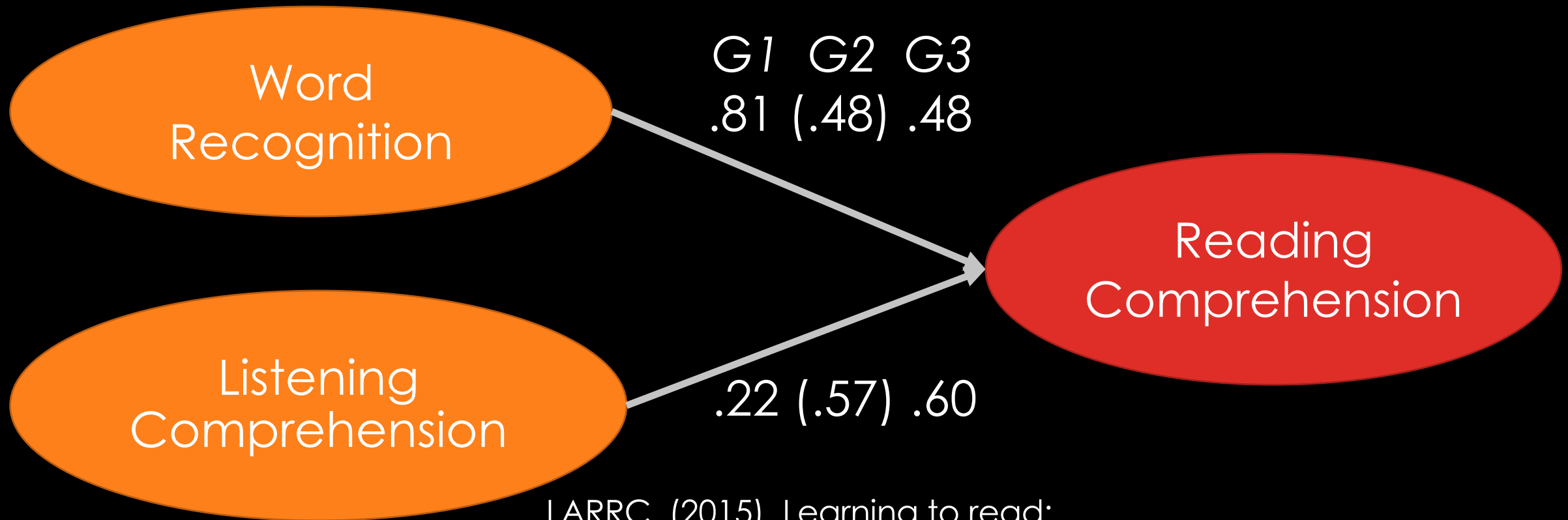
Reading Comprehension

Word Recognition

Listening
Comprehension



RESULTS: CHANGE OVER TIME



LARRC. (2015). Learning to read: Should we keep things simple? *Reading Research Quarterly*, 50, 151-169.

WRMT-R – PASSAGE COMPREHENSION

Grade 1 and below:

The boy has a cap on his _____

(with a picture of a boy walking with a cap on his head)

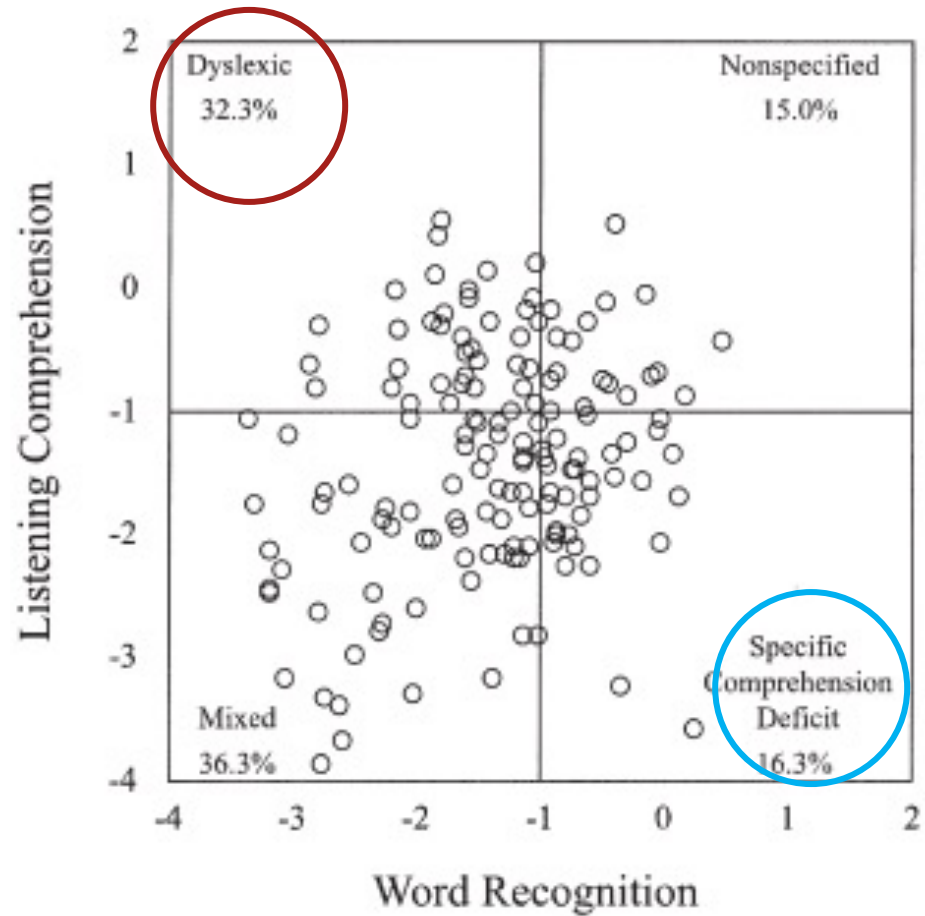
WRMT- R – PASSAGE COMPREHENSION

Grade 4 starting point:

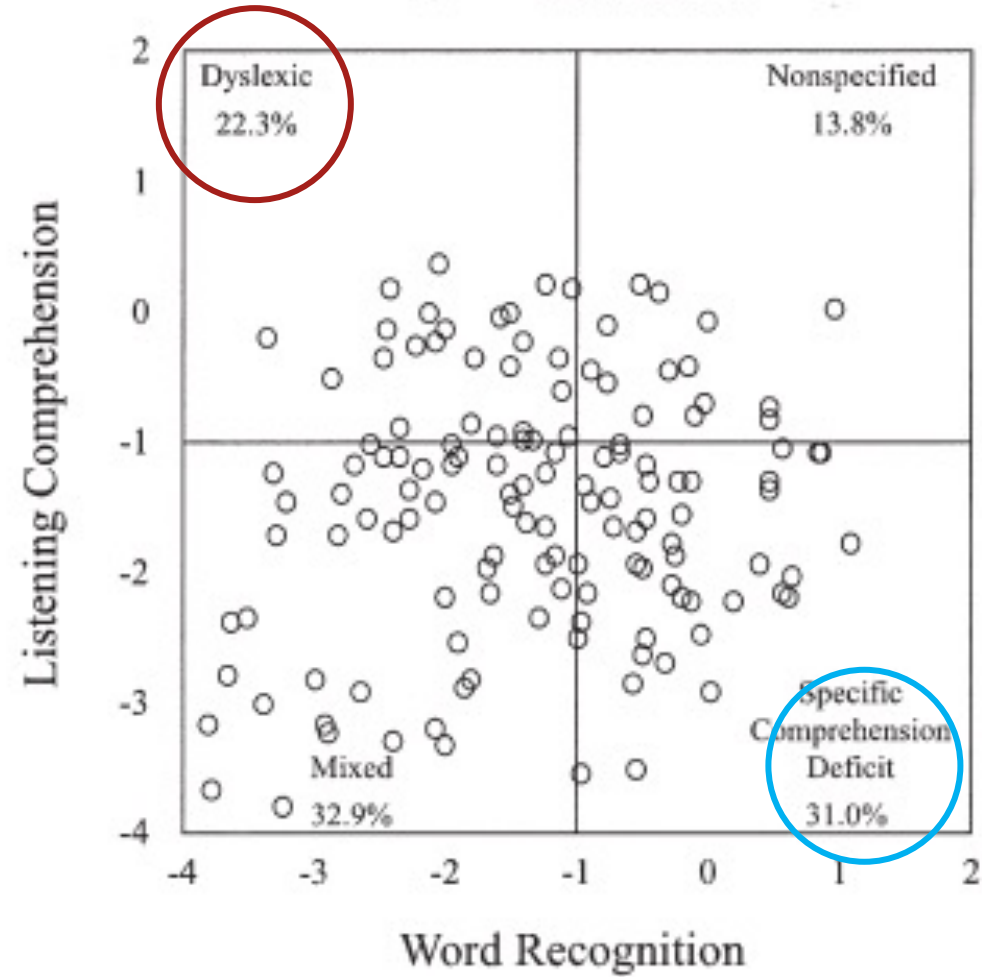
The can of paint is nearly full. Susan will use it to _____ the walls (paint and cover are correct)

As soon as Tony tried to say anything, he would feel the other children looking at him. His face would get red, and the _____ wouldn't come out. (words, truth, sentence, question, answer are correct)

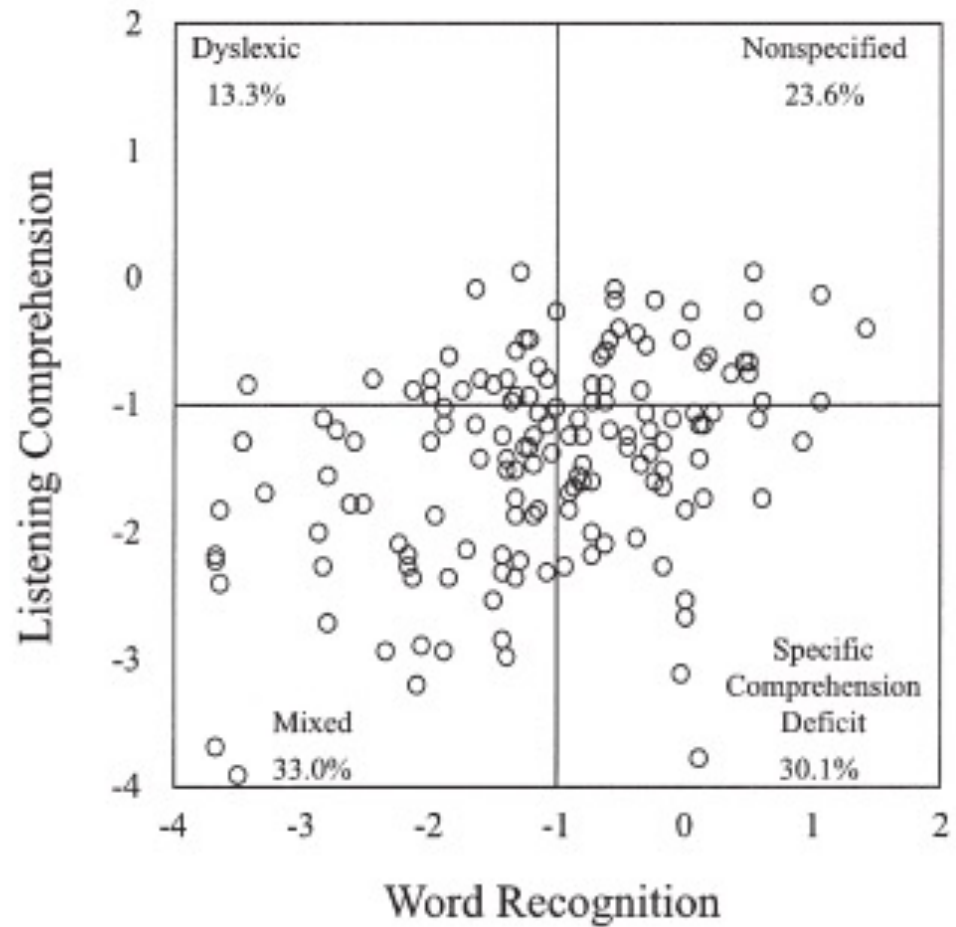
2nd Grade



4th Grade



8th Grade



Word Recognition

Poor

Good

Listening
Comprehension

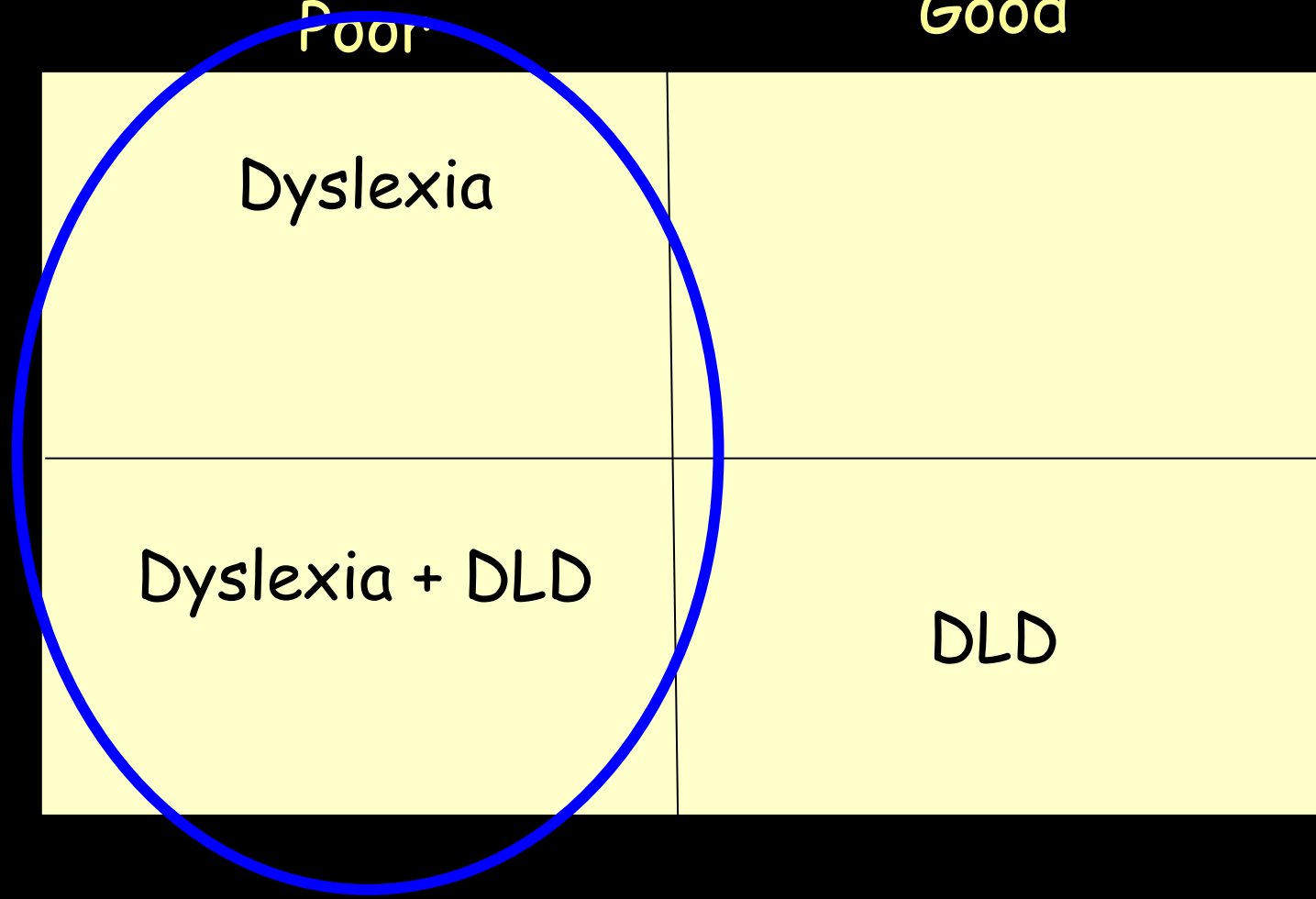
Good

Dyslexia

Poor

Dyslexia + DLD

DLD



Word Recognition

Poor

Good

Listening
Comprehension

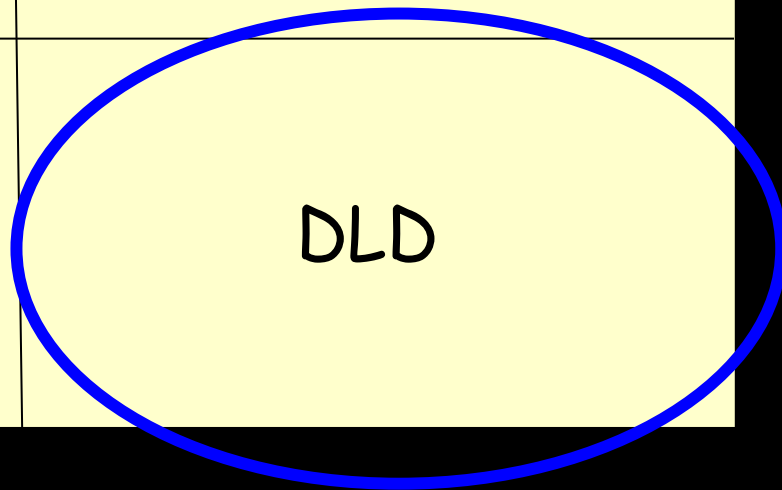
Good

Dyslexia

Dyslexia + DLD

Poor

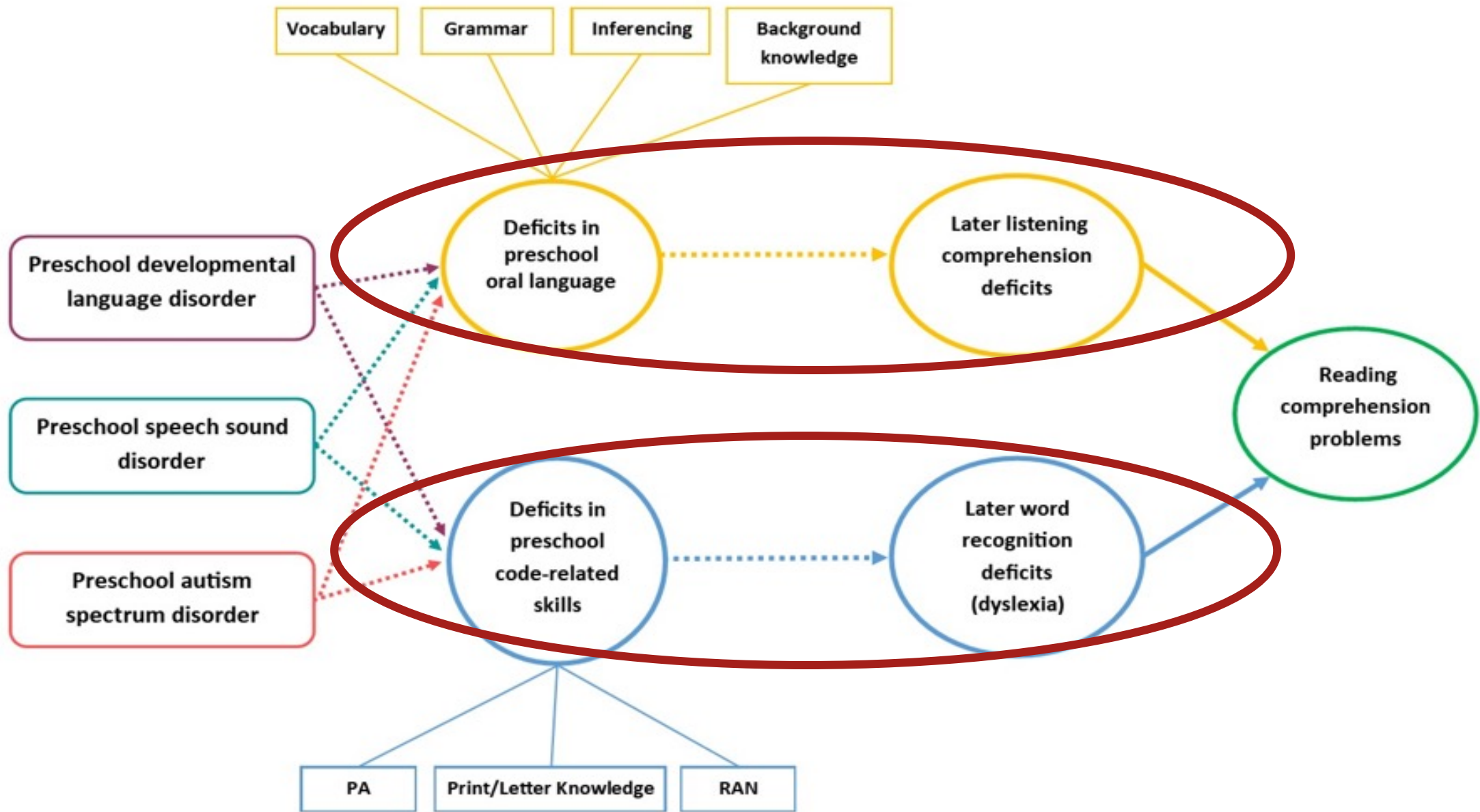
DLD



MOST LATE EMERGING POOR
READERS ARE ACTUALLY
LATE IDENTIFIED

Catts et al., 2012; Petscher et al, 2017





If We Don't Look, We Won't See: Measuring Language Development to Inform Literacy Instruction

Suzanne M. Adlof, Tiffany P. Hogan

First Published June 17, 2019 | Research Article | [Check for updates](#)

<https://doi.org/10.1177/2372732219839075>

[Article information](#) ▾



75



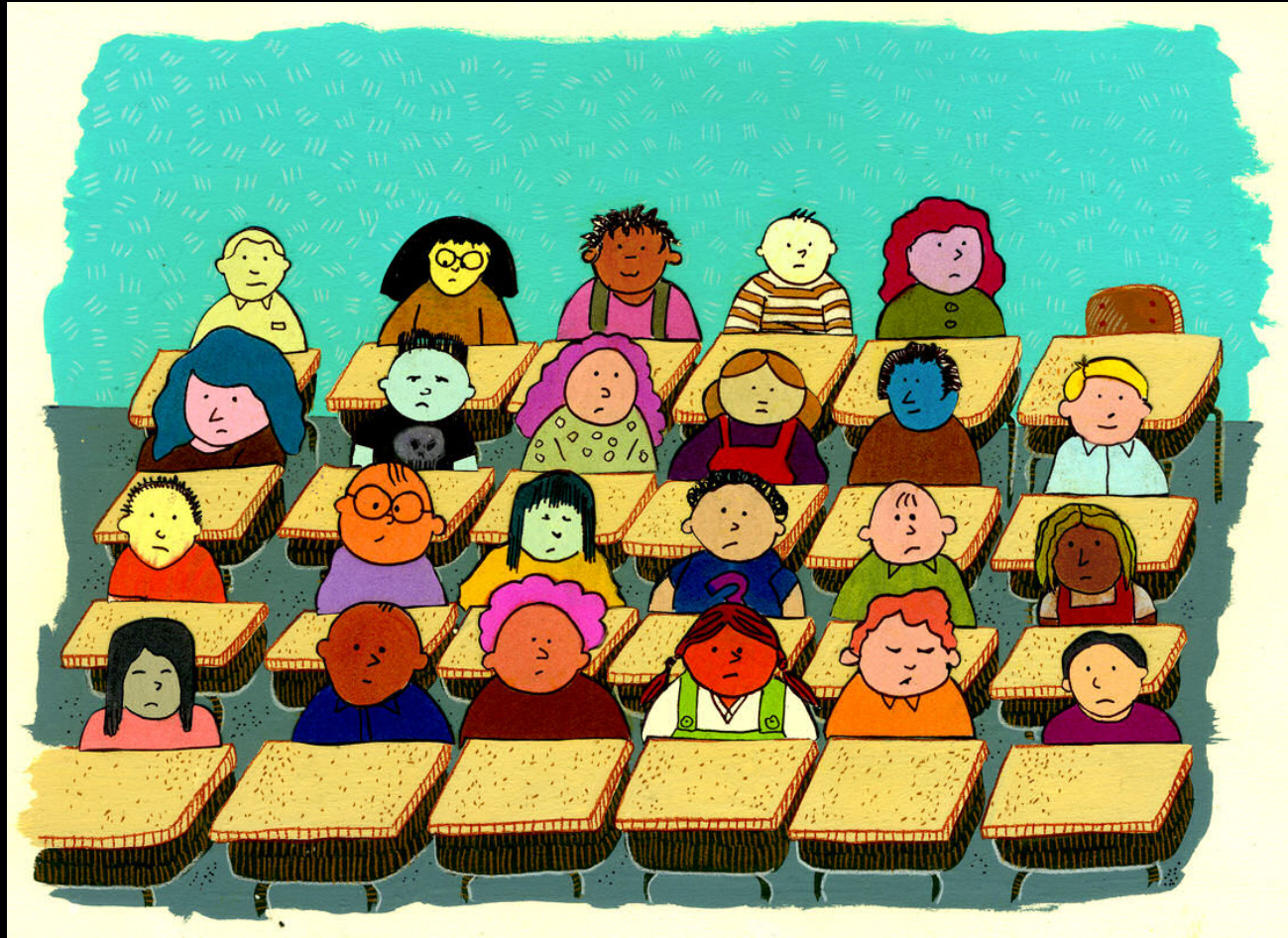
Abstract

Oral language abilities enable children to learn to read, and they predict future academic achievement and life outcomes. However, children with language impairment frequently go unidentified because schools do not systematically measure oral language development. Given that identification paves the way for treatment, schools should increase attention to oral language development, particularly within response to intervention (RTI) frameworks, which aim to prevent learning disabilities by identifying and intervening at early stages. Formal schooling should address language comprehension (in addition to word reading) to ensure an adequate foundation for future reading comprehension. In support, we overview

EARLY SCREENING FOR DLD

<https://tinyurl.com/screen4DLD>

<https://charts.intensiveintervention.org/chart/academic-screening>



OPEN SOURCE GOOGLE DOC

Note: This is an open source document that contains a list of measures with evidence to support their use as language screeners. These measures are intended for screening purposes only so those who score below your chosen (or evidence-based pre-determined) cut-point should be assessed further to determine the presence of language impairment. Please feel free to add to this list.

To listen to a discussion about screening and the varied purposes for tests, please see:

<https://anchor.fm/tiffany-hogan/episodes/Episode-7-Lively-discussion-about-tests-with-Elena-Plante-why-we-use-them--what-makes-one-valid--i-e485hc>

Further resources at: www.seehearspeakpodcast.com ('Episode 7 resources'), <https://www.dldandme.org/school-language-screening>, and <https://journals.sagepub.com/doi/10.1177/2372732219839075>

Name of test	Reference	Group or individual	Time for administration	Cost	Age range	Sensitivity and specificity information from web	Dialect information from web
Student Language Scale Screener for Language and Literacy	https://products.brookespublishing.com/SLS-Screener-for-Language-Literacy-Disorders-P1046.aspx	individual	3 min survey filled out by the parent or teacher or student	79.95 US Dollars for 50 forms	6-18 years old	Sensitivity of the SLS to risk of language/literacy disorder is .92 for teachers and .85 for parents, and specificity (correct identification of typical learners) is .90 for teachers and .83 for parents.	None found
Clinical Language Evaluation of Fundamentals - 5 Screening Test	https://www.pearsonassessment.com/store/usassessments/en/Store/Professional-Assessments/Speech-%26-Language/CELF	individual	10-30 mins per child	289.00 US Dollars for Test Stimuli and Manual; 43.75 US Dollars for pack of 25 test protocols	5:0 through 21:11	Test presents research-based cut scores by age based on a standardization sample of more than 2,300 students throughout the United States.	"Scoring rules are sensitive to many dialects use in the U.S. and diverse cultures."

Compare Tools		Reset Chart		Classification Accuracy		Technical Standards	Usability Features
All	Title	Area	Grade	<u>Classification Accuracy</u> Fall	<u>Classification Accuracy</u> Winter	<u>Classification Accuracy</u> Spring	
<input type="checkbox"/>	Acadience Reading (aka DIBELS Next)	Composite Score	Kindergarten				
<input type="checkbox"/>	Acadience Reading (aka DIBELS Next)	Composite Score	Grade 1				
<input type="checkbox"/>	Acadience Reading (aka DIBELS Next)	Composite Score	Grade 2				
<input type="checkbox"/>	Acadience Reading (aka DIBELS Next)	Composite Score	Grade 3				
<input type="checkbox"/>	Acadience Reading (aka DIBELS Next)	Composite Score	Grade 4				
<input type="checkbox"/>	Acadience Reading (aka DIBELS Next)	Composite Score	Grade 5				
<input type="checkbox"/>	Acadience Reading K-6	Maze	Grade 3				

Windows of Opportunity

PreK–1st Grade

2nd–3rd Grade

Prevention

Diagnosis & Treatment

Universal Screening
High Quality Tier 1 Instruction
Progress Monitoring
MTSS Instruction to Match Needs

Assessment & Evaluation
Special Education
Intensive Intervention

Fewer Negative Consequences
Less Early Reading Failure
More Cost-Effective

More Negative Consequences
Delayed Reading Success
Less Cost-Effective

DYSLEXIA: AN OUNCE OF PREVENTION
IS WORTH A POUND OF DIAGNOSIS
[HTTPS://PSYARXIV.COM/NVGJE](https://psyarxiv.com/nvgje)



KNOWLEDGE TO WORK

HOW IS DLD DIAGNOSED?

- Both expressive (producing language) and receptive (understanding) tests
- Some examples:
 - Recalling Sentences
 - Formulating sentences
 - Picking pictures that go together
 - Retelling a story
- Vocabulary tests are less sensitive, especially the PPVT

Diagnostic Decisions: Language Difficulties or DLD in Under 5-year-olds

Diagnostic Scenario

The SLP/SaLT assessment determines that a child under 5 years has language difficulties with a significant impact on everyday interactions & no known biomedical condition. Given the variability in language development at this age, what considerations might help the clinician decide if the problem is likely persistent and a diagnosis of DLD is warranted?

Indicators of relatively low concern

Indicators of moderate concern

Indicators of quite high concern

Diagnostic Considerations

Age in years when assessed ¹		
up to 2	3	4+
Time over which re-assessment has indicated continued language difficulties ²		
less than 6 months		6 months or more
Language domains impacted ² :		
Phonology	Morphosyntax	Semantics Word finding Pragmatics Verbal learning & memory
Phonology only	Few domains Expressive only	Many domains (see note (a)) Receptive & expressive deficits
Risk factors ³ :	Family history of communication or reading disorders Low level of parental education/vocabulary Socioeconomic disadvantage	Low birth weight or responsivity Others: birth order, male, shyness
	Many (see note (b))	
Early gesture or language indicators ⁴		
	At 12 months, few words used meaningfully or understood without gestures, limited pointing or holding out arm to show object	At 24 months, no word combinations
Later preschool language indicators ¹		
Retells main events in story (even with morphosyntactic & phonological errors)		Unable to retell simplified sequence of story events (even with pictures)
Malleable factors ⁵ :	Language & literacy home environment (e.g., toy talk: <i>When my child looks at a toy, I talk about it</i> ; shared book reading; many books available; interactions during screen time) Variability in language input (i.e., informal play opportunities; attends childcare centres) Intervention	
Language improves with existing or enhanced inputs	Not available	No change when enhanced or change requires considerable effort

Determining best label to use: Consider the range in which the majority of indicators fall...

Language

ABOUT LWM

Home > DLD Toolbox > 20

DL D T o o l b o x

2020

2021

Contact Us

Lisa Archibald, PhD
Associate Professor
Western University
School of Communication
Sciences and Disorders
Elborn College
1201 Western Rd.
London, Ontario CA
N6G 1H1

Tel: 519-661-2111 ext. 2111
Email Dr. Archibald

Assessment of dyslexia involves individual testing, most often provided by a team of qualified professionals who have had extensive clinical training in assessment as part of a graduate degree program. Professional clinicians who assess Specific Learning Disabilities (SLD) and dyslexia may have M.A., M.S., M.ED., Ed.D., or Ph.D. degrees in Education, Reading, Speech Language Pathology, School Psychology, Psychology, or Neuropsychology. Evaluation by a medical doctor is not required for assessment or identification of SLD or dyslexia.

IDA Fact Sheet on Assessment for Dyslexia:

<https://dyslexiaida.org/dyslexia-assessment-what-is-it-and-how-can-it-help-2/>

5;9, KINDER

Clinical Evaluation of Language Fundamentals – 5 th Edition (CELF-5)	Standard Score (mean = 100, standard deviation of 15)
Sentence Comprehension Subtest	9
Word Structure Subtest	6
Formulated Sentences Subtest	3
Recalling Sentences Subtest	8
Core Language Score	80

Woodcock-Johnson Tests of Achievement – 4 th Edition (WJ-IV)	Standard Score (mean = 100, standard deviation of 15)
Letter-Word Identification Subtest	77

Does this child have DLD? Dyslexia?

5;4, KINDER

Clinical Evaluation of Language Fundamentals – 5 th Edition (CELF-5)	Standard Score (mean = 100, standard deviation of 15)
Sentence Comprehension Subtest	12
Word Structure Subtest	12
Formulated Sentences Subtest	10
Recalling Sentences Subtest	12
Core Language Score	109

Woodcock-Johnson Tests of Achievement – 4 th Edition (WJ-IV)	Standard Score (mean = 100, standard deviation of 15)
Letter-Word Identification Subtest	82

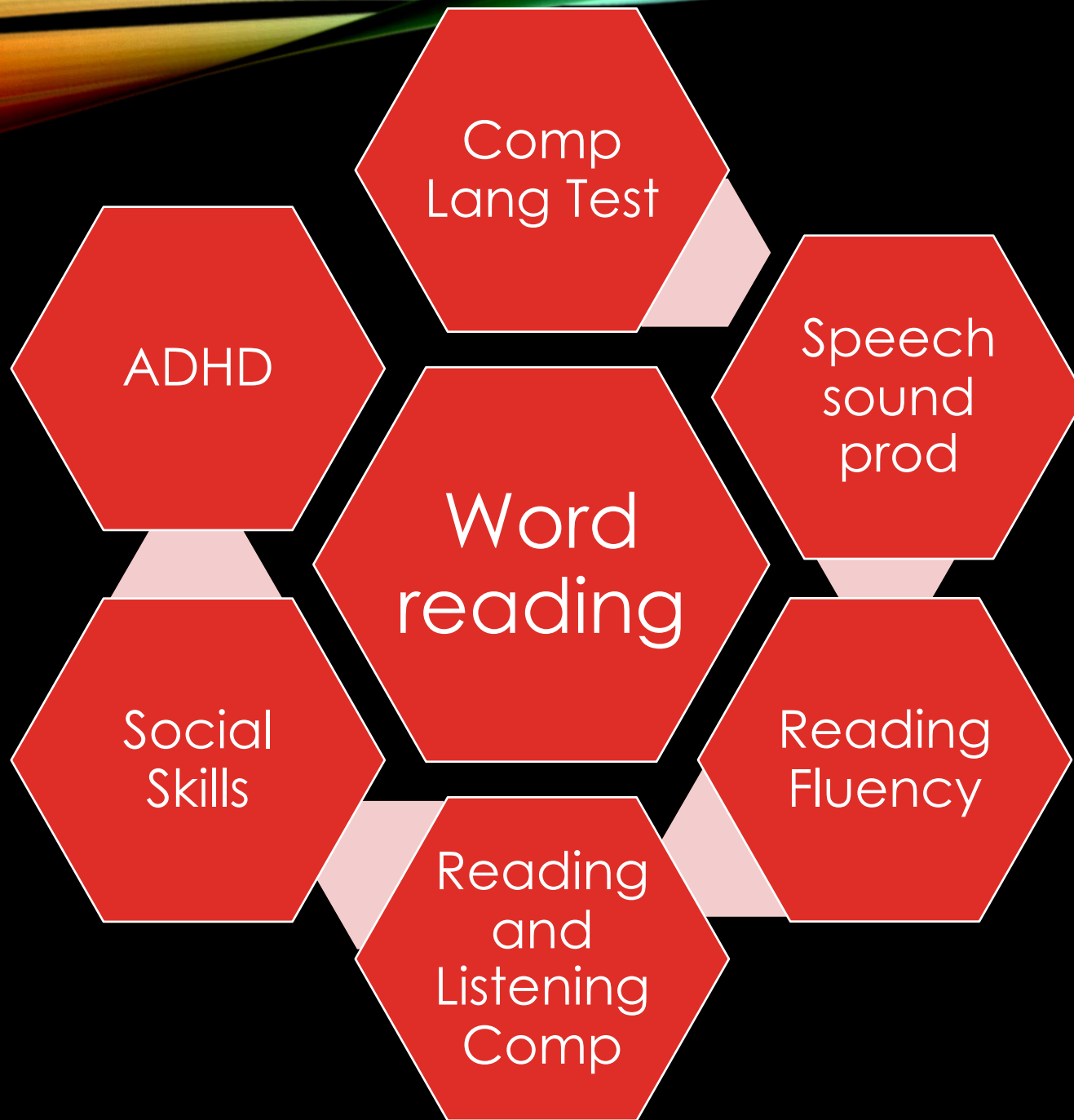
Does this child have DLD? Dyslexia?


5;9, KINDER

Clinical Evaluation of Language Fundamentals – 5 th Edition (CELF-5)	Standard Score (mean = 100, standard deviation of 15)
Sentence Comprehension Subtest	9
Word Structure Subtest	6
Formulated Sentences Subtest	3
Recalling Sentences Subtest	8
Core Language Score	80

Woodcock-Johnson Tests of Achievement – 4 th Edition (WJ-IV)	Standard Score (mean = 100, standard deviation of 15)
Letter-Word Identification Subtest	101

Does this child have DLD? Dyslexia?





WHAT ABOUT CHILDREN
WHO ARE MULTILINGUAL?

PROGRESS MONITORING

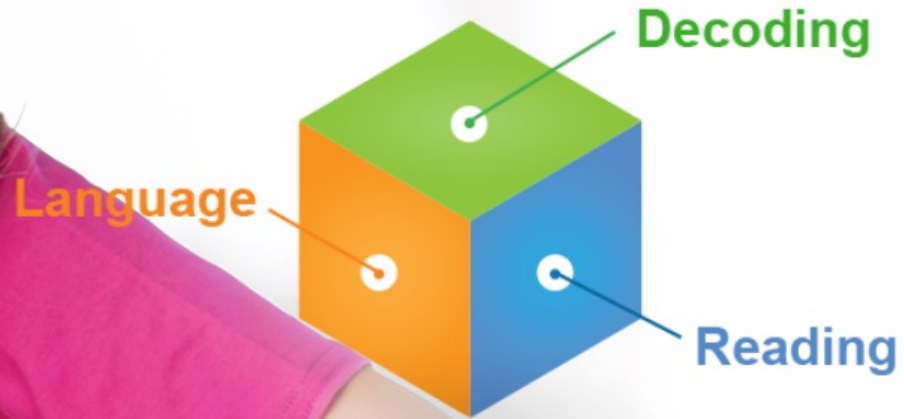
- Measures response over time
- Requires equated test difficulty

NARRATIVE LANGUAGE MEASURES

- Short narratives based on common experiences for young children in the US
- Equated on:
 - Story Grammar
 - 108-110 words



The CUBED offers a multi-dimensional view of literacy



https://www.languagedynamicsgroup.com/products/cubed/cubed_download/
<http://www.trinastoolbox.com/>

LEARNING TASKS

- How well children learn words from text
- The effort required to teach children
- Dynamic assessment in a short period of time
- Converging evidence

Fiestas & Peña (2018)



NATIONAL CENTER ON RESPONSE TO INTERVENTION

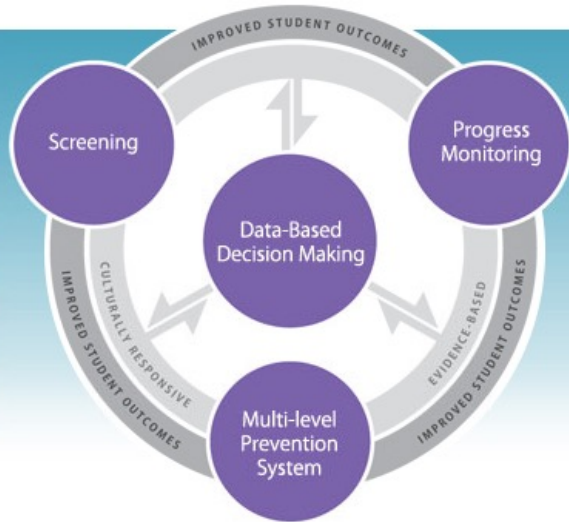
WHAT IS RTI? IMPLEMENTING RTI RESOURCES COMMUNICATION STATE ASSISTANCE ABOUT US

THE ESSENTIAL COMPONENTS OF RTI

Welcome

Welcome to the one place to find all you need to know about Response to Intervention. Use the graphic to navigate through and learn about the the Essential Components of RTI.

[Learn more](#)



THE RTI RESPONDER

Enter your e-mail address to sign up for our monthly online newsletter.

Subscribe

[View our current Newsletter](#)

WHAT'S NEW?

[The ABCs of RTI in Middle School: A Guide for Parents](#)

[Screening Briefs Series](#)

[Progress Monitoring Briefs Series](#)

[RTI in Middle Schools: The Essential Components](#)

[Response to Intervention in Middle Schools: Considerations for Implementation](#)

[Using Fidelity to Enhance Program Implementation Within an RTI](#)

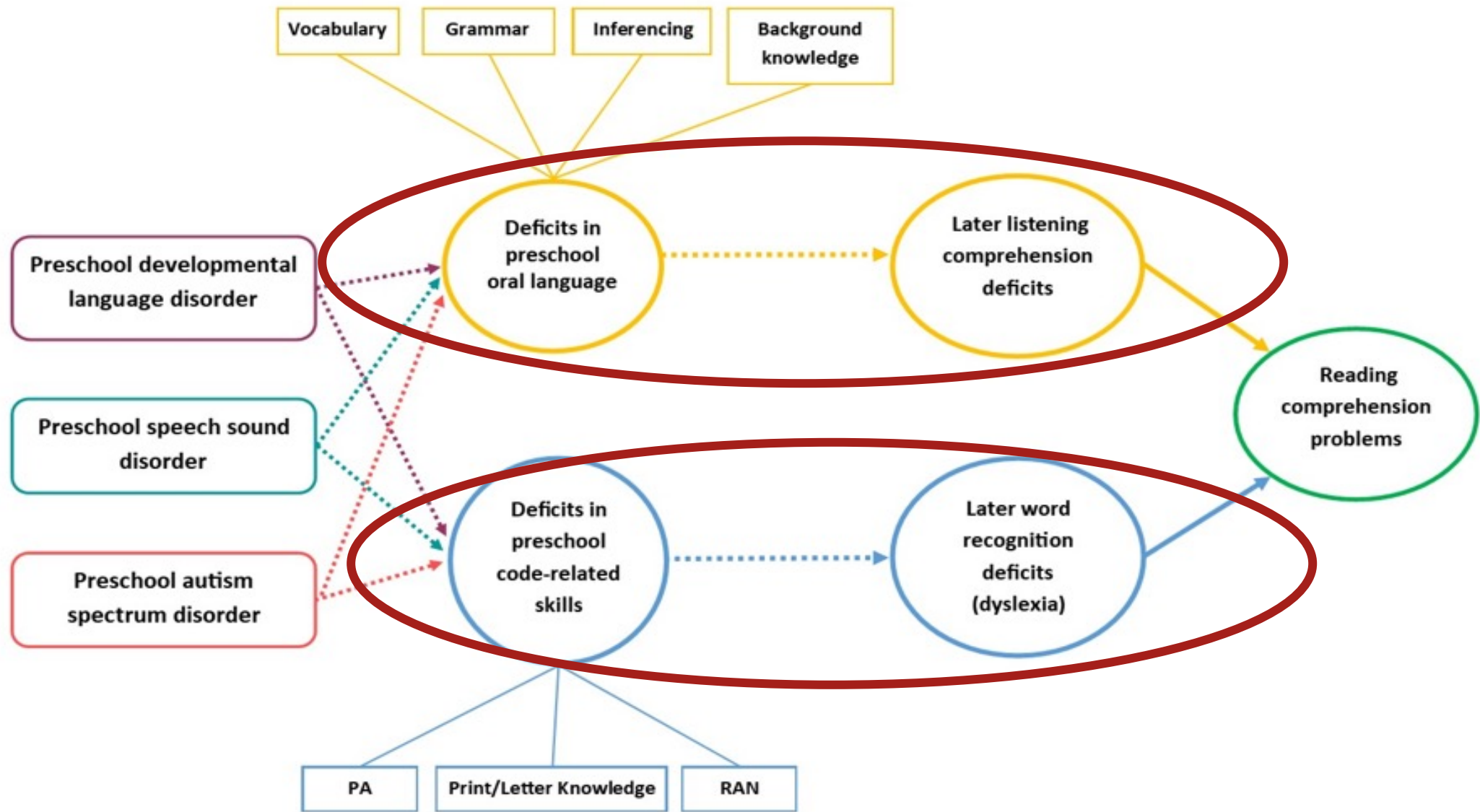
POLL QUESTION

To schedule intervention classes that work best for students, the leadership team at your school should look very closely at::

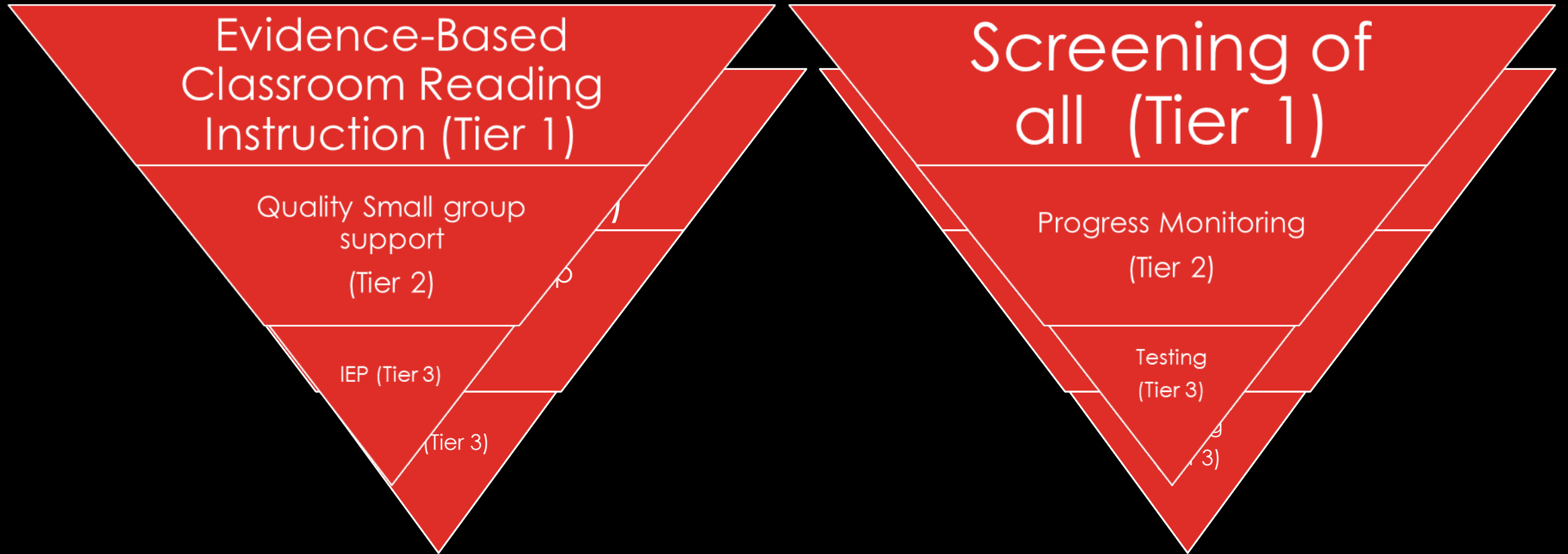
A) Assessment data (e.g., level and

UPCOMING EVENTS

There are no upcoming events at this time.



ATTEND TO BOTH WORD READING & LANGUAGE COMPREHENSION



#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

DYSLEXIA DIAGNOSIS: NOW WHAT?

WORD READING TREATMENT

- Systematic
- Explicit
 - Intensive
 - Focus on letter-sound correspondences and word study of patterns
- Tiers need to connect

- Dyslexia is a lifelong disability
 - Slower reader
 - Spelling problems
 - Difficulty remember phonologically-based information
 - Names
 - New longer words
 - Learning a second language



THE ROLE OF THE SLP IN READING ASSESSMENT AND INTERVENTION

139

- In 2001, ASHA asserted the role of the SLP in the diagnosis and treatment of those with reading disabilities including dyslexia
 - *Roles and Responsibilities of Speech-Language Pathologists With Respect to Reading and Writing in Children and Adolescents* [Position Statement]. Available from www.asha.org/policy.
- Since that time, SLPs have become valuable members of literacy teams that assess and treat persons with dyslexia...and DLD comprehension

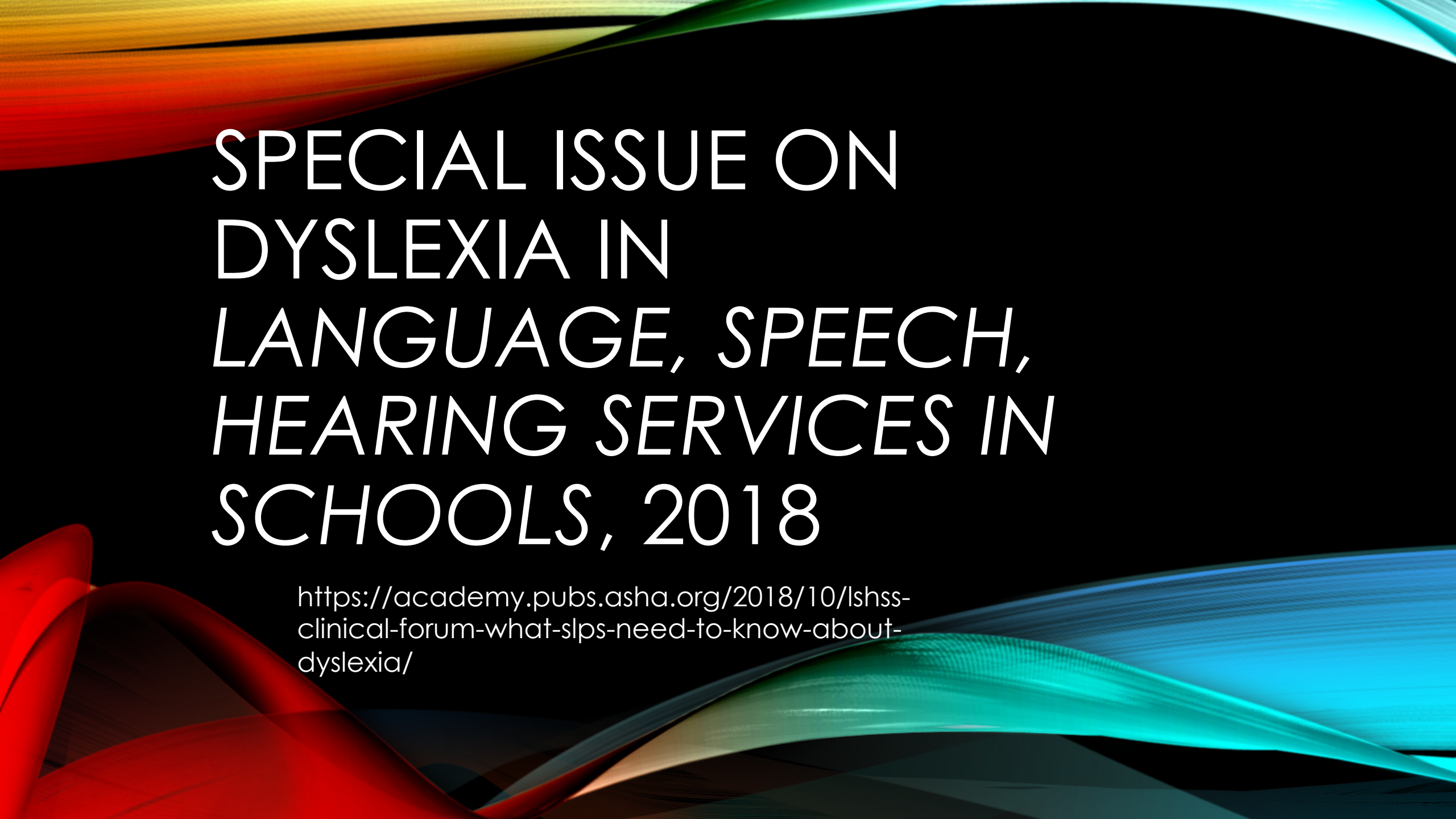
THE ROLE OF THE SLP

- SLPs have traditionally played a part in reading disabilities of individuals in a rehabilitation setting (i.e., TBI, aphasia, etc.)
- Why would we not contribute in the assessment and treatment of children with reading disabilities that are acquired naturally?
 - Language in school is written language
 - To affect change in child, must focus on written language outcomes

But what about large caseloads!

HOW DO WE FIT IT ALL IN?

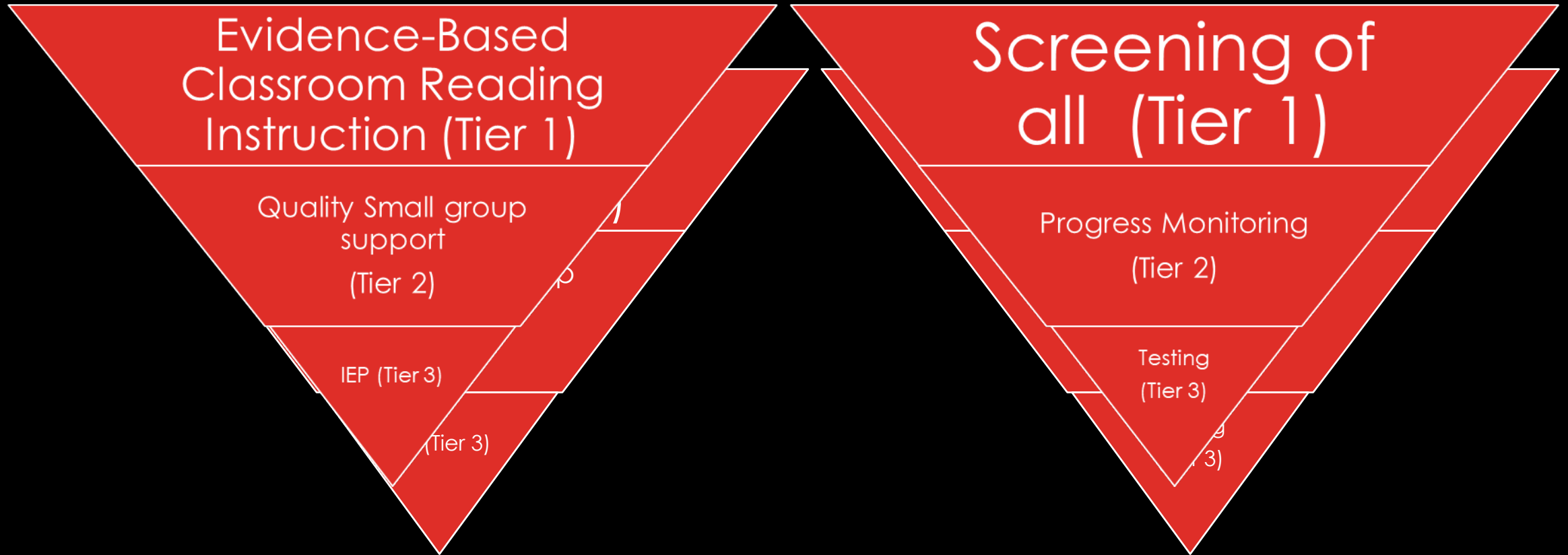
- Collaborate with teachers
 - Join literacy teams
 - Consult on screenings, RTI, and diagnostic evaluations
 - Provide in-service trainings
 - Add just one reading goal for each of your clients
- *What have you done?



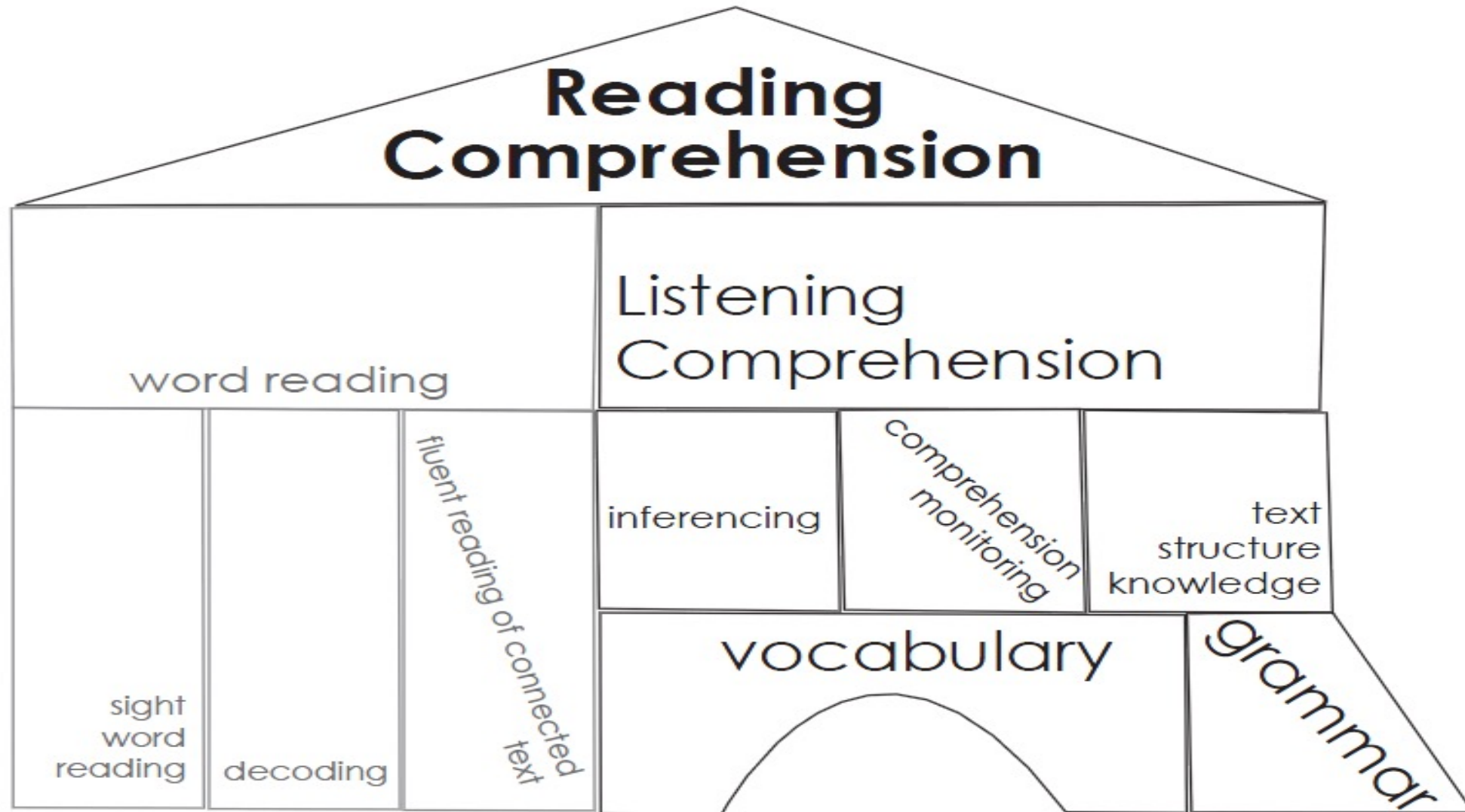
SPECIAL ISSUE ON
DYSLEXIA IN
*LANGUAGE, SPEECH,
HEARING SERVICES IN
SCHOOLS, 2018*

<https://academy.pubs.asha.org/2018/10/lshss-clinical-forum-what-slps-need-to-know-about-dyslexia/>

ATTEND TO BOTH WORD READING & LANGUAGE COMPREHENSION



5 key malleable factors



Increasing Higher Level Language Skills to Improve Reading Comprehension

Tiffany F. Hogan, Mindy Sittner Bridges, Laura M. Justice, and Kale Cain

Reading comprehension involves two primary processes: (a) decoding printed text and (b) understanding language accessed through the process of decoding. In the early years of reading development, children's ability to comprehend text is largely constrained by individual differences in decoding printed text; however, once decoding becomes automatized, reading comprehension is largely dependent upon one's skills in language comprehension (Catts, Hogan, & Adlof, 2005). In recent decades, numerous studies have investigated how children develop decoding skills and how, when these skills do not develop normally, educators can effectively intervene (e.g., Denton & Mathes, 2003; Simmons et al., 2008; Vellutino, Scanlon, Small, & Fanuele, 2006).

Beyond decoding, the substantial role that language skills play in the achievement of skilled reading comprehension has largely been ignored. This is surprising, given that skilled reading comprehension is critical for modern life; success in education, productivity in society, and almost all types of employment require rapid and thorough assimilation of information from text. Further, there are children who develop good decoding skills but fail to develop comparable levels of reading comprehension. A profile of good word reading in the presence of poor comprehension affects approximately 10% of school-age children (Nation, 2005; Yuill & Oakhill, 1991) and demonstrates that skills other than decoding

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1079&context=specedfacpub>

ACCESS TO LESSONS

- Pre-K to Grade 3

<https://larrc.ehe.osu.edu/>

-click read 'curriculum download' button on upper right side

Middle & High School

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

Middle & High School

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



EDUCATOR'S PRACTICE GUIDE

A set of recommendations to address challenges in classrooms and schools

WHAT WORKS CLEARINGHOUSE™

Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade



<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=WWCPGLit21>

HOW TO HELP CHILDREN WITH DLD IN IN THE SCHOOLS (CURRAN & HOGAN, 2021)

- Look for DLD (screening & follow-up testing)
 - Need for Implementation Science
 - Label to qualify for services vs DLD diagnosis
- Talk about DLD
 - Advocacy
 - Focus on acceptance of individual differences (neurodiversity)
- Collaborate with the SLP to increase quality language input in the classroom
- Support peer relationships (neurodiversity)

Supporting a Child with DLD in the Classroom

Home / Educators' Corner, Family Corner, Featured Articles, Latest Articles, Treating DLD / Supporting a Child with DLD in the Classroom

< Previous Next >



Listen to this article



0:00 / 8:03 1X

Children with Developmental Language Disorder (DLD) benefit from individualized intervention. [Read more about individualized intervention for children with DLD here.](#)

Another way to help children with DLD is by providing support right in the classroom, which is where they spend a lot of their time! The classroom is full of language. The teacher gives verbal instructions, classmates engage in discussion, and children often present their work by talking about it. And it's not



Lisa Archibald, Ph.D.

University of Western
Ontario

IN THE CLASSROOM

- Face the child
- Make clear, explicit statements
- Repeat and rephrase key instructions
- Use multimodal supports
- Allow extra time to process language
- Ask child to repeat instructions
- Breakdown larger information into chunks
- Use visually distinct sections
- Use graphics and icons
- Provide key definitions
- Have questions and text on same page

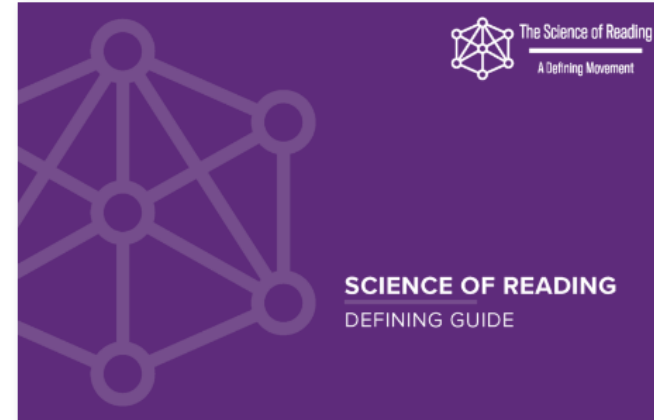
[HTTPS://WWW.THEREADINGLEAGUE.ORG/WHAT-IS-THE-SCIENCE-OF-READING/](https://www.theleague.org/what-is-the-science-of-reading/)

A FIRM DEFINITION

Science of Reading: Defining Guide

The science of reading has culminated in a preponderance of evidence to inform how proficient reading and writing develop; why some have difficulty; and how we can most effectively assess and teach and, therefore, improve student outcomes through prevention of and intervention for reading difficulties.

Although the scientific evidence base for effective reading has existed for decades, the term “the science of reading” has gained traction in the last few years, potentially leading to misunderstandings. The *Science of Reading: Defining Guide* provides a firm definition of what the science of reading is, what it is not, and how all stakeholders can understand its potential to transform reading instruction.



[DOWNLOAD THE FREE EBOOK](#)

IMPLEMENTATION SCIENCE

Implementation Science IS for All: The Power of Partnerships



What is implementation science?

April 27-28, 2023 | Virtual Conference

Implementation science involves practitioners and researchers working together in partnerships to create equitable outcomes. Join us for the second annual Implementation Science IS For All, 2-day virtual conference designed to improve client outcomes and make a positive impact on the practice to research to practice gap in Communication Sciences and Disorders (CSD). Engaging speakers will share how they developed, maintained, and sustained partnerships in implementation science projects.

REGISTER NOW

<https://www.mghihp.edu/healthcare-leadership/cpd/implementation-science-all-power-partnerships>



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

Email: thogan@mghihp.edu

Twitter: [@tiffanyphogan](https://twitter.com/tiffanyphogan)

Web: <http://www.mghihp.edu/sail-lab/>

Facebook: [sailliteracylab](https://www.facebook.com/sailliteracylab)

Instagram: [@seehearspeakpodcast](https://www.instagram.com/seehearspeakpodcast)

Podcast: seehearspeakpodcast.com

DLD information: dldandme.org

