

## Language comprehension and developmental language disorder (DLD): The other side of the simple view of reading

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## ACKNOWLEDGEMENTS

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## DISCLOSURES: TIFFANY HOGAN

- American Institute for Research Tools Chart, Paid Consultant
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- (unpaid) Host, SeeHearSpeak Podcast
- (unpaid) Co-founder of DLDandme.org



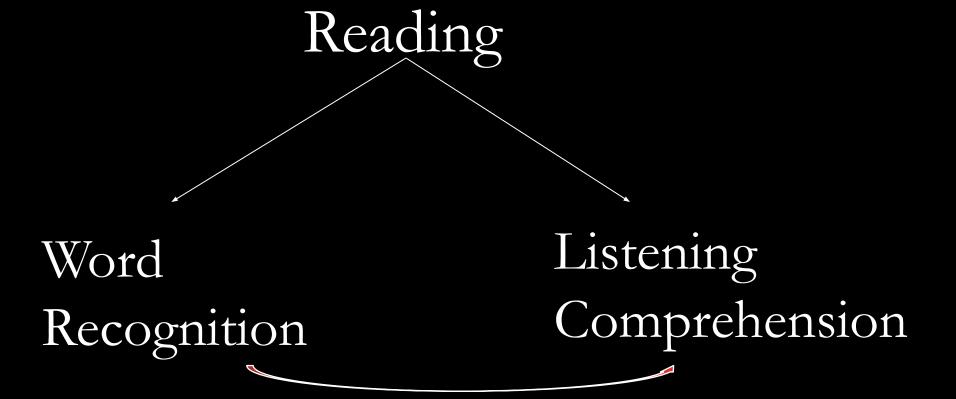
## WHO IS READING?

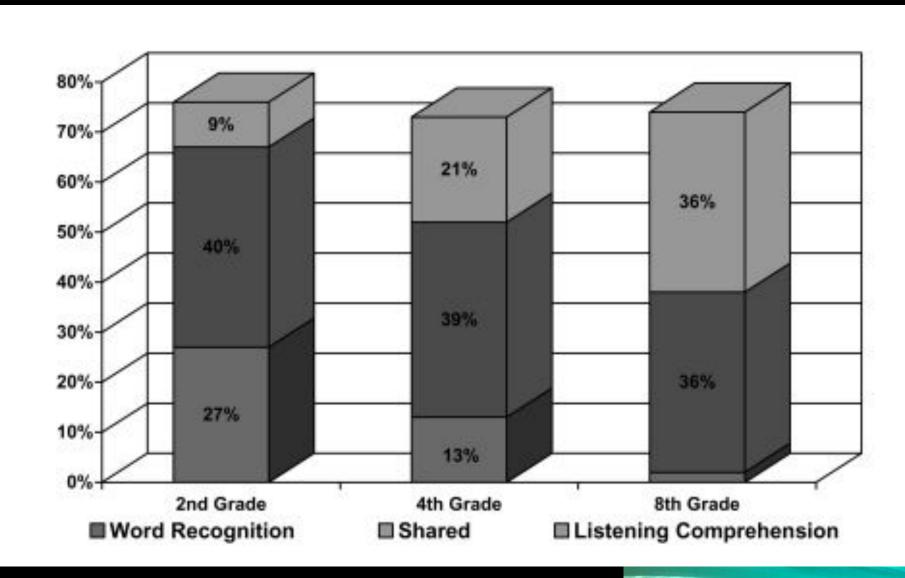
(CATTS, HOGAN, & FEY, 2003; CATTS, HOGAN, & ADLOF, 2005; HOOVER & GOUGH, 1990)

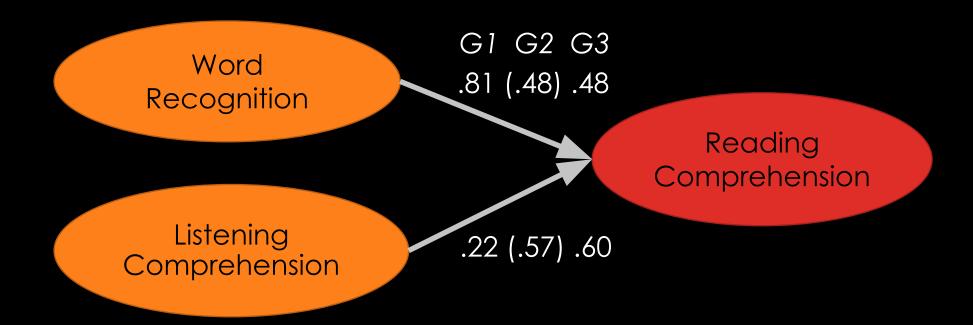
Reading

Reading

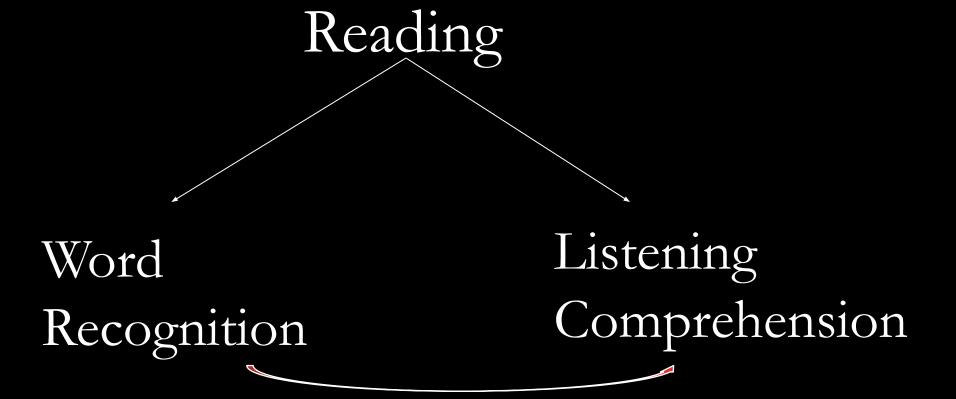
Word Recognition

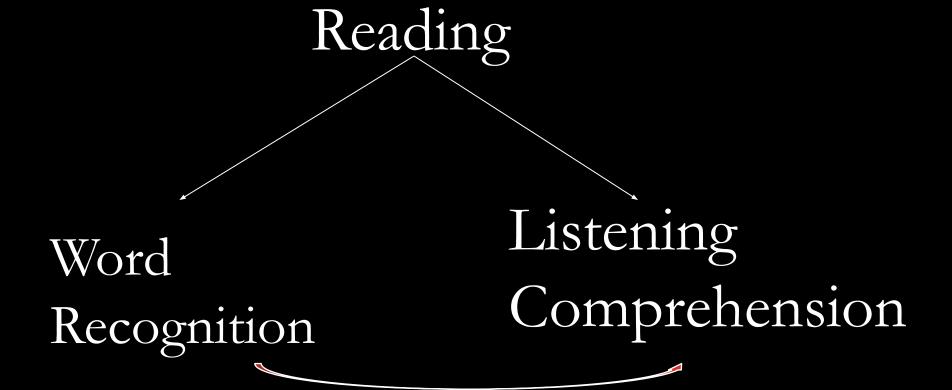


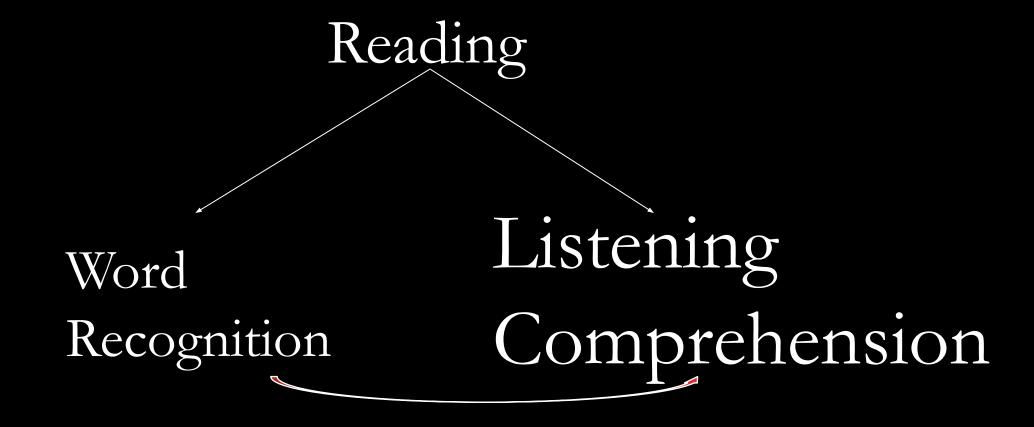




LARRC. (2015). Learning to read: Should we keep things simple? Reading Research Quarterly, 50, 151-169.







## WORD READING VS LISTENING COMPREHENSION

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

Laip

Adjex

Yeng

Zirdn't

gaked

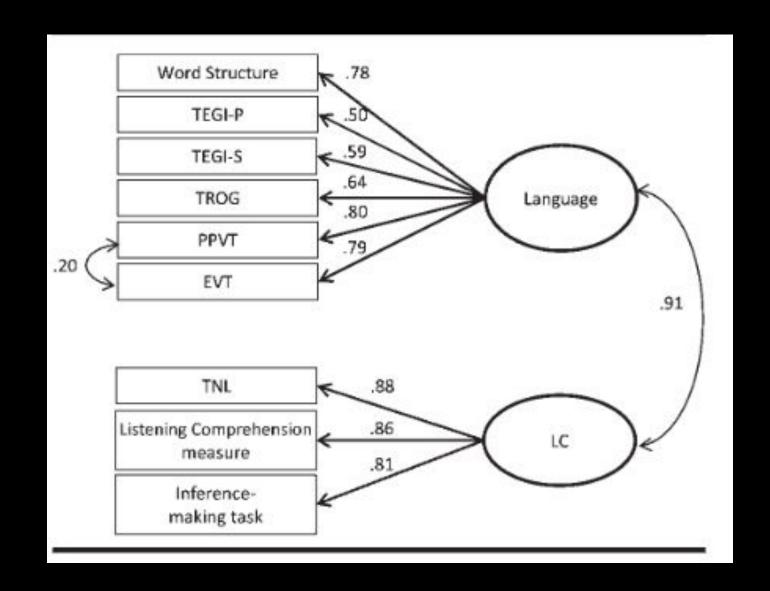
WMRT-R Word Attack Subtest

## LISTENING COMPREHENSION IS THE ABILITY TO UNDERSTAND SPOKEN LANGUAGE

## LISTENING OR LANGUAGE COMPREHENSION?

 Used interchangeably because they are the same on construct (LARRC, 2017)

But measured differently



# AN EXAMPLE

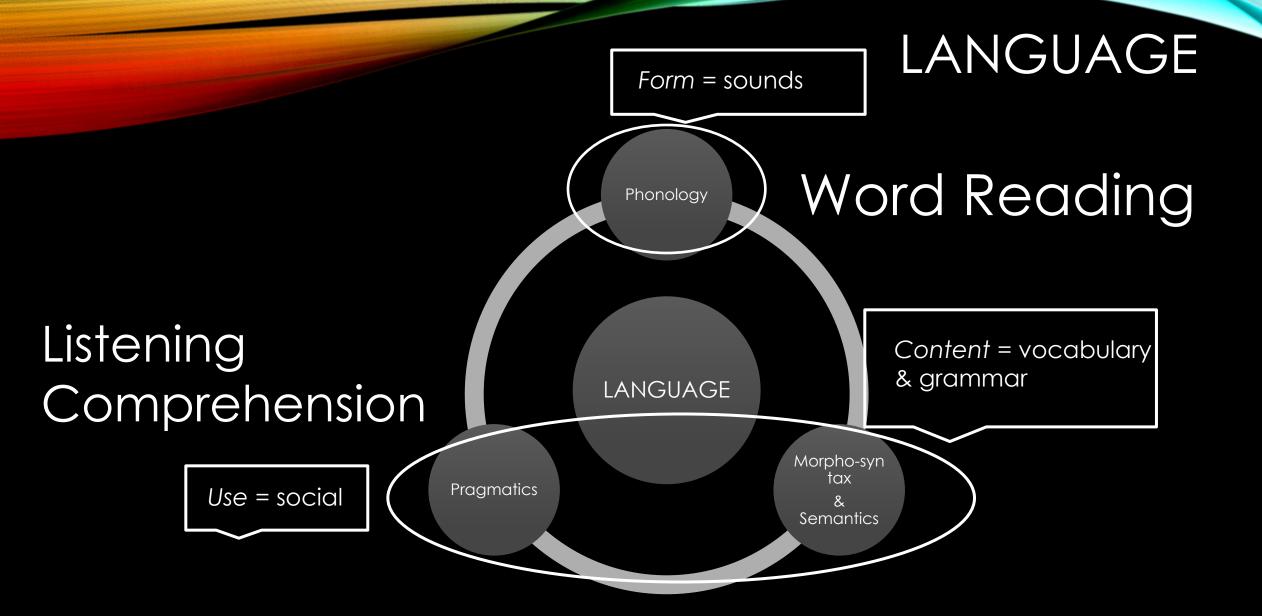
Sally first let loose a team of gophers. The plan backfired when a dog chased them away. She then threw a party but the guests failed to bring their motorcycles. Furthermore, her stereo system was not loud enough. Obscene phone calls gave her some hope until the number was changed. It was the installation 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?

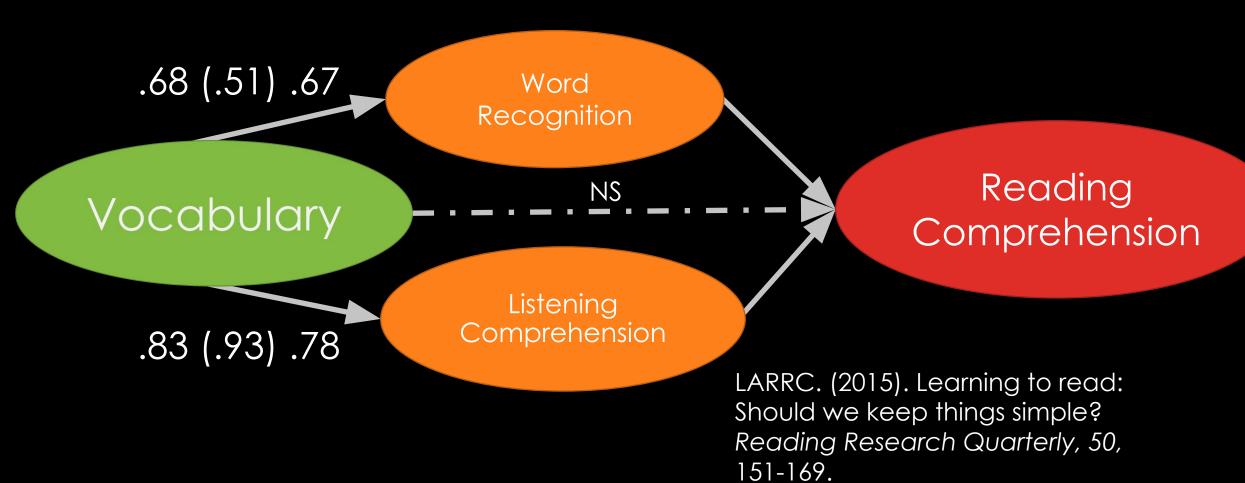
## SIMPLE VIEW CONCLUSIONS

•Both components need to be considered when thinking of "reading" (Hogan et al., 2014)

## WHAT'S LANGUAGE GOT TO DO WITH IT?



## LANGUAGE IS VERY IMPORTANT!



### THE MANY STRANDS THAT ARE WOVEN INTO SKILLED READING LANGUAGE COMPREHENSION BACKGROUND KNOWLEDGE (facts, concepts, etc.) SKILLED READING: VOCABULARY (breadth, precision, links, etc.) Fluent execution and coordination of word LANGUAGE STRUCTURES recognition and text (syntax, semantics, etc.) comprehension. VERBAL REASONING (inference, metaphor, etc.) LITERACY KNOWLEDGE (print concepts, genres, etc.) WORD RECOGNITION PHONOLOGICAL AWARENESS increasingly (syllables, phonemes, etc.) automatic DECODING (alphabetic principle, spelling-sound correspondences) SIGHT RECOGNITION (of familiar words)

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

## 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

		1101 4 11009 1111011	
		Poor	Good
Listening Comprehension	Good		
Liste Compre	Poor		

Word Recognition
Poor Good

Poor Listening Comprehension Good Dyslexia Poor

## FACTS ABOUT DYSLEXIA

- A person is born with dyslexia, persists across the lifetime
- Brain difference
- Cuts across SES and other disorders
- Key deficits in phonological (sound) and orthographic (letter) processing
- Many new(ish) laws require early screening in schools (Snowling, 2019)

## RESOURCES

Video:

https://dyslexicinsight.com/videos-explaining-dyslexia/

Dyslexia Foundation Webinars

https://dyslexiafoundation.org/

International Dyslexia Association (IDA)

https://dyslexiaida.org/

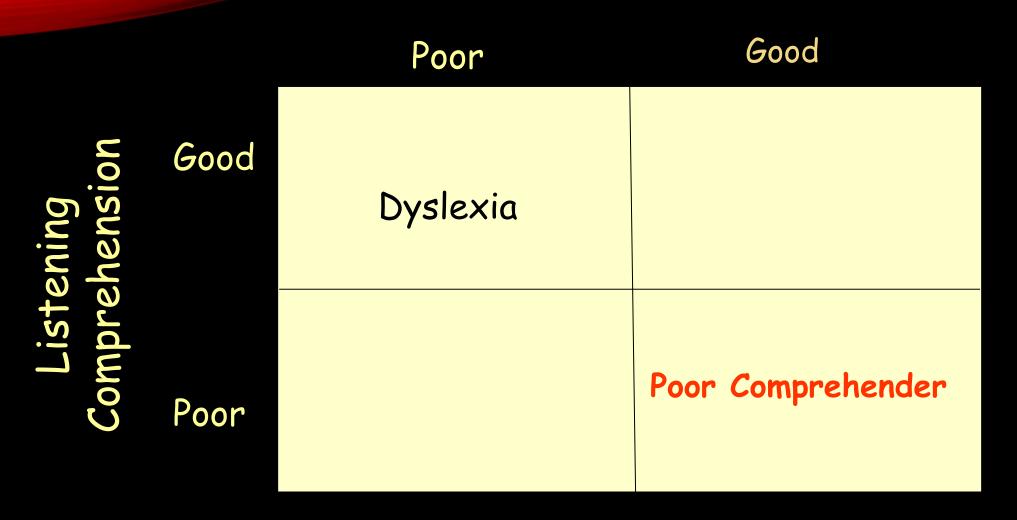
The Reading League

https://www.thereadingleague.org/

What SLPs need to know about dyslexia

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

## Word Recognition



## DLD, POOR COMPREHENDERS, LERD

### DLD

- Receptive and expressive language difficulty
- Diagnosed by SLP using comprehensive assessment
- Most have poor comprehension of text
- Age of diagnosis can be quite young

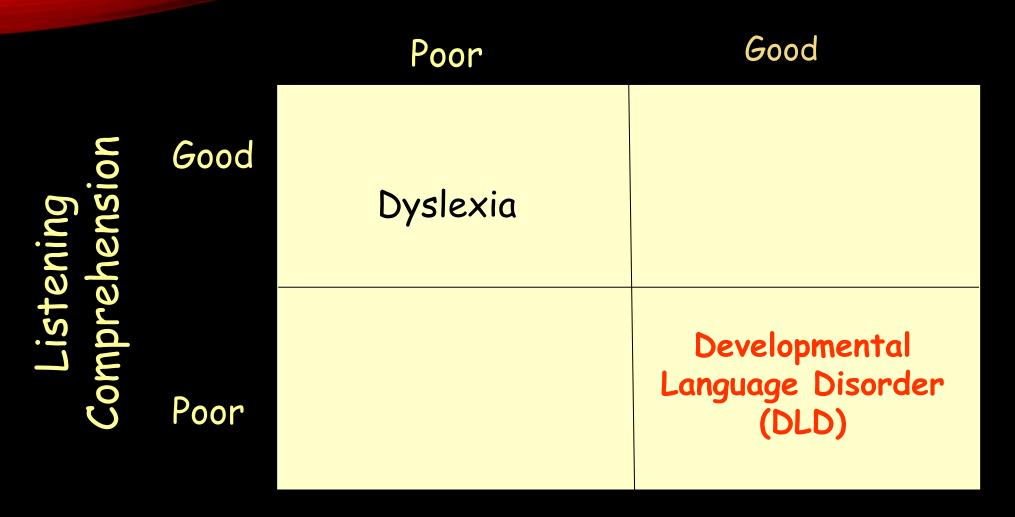
### Poor Comprehenders

- Poor reading (or listening) comprehension with good word reading
- Have poor expressive and receptive language skills, but not always at severity for DLD
- Diagnosed by researcher or special educator
- Age of diagnosis is 2<sup>nd</sup> grade and beyond

### Late Emerging Reading Disability

- No early reading problems
- Majority had language problems early but not detected on reading assessment

## Word Recognition



## 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
- Brain difference
- Cuts across SES and other disorders
- •Hallmarks are difficulty learning new words and remembering them (vocabulary) and grammar learning & use
- Awareness is low...but that is changing (McGregor, 2020)



#### What is Developmental Language Disorder?



DLD is a brain difference that makes talking and listening difficult.



DLD affects about 2 children out of every classroom.



DLD poses a risk for social-emotional behavioral concerns



DLD is associated with risk for dyslexia and other learning disabilities.



DLD is five times more prevalent than autism.



DLD can last a lifetime, but help is available.

### DLD FACTS

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

Translated in 20 languages!!!

https://radld.org/about/dl
d/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 talking 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
  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/)

#### 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/)

#### 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.

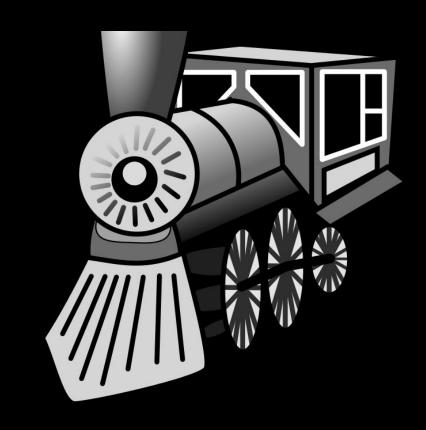
TRUTH: Genetic influences on brain development cause DLD.

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.

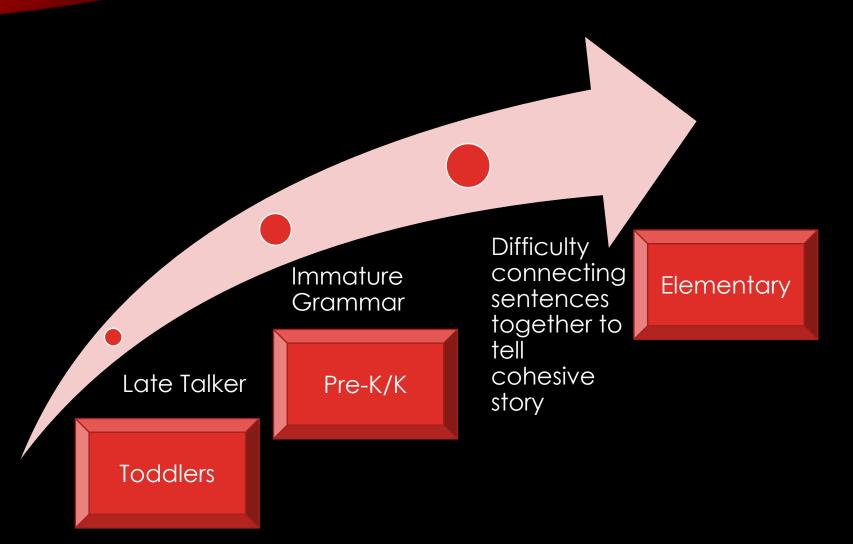
# HOW DOES LANGUAGE DEVELOPMENT PROGRESS IN CHILDREN WITH DLD?

https://cldp.ku.edu/sites/cldp.ku.edu/files/docs/ OpenAccessE-BookOctober2018.pdf

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



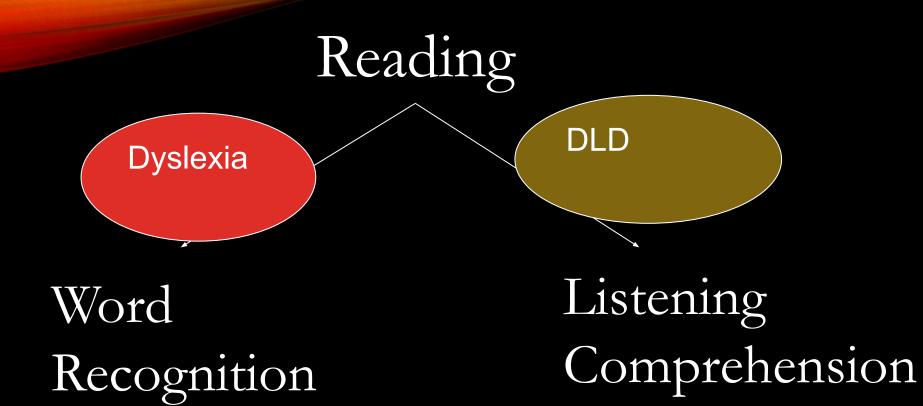
### WHY? DLD IS DEVELOPMENTAL



### GROWING WITH DLD



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



# Word Recognition Poor Good

Listening Comprehension

Good

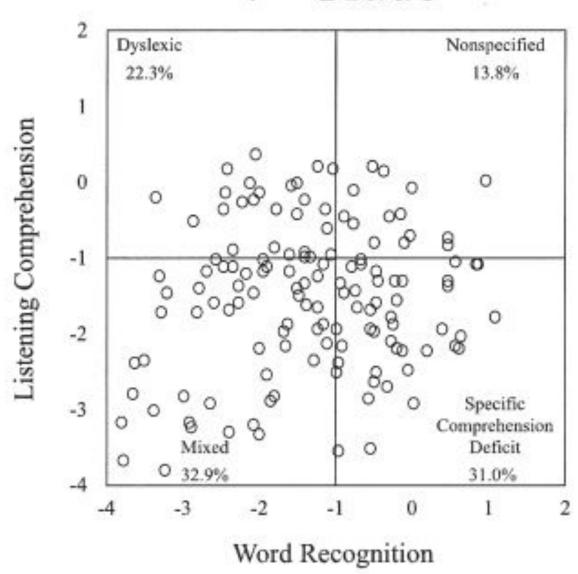
Dyslexia

Dyslexia +DLD

Developmental Language Disorder (DLD)

Poor

### 4th Grade



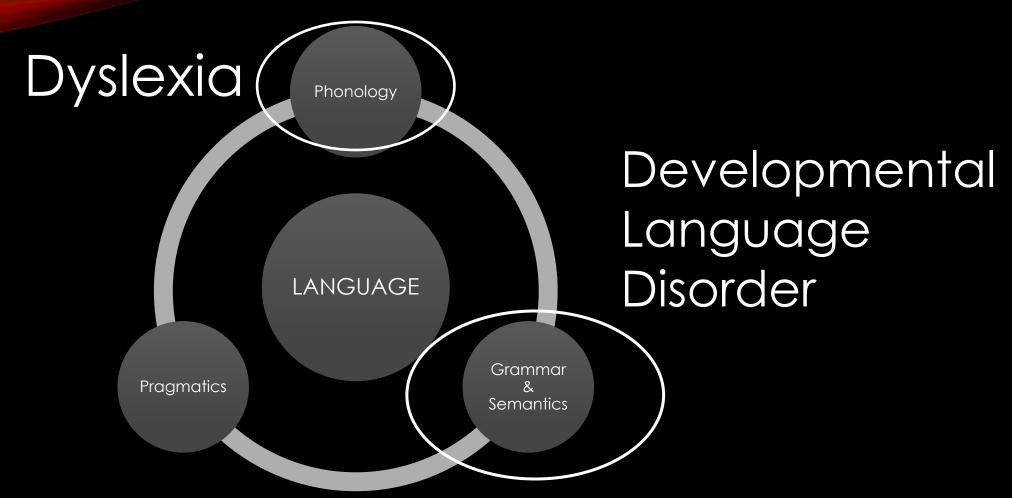
Catts, Hogan, & Adlof, 2005



### Question

Is dyslexia a language disorder?

### LANGUAGE



LSHSS

#### **Tutorial**

#### Understanding Dyslexia in the Context of Developmental Language Disorders

Suzanne M. Adlofa and Tiffany P. Hoganb

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.

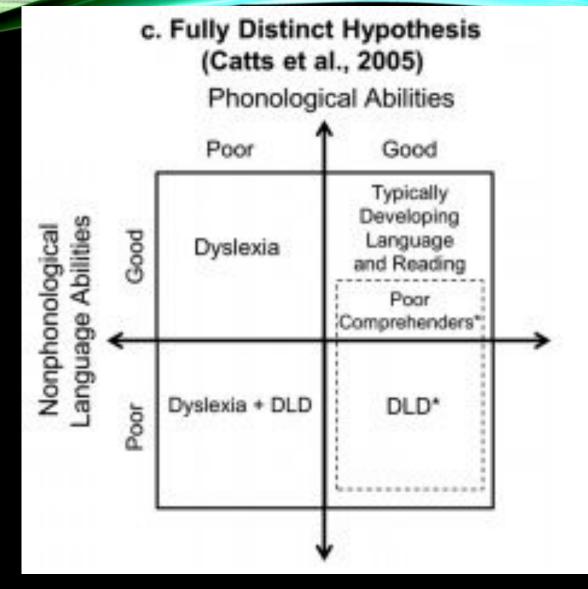
Results: We present clinically relevant information on the history of dyslexia as a language-based disorder, the operational definitions used to diagnose dyslexia in research and practice, the relation between dyslexia and DLD, and the language abilities of children with dyslexia.

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.

A lthough 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-

https://www.ncbi.nlm.nih.gov/pubme d/30458538



#### 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.

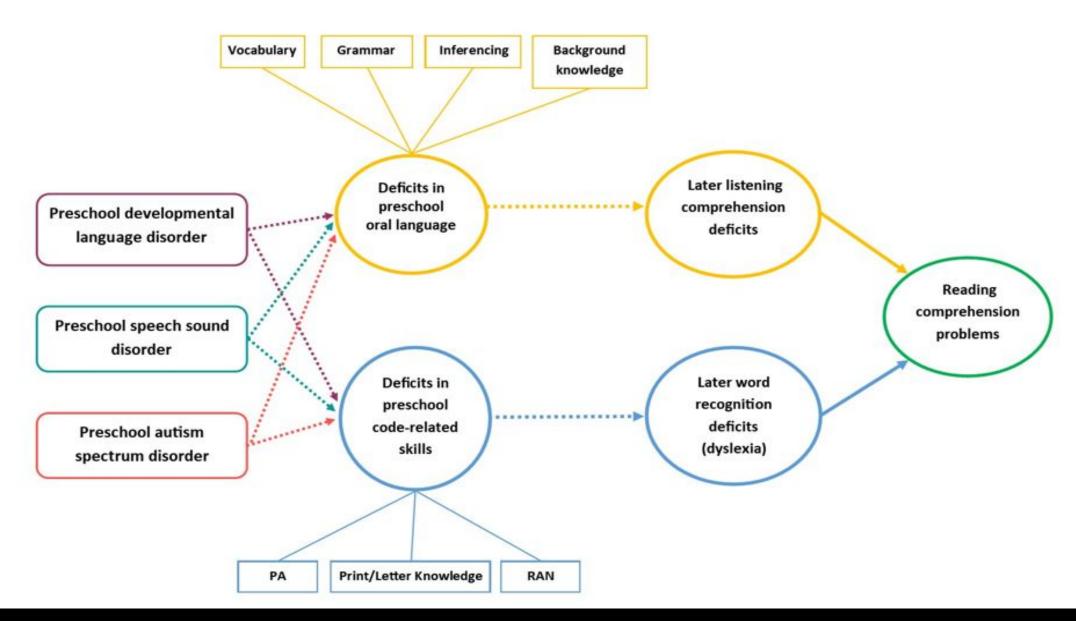
(Adlof & Hogan, 2018)

DYSLEXIA VERSUS DEVELOPMENTAL LANGUAGE DISORDER

# SIMPLE VIEW ACROSS DEVELOPMENT

#### Model D WS LOM USP TNL .12 RS RCM GM WPC. .70 .85 TEGS .25 TEGT .85 .75 .67 TROG-2 PK Oral G3 Listening Language Comprehension **PPVT** G3 Reading Comprehension **EVT** WCR PK Code-G3 Word .71 Recognition related .66 skills WCE INK-BK √.67 .41 .73 INF-INT .63 ORF PDE SWE 0.42 KVT 0.39 0.35 RAN-E RAN-T PAT 0.42

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.



Komesidou & Hogan, 2020, IDA perspectives

### ON THE SHOULDERS OF GIANTS

### CHILD DEVELOPMENT



#### Very Early Language Deficits in Dyslexic Children

Hollis S. Scarborough

First published: December 1990 | https://doi.org/10.1111/j.1467-8624.1990.tb03562.x | Citations: 120

This research was supported in part by grants from the National Institute of Child Health and Human Development and the March of Dimes Birth Defects Foundation. Maria Hager, Janet Wyckoff, and Wanda Dobrich assisted with data collection and analysis, and Martin Braine, Virginia Mann, Adele Abrahamsen, Bruce Pennington, Guy Van Orden, and two anonymous reviewers provided helpful comments on the paper. Thanks are also extended to the families who participated in this study for their patience and goodwill.



# IMPLICATIONS OF LONGITUDINAL DATA ON SIMPLE VIEW

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

Labels used to qualify for services

A STORY

DD
Developmental
Delay

SLI
Speech &
Language
Impairment

SLD
Specific
Learning
Disability

Where does DLD fit?

Diagnosis

Dyslexia and/or Developmental Language Disorder

### 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: <a href="https://dldandme.org/terminology/">https://dldandme.org/terminology/</a>

#### Resea

#### Develop

The term language because c

#### Specific

One of the DLD with among re literature

#### Primary

While this different v confused

#### Languag

This term While mo

#### Develop

DLD is cur early in de

#### Clinical Terminology Educational

In clinical Disorders disorders

#### Langua

This refer

#### Specific

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#### Insura

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: <a href="https://pubs.asha.org/doi/full/10.1044/2019">https://pubs.asha.org/doi/full/10.1044/2019</a> PERSP-19-00083

Karla McGregor 2020: <a href="https://pubs.asha.org/doi/full/10.1044/2020">https://pubs.asha.org/doi/full/10.1044/2020</a> LSHSS-20-00003

LSHSS

**Clinical Focus** 

ow We Fail Children With Developmenta Language Disorder

Karla K. McGregora,b

PERSPECTIVES

Tutorial

Developmental Language Disorder: Applications for Advocacy, Research, and Clinical Service

Karla K. McGregor, a Lisa Goffman, Amanda Owen Van Horne, Tiffany P. Hogan, and Lizbeth H. Finestack

### DLDANDME.ORG



WHAT IS DLD?

WHO WE ARE

RESOURCES ~

2

### Welcome to DLD and Me!

Spreading the word about Developmental Language Disorder





### Developmental Language Disorder (DLD) Awareness Day

radld.org

2020: Oct 16

2021: Oct 15

2022: Oct 14



Niagara Falls, Ontario, Canada



Matagarup Bridge and Sky Ribbon, Perth, Australia



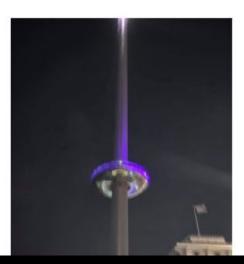
Woodmen Life Tower, Omaha, Nebraska University of Limerick, Republic of Ireland



Zakim Bridge, Boston, Massachussetts



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



# See • Hear • Speak

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

# ADVOCACY DAYING OFF...





SCIENCE OF READING
DEFINING GUIDE

Department highlight the tion under the Individuals with clarifying that nothing in federal an individualized education of Education requesting a meeting

Letter to U.S
Departmen
Education L
Meeting on DLD

DIAGNOSTIC

AMERICAN PSYC

MAI

DS

MENTA

with ASHA to discuss the concerns we shared in the letter.

### MHEN IS DLD IDENTIFIEDS

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*. <a href="http://pamelasnow.blogspot.com/2018/06/behaviour-as-form-of-communication.html">http://pamelasnow.blogspot.com/2018/06/behaviour-as-form-of-communication.html</a>
<a href="https://www.ase.harvard.edu/news/19/12/harvard-edcast-bringing-hidden-language-disorder-light">https://www.ase.harvard.edu/news/19/12/harvard-edcast-bringing-hidden-language-disorder-light</a>

"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."



### 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

Listening Comprehension

Word Recognition

### 'READING' CHANGES OVER TIME

(CATTS, HOGAN, & ADLOF, 2005)

Reading Comprehension

Word Recognition

Listening Comprehension

### WRMT-R - PASSAGE COMPREHENSION

Grade 1 and below:

The boy has a cap on his \_\_\_\_\_

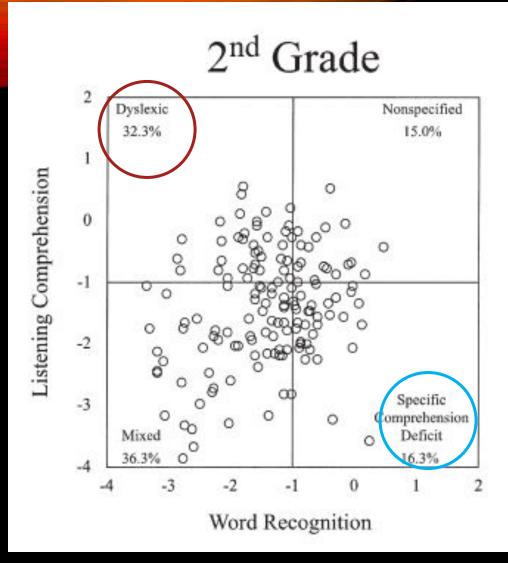
(with a picture of a boy walking with a cap on his head)

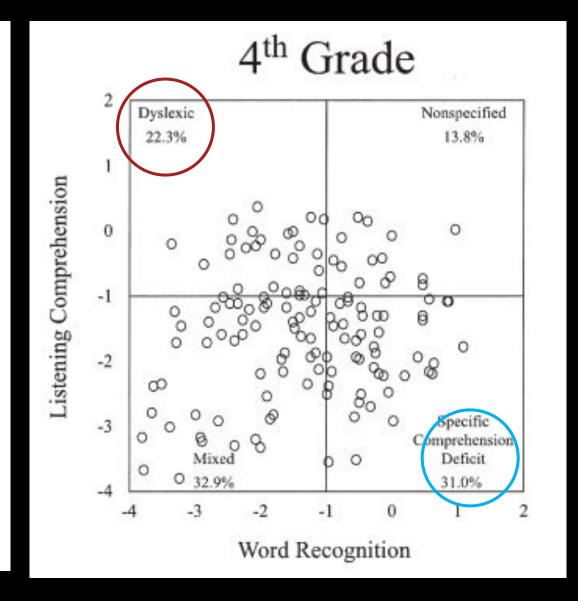
#### WRMT- R - PASSAGE COMPREHENSION

#### Grade 4 starting point:

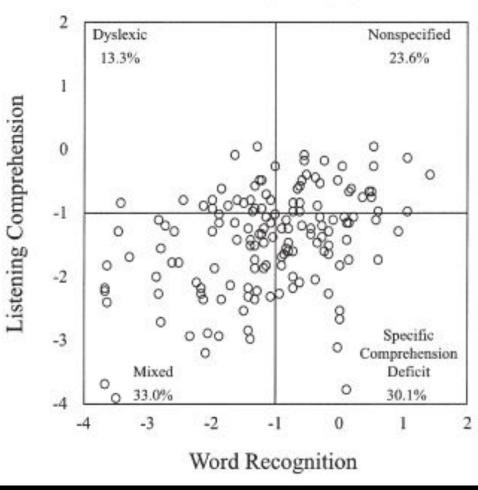
The can of paint is nearly full. Susan will use it to \_\_\_\_ the walls (paint and cover are correct)

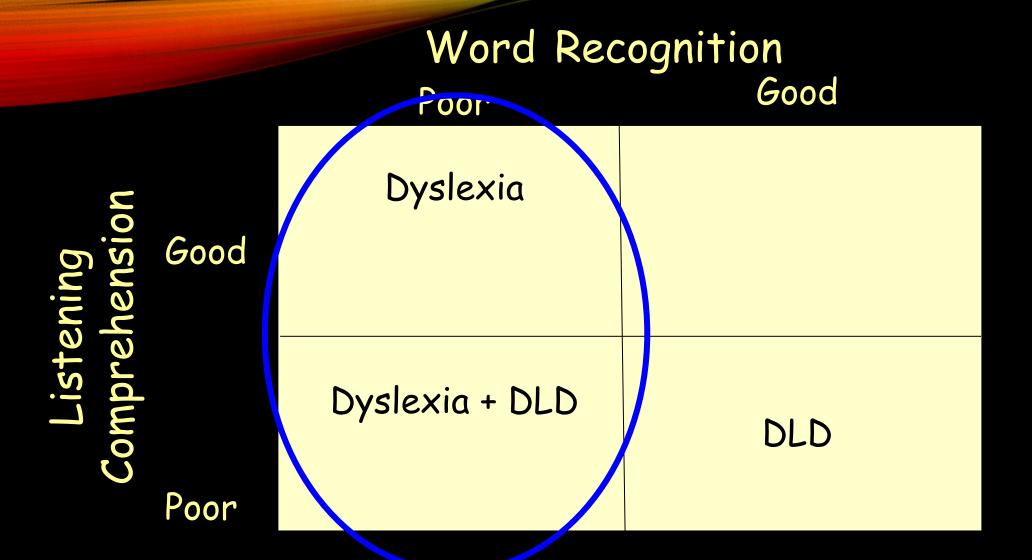
As soon as Tony tried to say anything, he would feel the other children looking at him. His face would get red, and the wouldn't come out. (words, truth, sentence, question, answer are correct)











#### Word Recognition Good Poor

Listening Comprehension Good

Poor

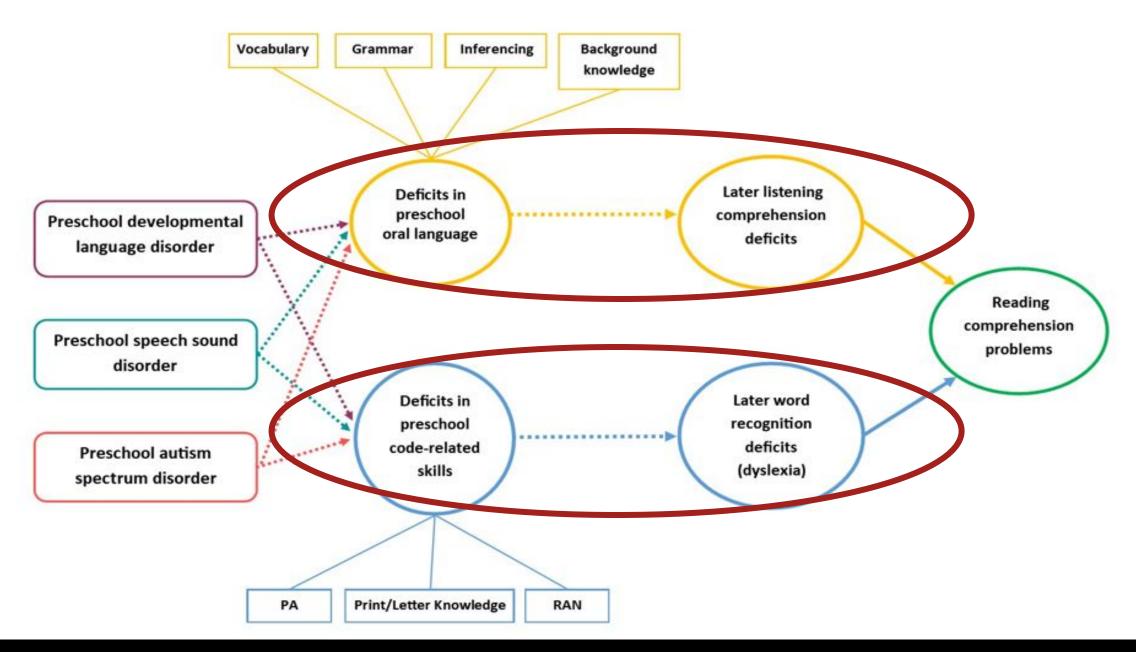
Dyslexia

Dyslexia + DLD

DLD

# MOST LATE EMERGING POOR READERS ARE ACTUALLY LATE IDENTIFIED

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



Komesidou & Hogan, 2020, IDA perspectives

#### Policy Insights from the Behavioral and Brain Sciences



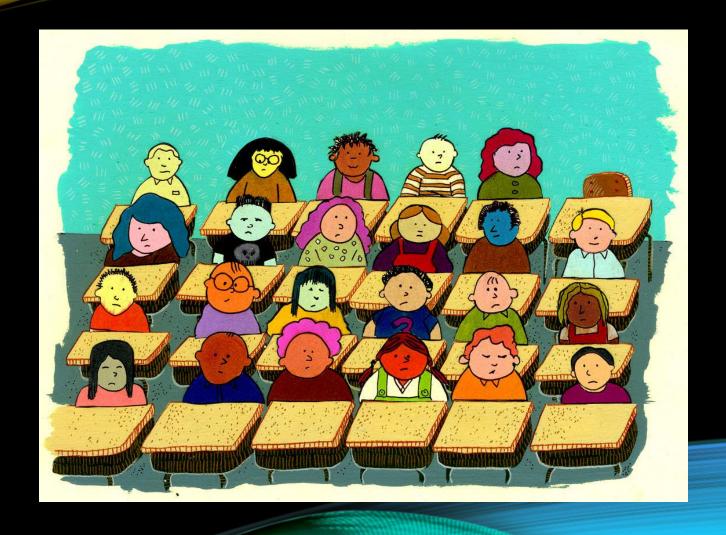
Journal Home Browse Journal > Journal Info V Stay Connected ~ **Submit Paper** If We Don't Look, We Won't See: Measuring Language Development to Close ^ Inform Literacy Instruction Suzanne M. Adlof, Tiffany P. Hogan Inload PDF First Published June 17, 2019 Research Article Check for updates https://doi.org/10.1177/2372732219839075 Article information ~ Open EPUB Abstract Article 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 nses/by-nc/4.0/ E....pdf ^

https://journals.sagepub.com/doi/full/10.1177/2372732219839075

### 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

2	Name of test	Reference	Group or individual	Time for administration	Cost	Age range	Sensitivity and specificity information from web	Dialect information from web	
3	Language Scale Screener for Langauge and Literacy	https://products. brookespublishi ng.com/SLS-Scr eener-for-Langu age-Literacy-Dis orders-P1046.a spx	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	
4	Language Evalution of Fundamentals - 5 Screening Test	https://www.pea rsonassessment s.com/store/usa ssessments/en/ Store/Professio nal-Assessment s/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		"Scoring rules are sensitive to many dialects use in the U.S. and diverse cultures."	

#### **Windows of Opportunity**

PreK-1st Grade

2<sup>nd</sup>-3<sup>rd</sup> Grade

Prevention

**Universal Screening** 

High Quality Tier 1 Instruction

**Progress Monitoring** 

MTSS Instruction to Match Needs Diagnosis & Treatment

Assessment & Evaluation

Special Education

Intensive Intervention

Fewer Negative Consequences

Less Early Reading Failure

More Cost-Effective

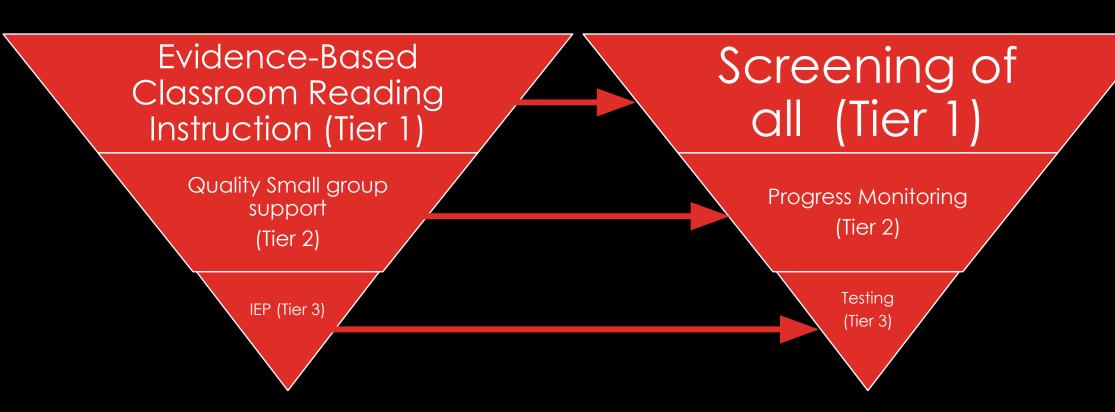
More Negative Consequences

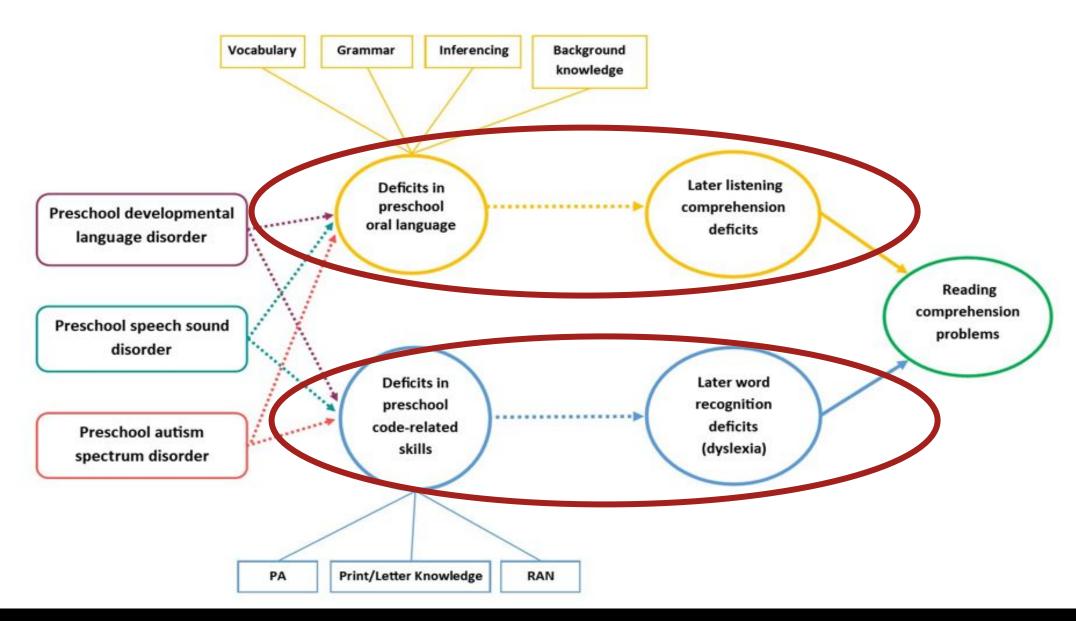
Delayed Reading Success

**Less Cost-Effective** 

Dyslexia: An ounce of prevention is worth a pound of diagnosis (Catts & Hogan, 2021) <a href="https://psyarxiv.co">https://psyarxiv.co</a>
m/nygje

### SCHOOL-BASED PROCESS TO IDENTIFY THOSE WHO NEED SUPPORT





## ATTEND TO BOTH WORD READING & LANGUAGE COMPREHENSION

Evidence-Based
Classroom Reading
Instruction (Tier 1)

Quality Small group support
(Tier 2)

IEP (Tier 3)

/ier 31

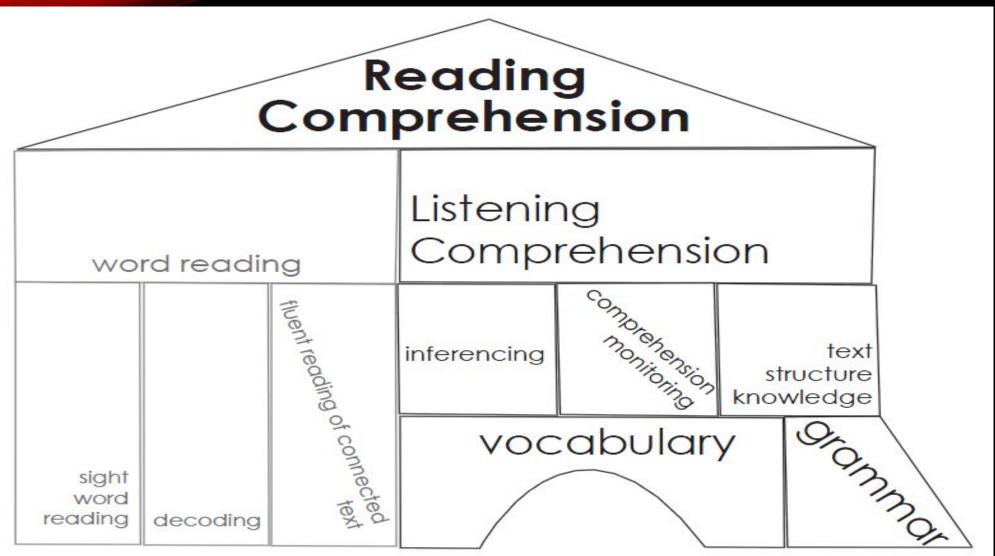
Screening of all (Tier 1)

Progress Monitoring
(Tier 2)

Testing (Tier 3)

(1)

Hogan et al., 2011



#### ACCESS TO LESSONS

• Pre-K to Grade 3

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

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

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Middle & High School

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

Middle & High School

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



# WHERE DOES KNOWLEDGE FIT?



#### #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
- 5. Work on implementation with school partners

PRACTICE TO RESEARCH TO PRACTICE

GAP:

It takes
approximately 17
years for only 14% of
efficacy research to
make it into practice.

(Morris et al., 2011)

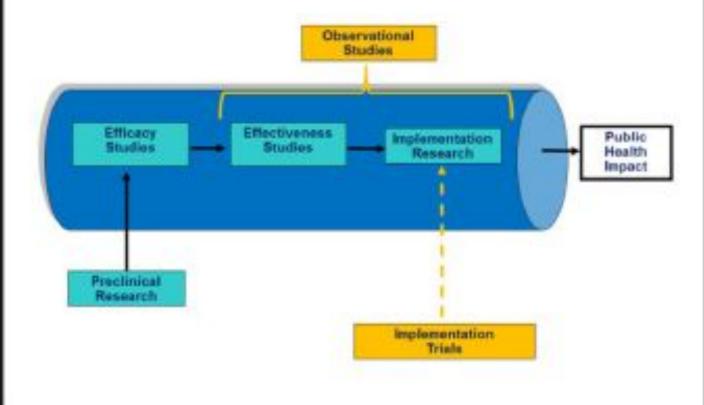


# NATIONAL INSTITUTES OF HEALTH (2009)

- Two aspects of translational science:
  - •Implementation
  - Dissemination

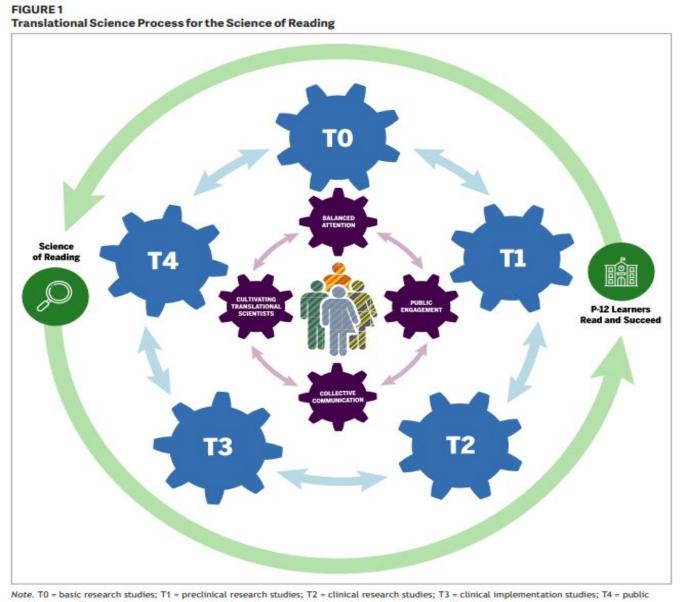
### LINEAR PIPELINE

#### Types of implementation research



"Thus, in overly simplistic terms, the clinical researcher establishes the efficacy and then effectiveness of an innovation, and then hands it off to the implementation scientist to test ways of getting people to use it. This process as stated is overly simplistic because it suggests a unidimensional flow of tasks (like our pipeline in <a href="Fig. 1">Fig. 1</a>). In reality <a href="the process is much more iterative as implementation experience may suggest changes in the clinical innovation to increase its external validity">to increase its external validity</a> (while also taking steps to ensure fidelity to its core components, supporting internal validity)."

(page 4; Bauer & Kirschner, 2020)



health studies. The color figure can be viewed in the online version of this article at http://ila.onlinelibrary.wiley.com.

Solari et al., (2020). Translational science: A roadmap for the science of reading. Reading Research Quarterly

QUERI Implementation Road map (va.gov)



#### PARTNERSHIP WITH MA 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 (Hogan & Wolter, Ricketts, & Petscher)
- Determine the effectiveness of small-group interventions for students with language difficulties (Hogan & Piasta, Bridges, & Fleming)
- Support regular and special education









#### Lessons Learned

My most valuable IS lessons have been learned while working with school partners

A ship is safe in harbor, but that's not what ships are for.

William G.T. Shedd

#### 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

Rouzana Komesidou , Melissa J. Feller, Julie A. Wolter, Jessie Ricketts, Mary G. Rasner, Coille A. Putman, Tiffany P. Hogan

First published: 23 January 2022 | https://doi.org/10.1111/1467-9817.12381

#### IMPLEMENTATION SCIENCE



Research Institute for Implementation Science in Education



Implementation Science IS for All: A CSD Practice-Research Exchange

April 28 - 29, 2022 10:00 AM - 5:00 PM (EDT) Virtual Conference

https://info.mghihp.edu/isforall



Season 1, Episode 1

The Story Behind 'Sold a Story'





#### THANK YOU & GOOD LUCK!

#### CHANGE THE WORLD

ONE CHILD AT A TIME...

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Facebook: sailliteracylab

Instagram: @seehearspeakpodcast

Podcast: seehearspeakpodcast.com

DLD information: dldandme.org





# Language comprehension and developmental language disorder (DLD): The other side of the simple view of reading

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