READING ASSESSMENT AND INSTRUCTION WITHIN AN MTSS FRAMEWORK

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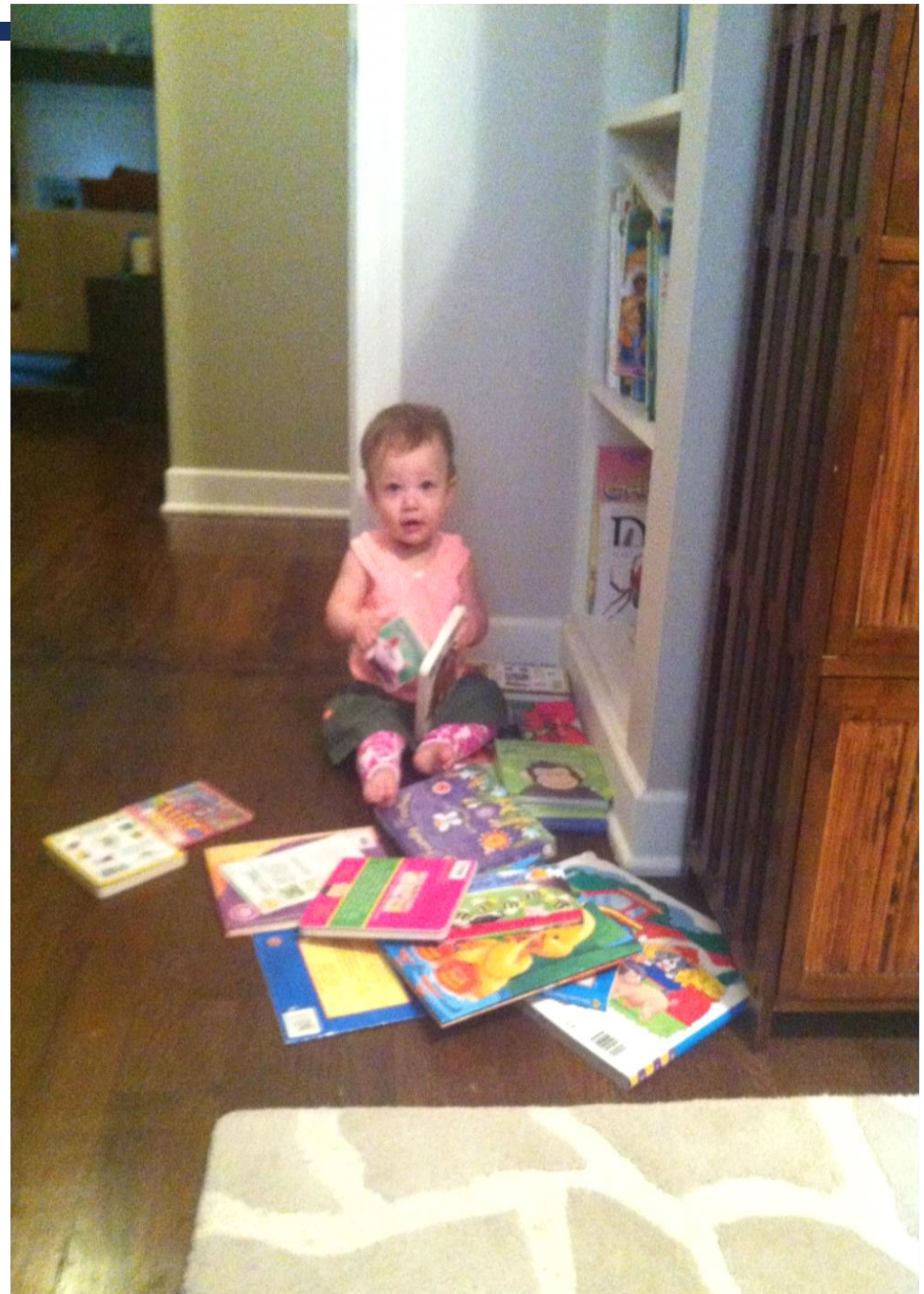
Columbia, Missouri

FINANCIAL DISCLOSURES

- University of Kansas Medical Center
- National Institutes of Health
- US Dept of Education
- National Center for Intensive Interventions

MY RESEARCH INTERESTS

- Clinical SLP for 8 years
  - Public schools, Birth-Three home intervention, inpatient and outpatient pediatrics, inpatient adult rehabilitation
- Always interested in the connection between language and literacy
  - From adults with acquired disorders to toddlers just learning to speak
- Why research?
  - Too many questions that no one could answer
  - Research-to-practice a particular interest of mine

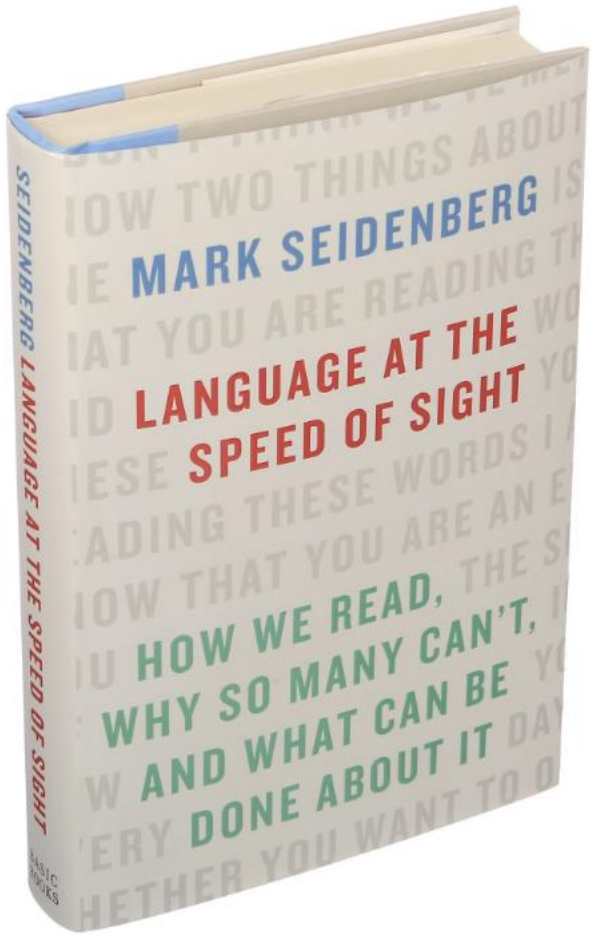


THE PROBLEM

- Poor reading comprehension among US children and adolescents is an ongoing concern
- Relatively little change in reading comprehension scores in past decades (e.g., National Assessment of Educational Progress, 2017)
  - Poor reading achievement associated with deficits in students' educational progress, employment opportunities, socioeconomic status, and health outcomes (US Department of Health and Human Services, 2011)

THE PARADOX

- ”We know the basic mechanisms that support skilled reading, how reading skill is acquired, and the main causes of reading impairments.”
- “We know which behaviors of three- and four-year-olds predict later reading ability.”
- “We know what is universal about reading……and what is not….”
  - From *Language at the Speech of Light,* pg. 4


MARK SEIDENBERG
LANGUAGE AT THE SPEED OF SIGHT
HOW WE READ, WHY SO MANY CAN'T, AND WHAT CAN BE DONE ABOUT IT
SEIDENBERG LANGUAGE AT THE SPEED OF SIGHT
BASIC BOOKS

WHY ARE LITERACY LEVELS IN THE US SO LOW IF WE KNOW SO MUCH?

- There is a disconnect between what we know- the science of reading- and what is being done- the educational practice
- My goal- to talk about what we know and how we can incorporate this into educational practice

RESPONSE TO INTERVENTION VS. MULTI-TIER SYSTEM OF SUPPORTS

https://rti4success.org/video/mtss-rti-special-education%E2%80%A6oh-my-gaining-understanding-mtss-and-rti-drs-lynn-fuchs-and-joe

”Both refer to a multi-tier prevention system…”

“Both rely predominantly on three-tier models that incorporate assessment and intertwine assessment with instruction and intervention that is evidence-based for the purpose of decreasing school failure.”

“…more variation within practice associated with each term than differences between the two terms…”

Carta (2019)- “….MTSS moves beyond RTI in that it focuses on creating a continuum of systemwide strategies and structures that aim to address barriers in student learning in both academic and behavior areas.” p. 4

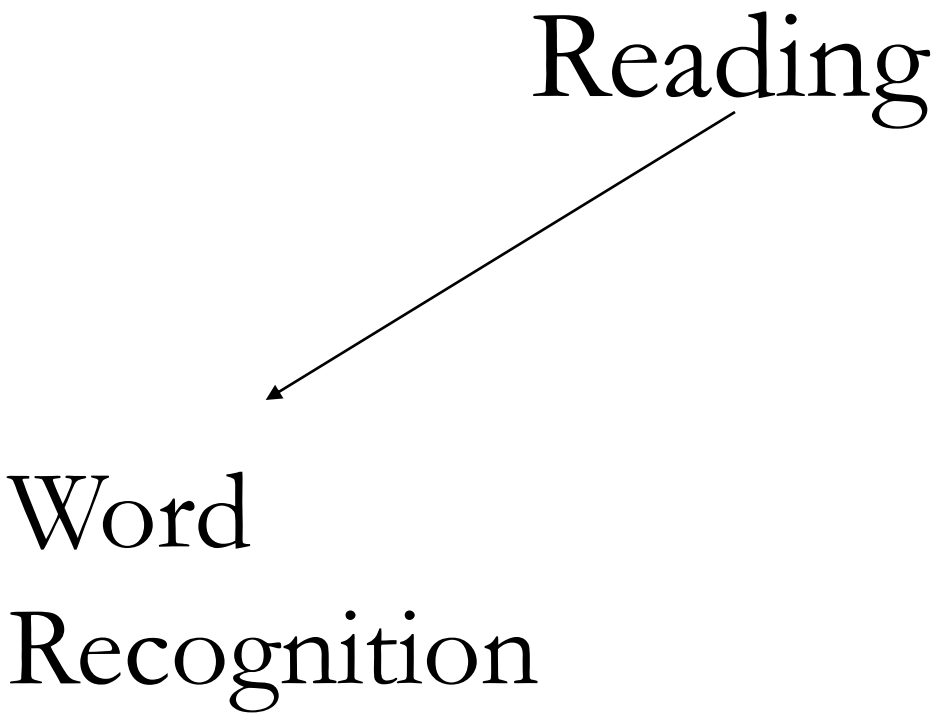
- In order to implement MTSS successfully in a school, everyone needs to be familiar with the science related to reading
- **A few** of the the things lack of knowledge will affect:
  - Poor Tier I instruction
  - Poor choice of screening and progress monitoring measures
  - Poor choice of intervention
  - How to appropriately group for intervention

THE SIMPLE VIEW OF READING

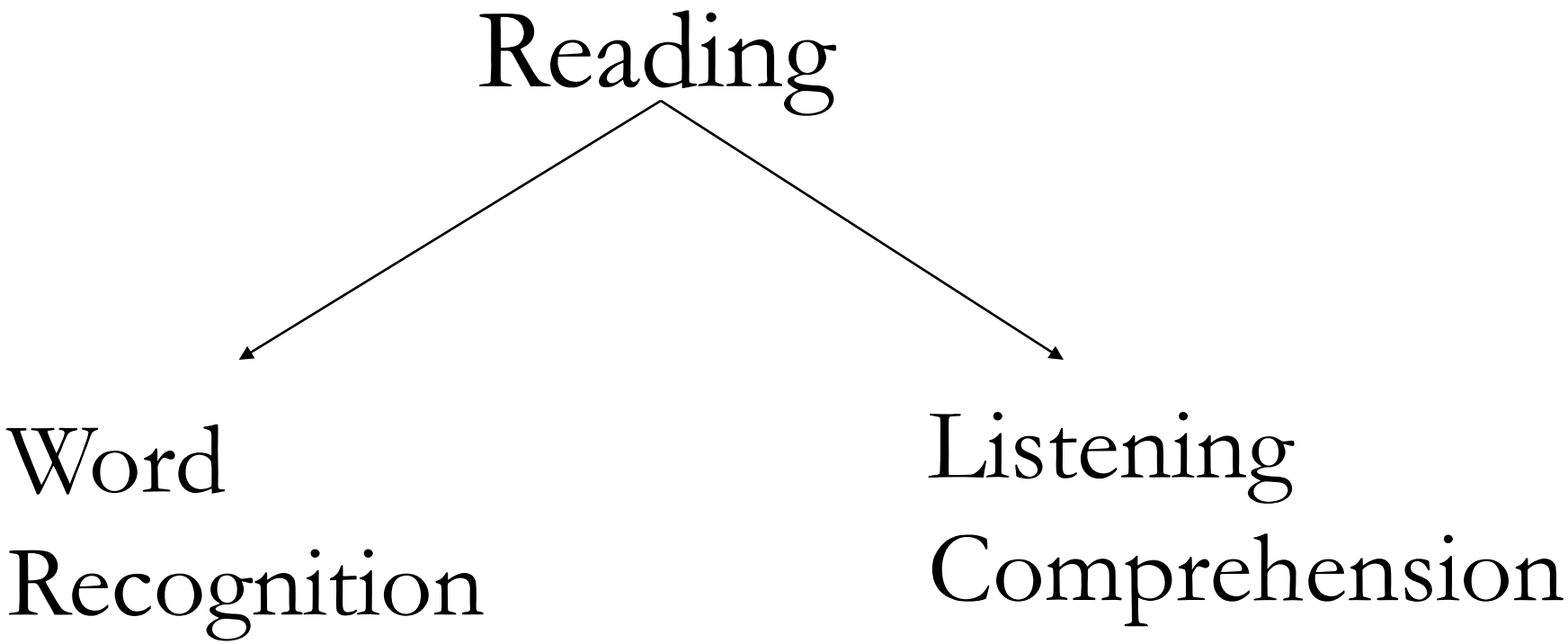
(CATTS, HOGAN, & FEY, 2003; CATTS, HOGAN, & ADLOF, 2005; HOOVER & GOUGH, 1990)

Reading

THE SIMPLE VIEW OF READING

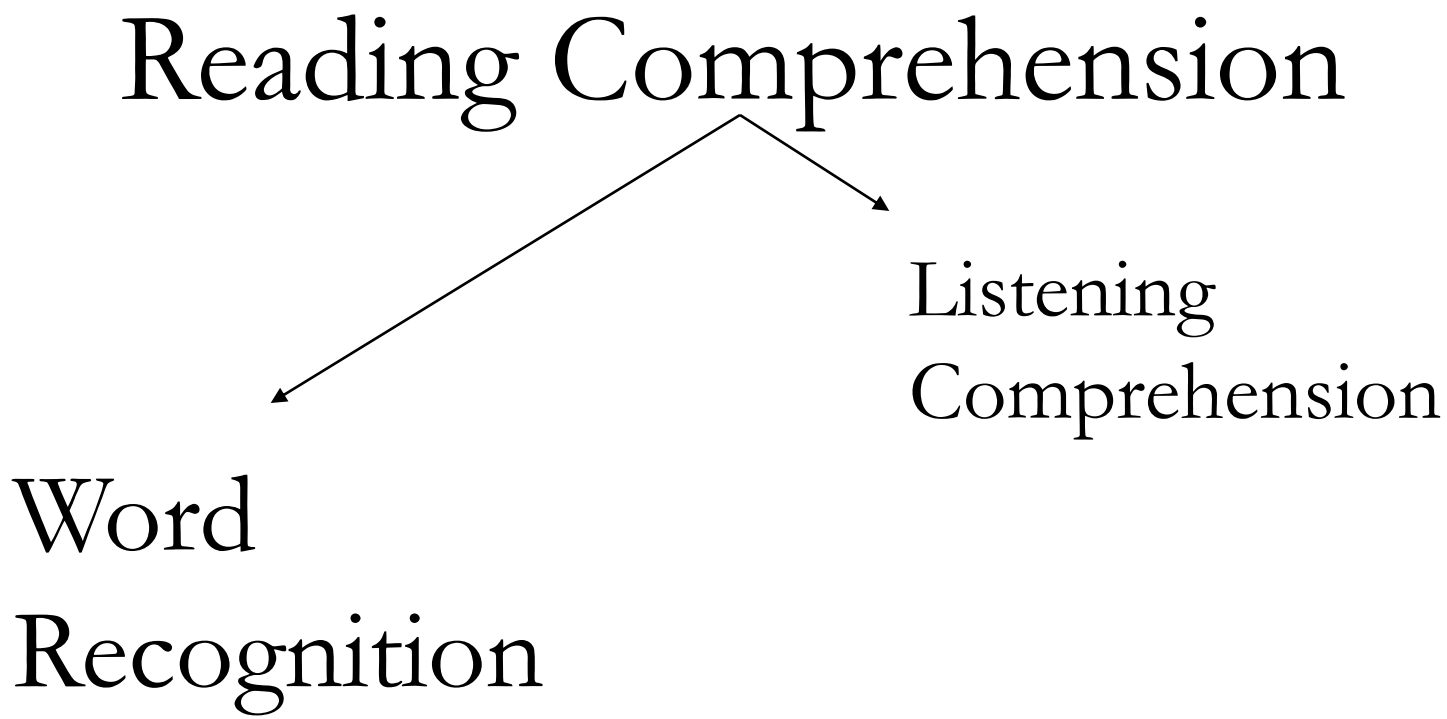


THE SIMPLE VIEW OF READING



‘READING’ CHANGES OVER TIME

(CATTS, HOGAN, & ADLOF, 2005)



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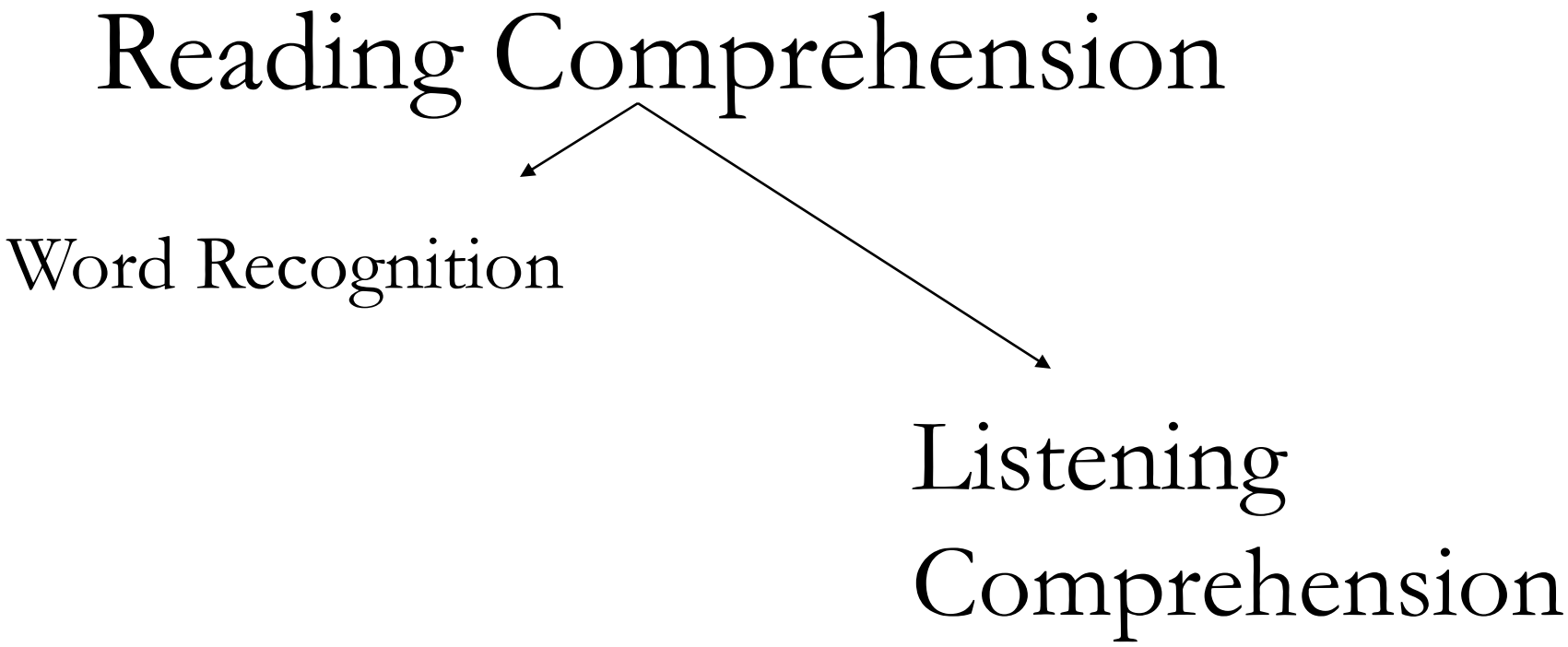
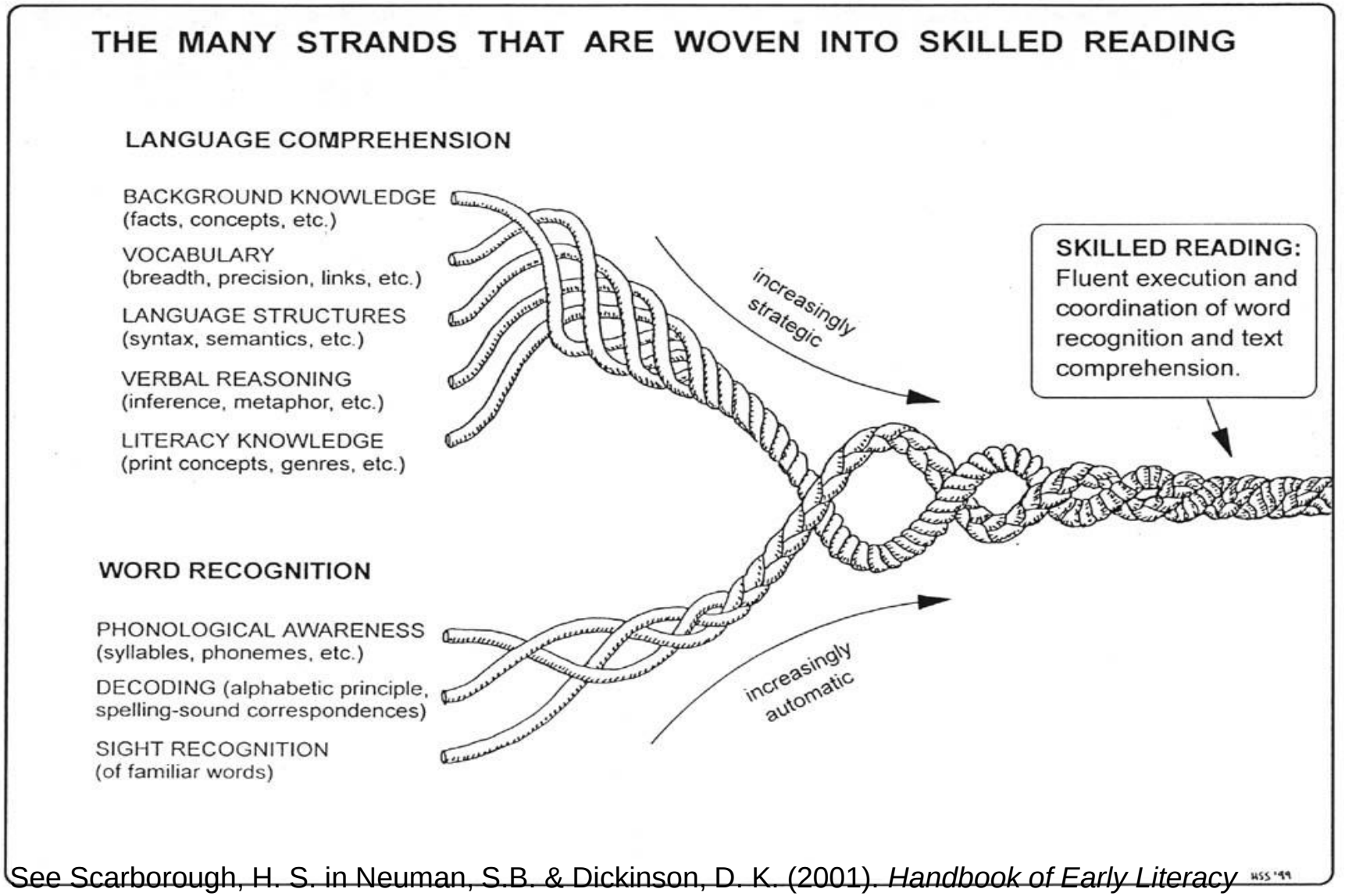
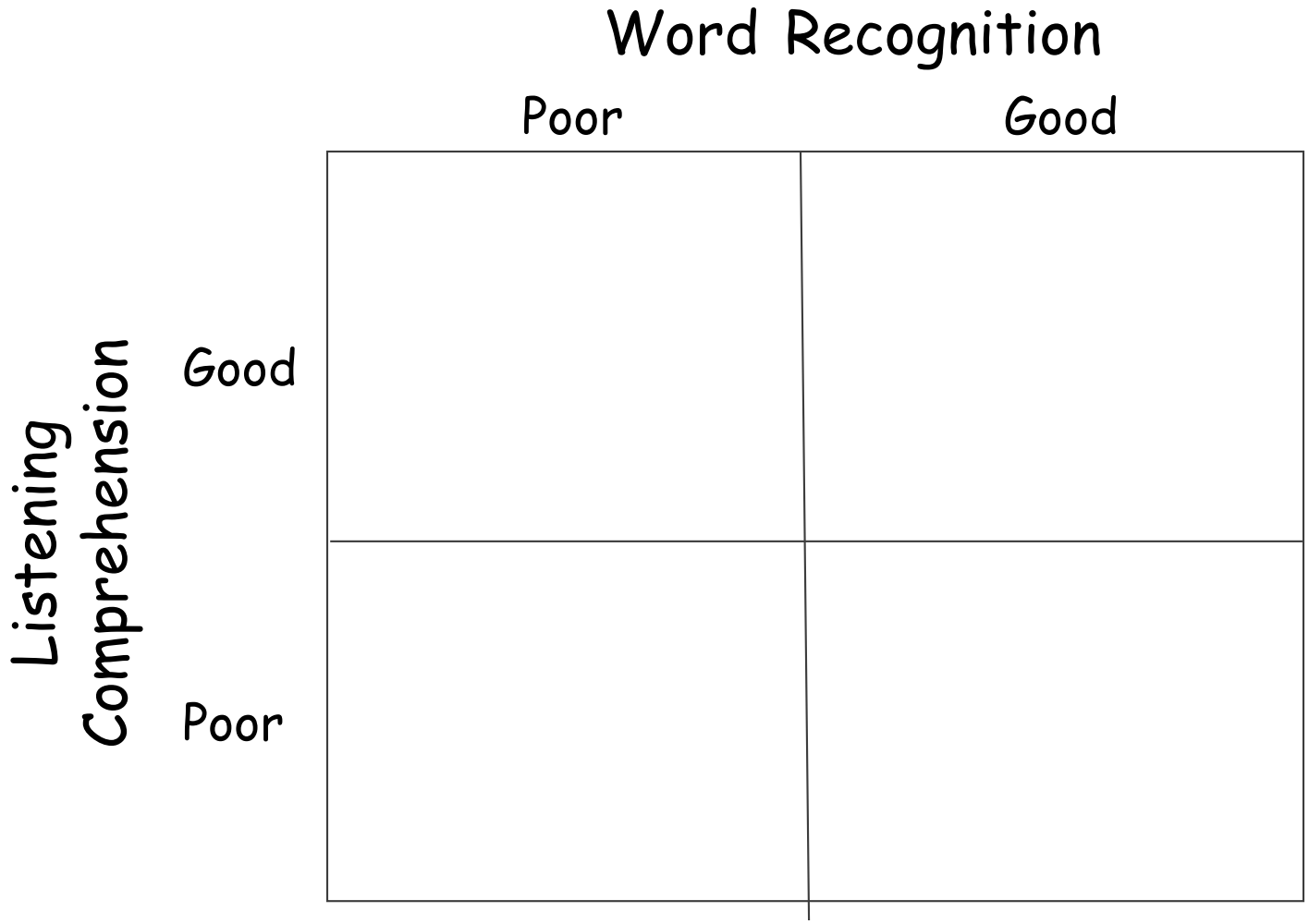
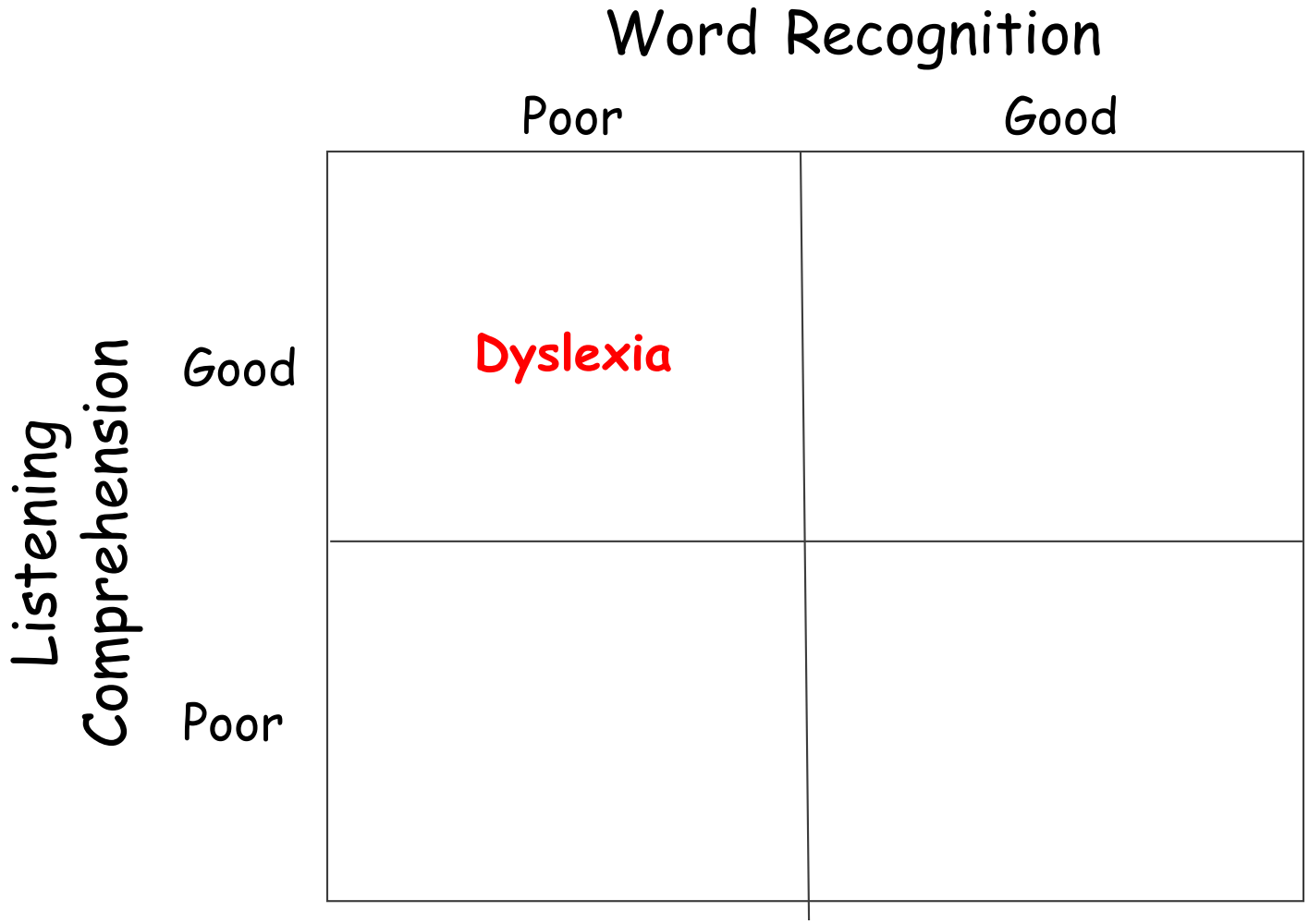


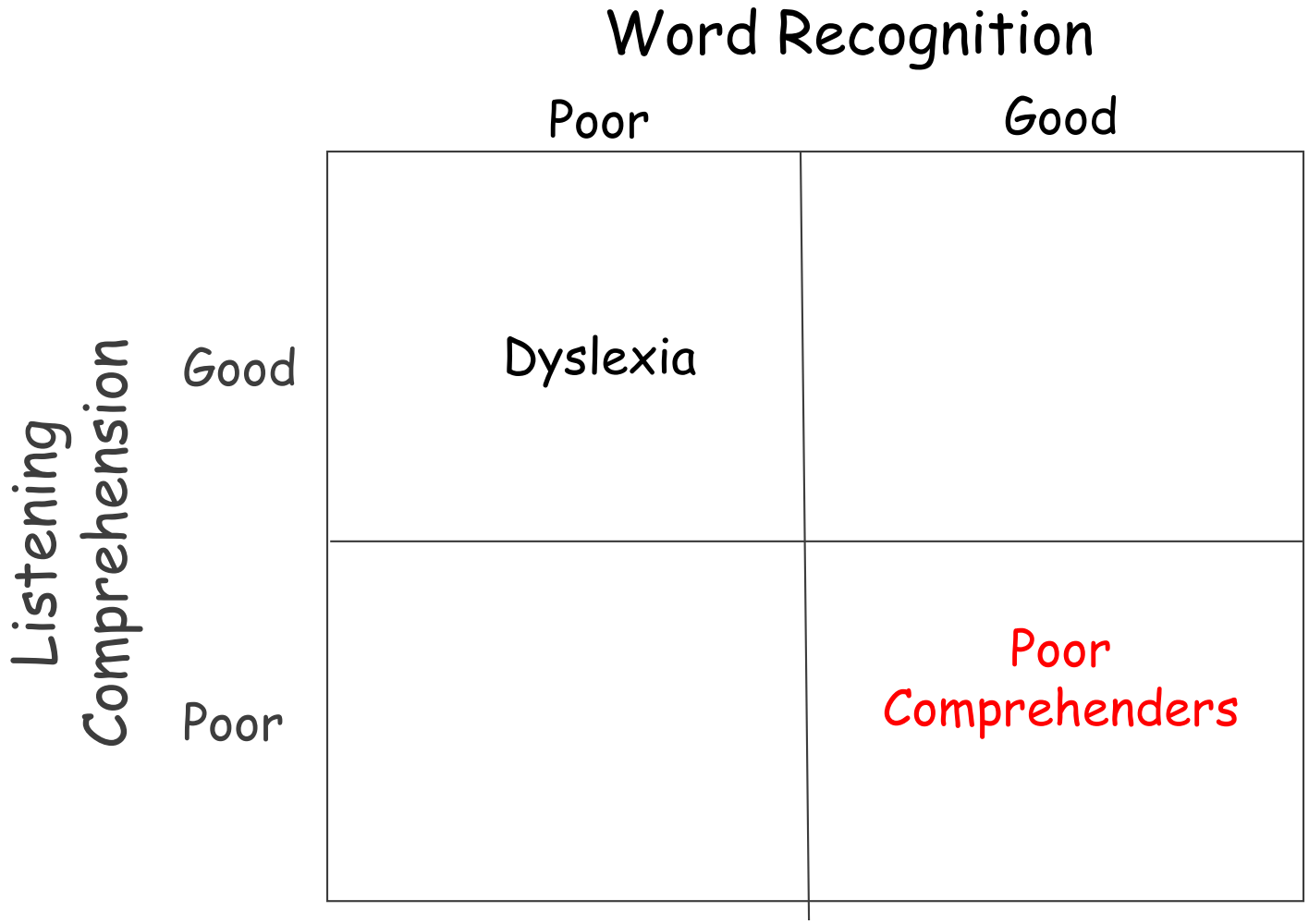


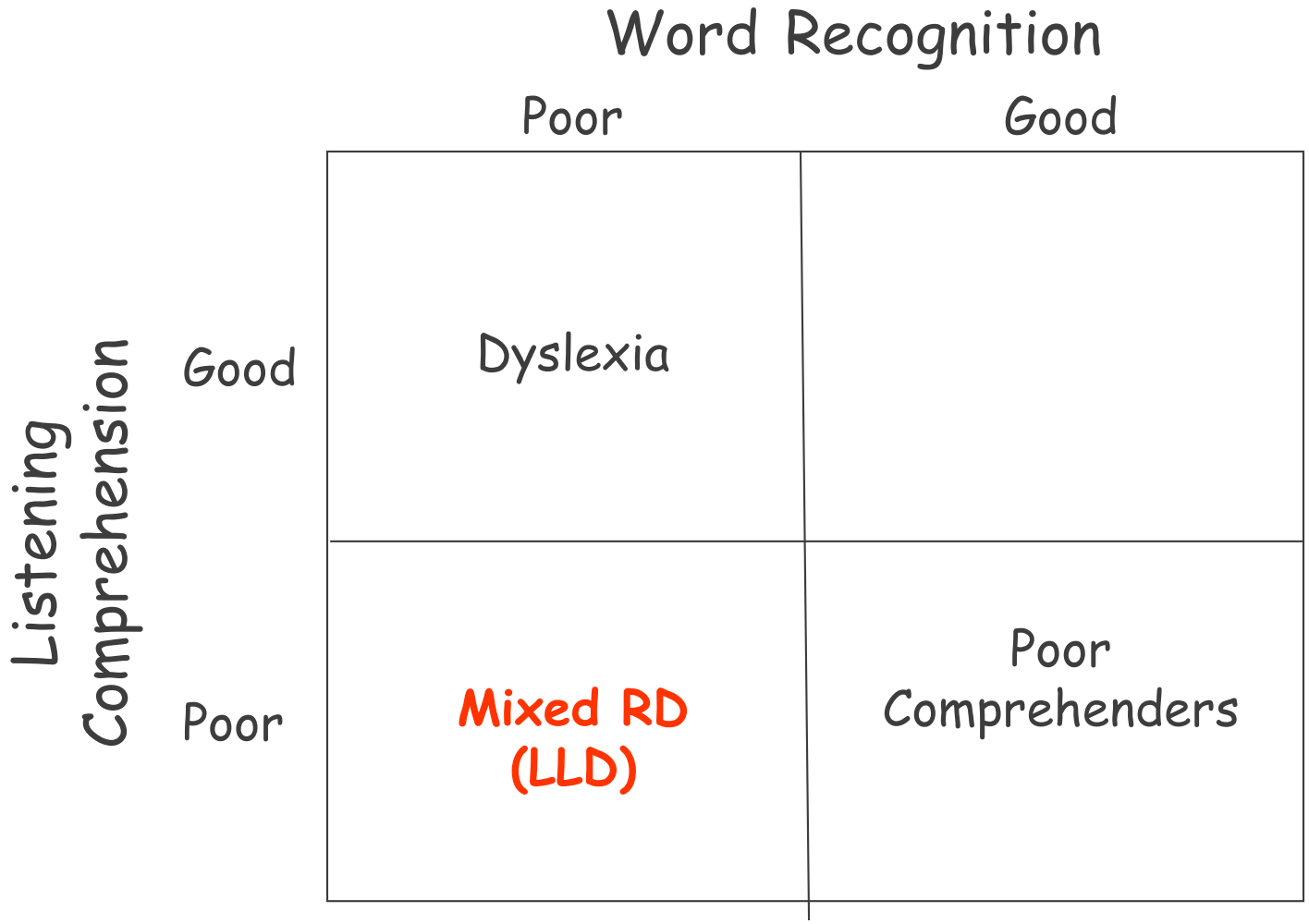
See Scarborough, H. S. in Neuman, S.B. & Dickinson, D. K. (2001). *Handbook of Early Literacy Research*. New York: Guilford Press.

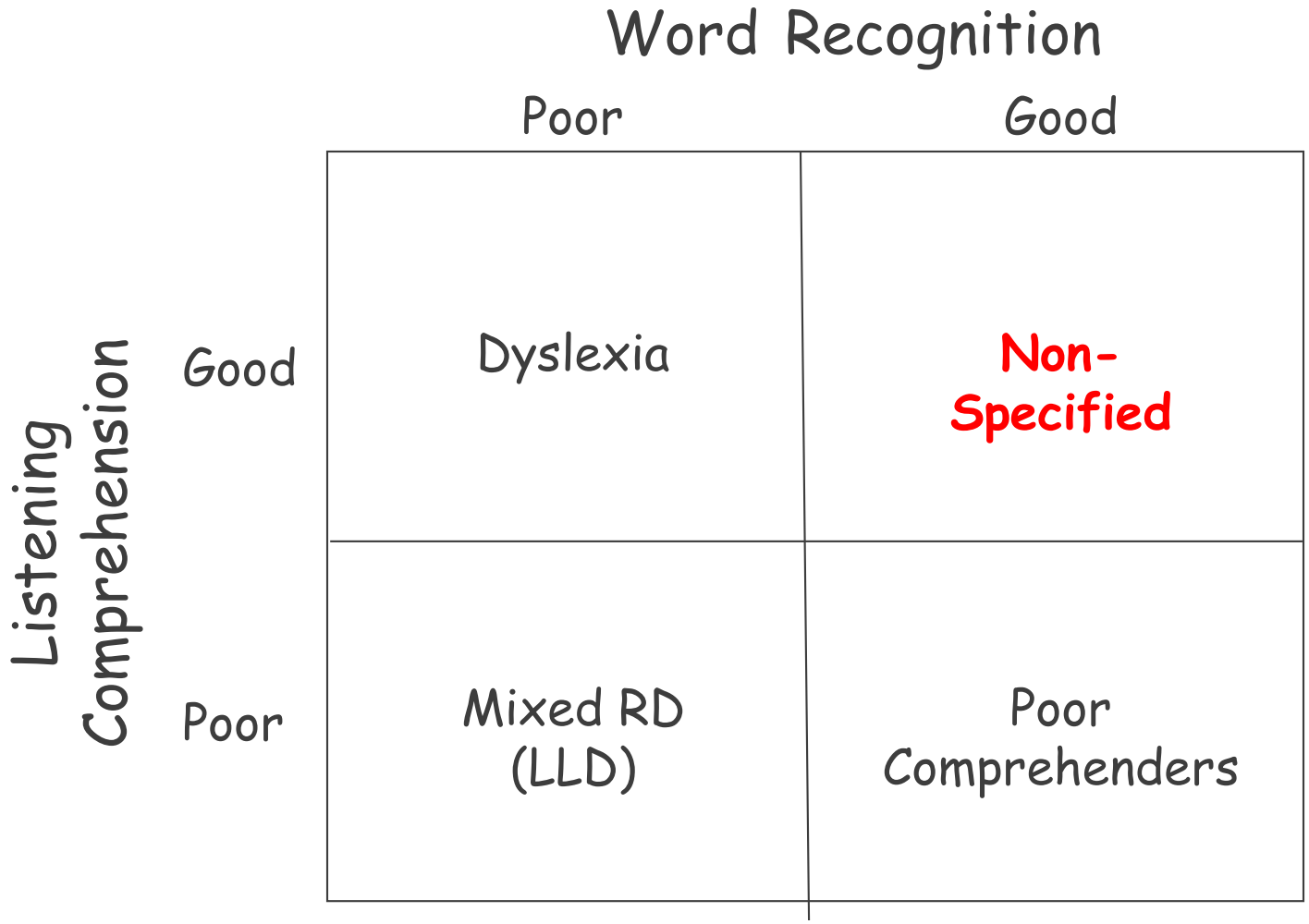
- We can use the Simple View of Reading to help us classify students


Word Recognition
Poor
Good
Listening Comprehension
Good
Poor


Word Recognition
Poor
Good
Listening Comprehension
Good
Poor
Dyslexia


Word Recognition
Poor
Good
Listening Comprehension
Good
Poor
Dyslexia
Poor Comprehenders


Word Recognition
Poor
Good
Listening Comprehension
Good
Poor
Dyslexia
Mixed RD (LLD)
Poor Comprehenders


Word Recognition
Poor
Good
Listening Comprehension
Good
Poor
Dyslexia
Non-Specified
Mixed RD (LLD)
Poor Comprehenders

POOR READER SUBGROUPS

CATTS, HOGAN, & FEY (2003)

- Subgroups are not homogenous
  - we don't see separate clusters of children in one group or another
- Rather group divisions are based on relative strengths and weaknesses in the component skills

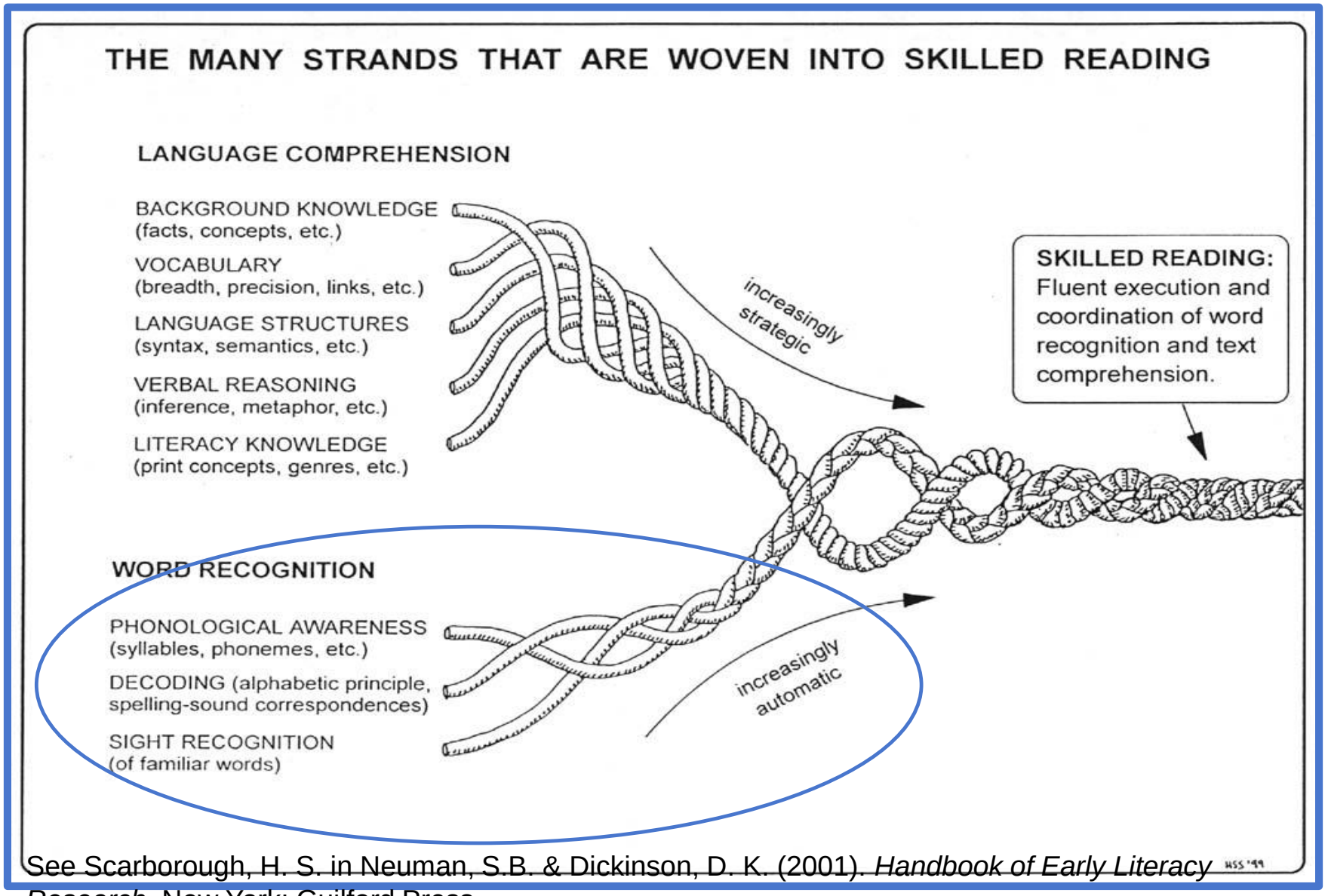
SUBGROUP PROFILES: DYSLEXIA

- Good language skills/ normal intelligence
- Difficulties with word recognition
  - Decoding difficulties
  - Limited sight vocabulary
- Phonological processing deficits
  - Phonological awareness
  - Nonword repetition

SUBGROUP PROFILES: POOR COMPREHENDERS

- Average word recognition
- Poor listening/language comprehension
- Normal phonological processing
- At least mild vocabulary deficits (≤ 20th percentile)
- At least mild grammatical deficits (≤ 20th percentile)
- Difficulty with inference generation

- Use the Simple View to think about the types of screening measures and assessments you would use
  - Appropriate measures for age/grade
  - Don't forget to measure LANGUAGE early, as it can be an indicator for later reading problems (Catts, Nielsen, Bridges, & Liu, 2016)
- Can use Simple View to group students into intervention groups
  - Much more appropriate to group by areas of challenge than by grade



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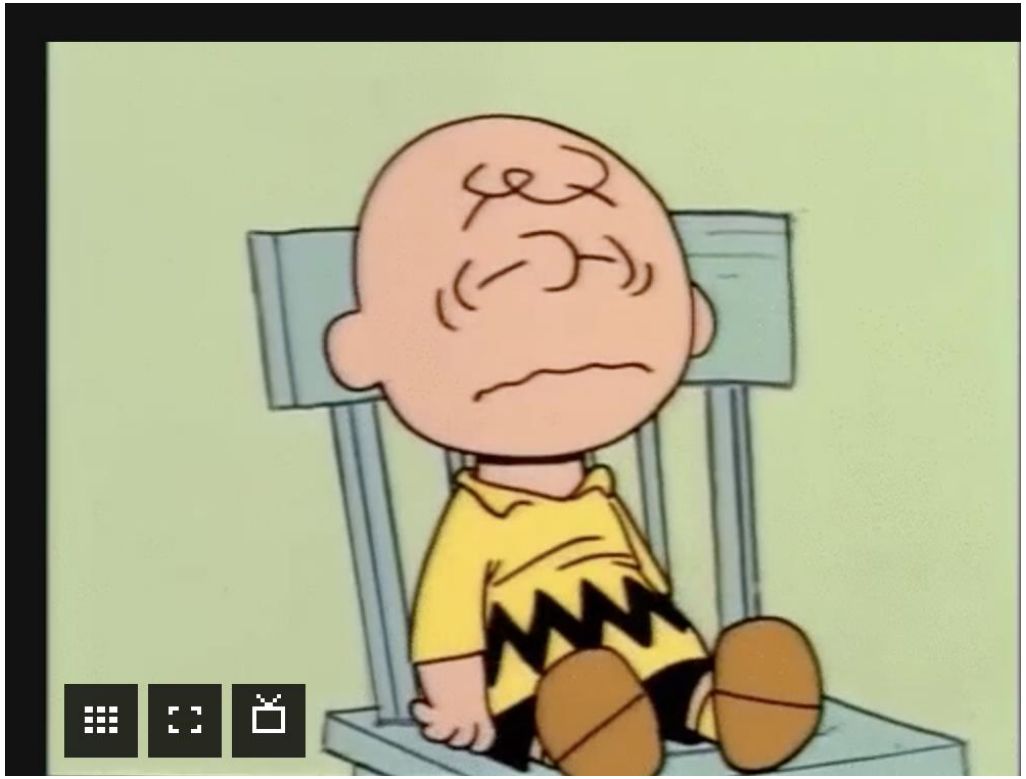
WHAT IS NEEDED FOR WORD RECOGNITION (AND FLUENCY)?

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

GOOD NEWS- WE KNOW ABOUT THIS!

BAD NEWS-WE AREN'T DOING IT



HARD WORDS: WHY AMERICAN KIDS AREN'T BEING TAUGHT TO READ

- Emily Hanford- education reporter
- https://www.apmreports.org/story/2018/09/10/hard-words-why-american-kids-arent-being-taught-to-read

HARD WORDS: WHY AMERICAN KIDS AREN'T BEING TAUGHT TO READ

- "This is the most studied aspect of human learning. One of the many things researchers have learned over the years is that ***virtually all kids can learn to read***. Researchers have done studies in classrooms and in clinics and they've shown – over and over – that somewhere between one and six percent of kids have such severe learning disabilities that they will probably always struggle with reading. **But everyone else can learn to read – *if they are taught*.** The problem is lots of kids aren't being taught – at least not in ways that line up with what science says about how children learn to read. The result: More than six in ten fourth-graders in the United States are not proficient readers. Thirty million adults struggle to read a basic passage of text. And this is not just a poverty problem: one-third of struggling readers are from college-educated families."

  Louisa Moats

FROM TWITTER CONVERSATIONS

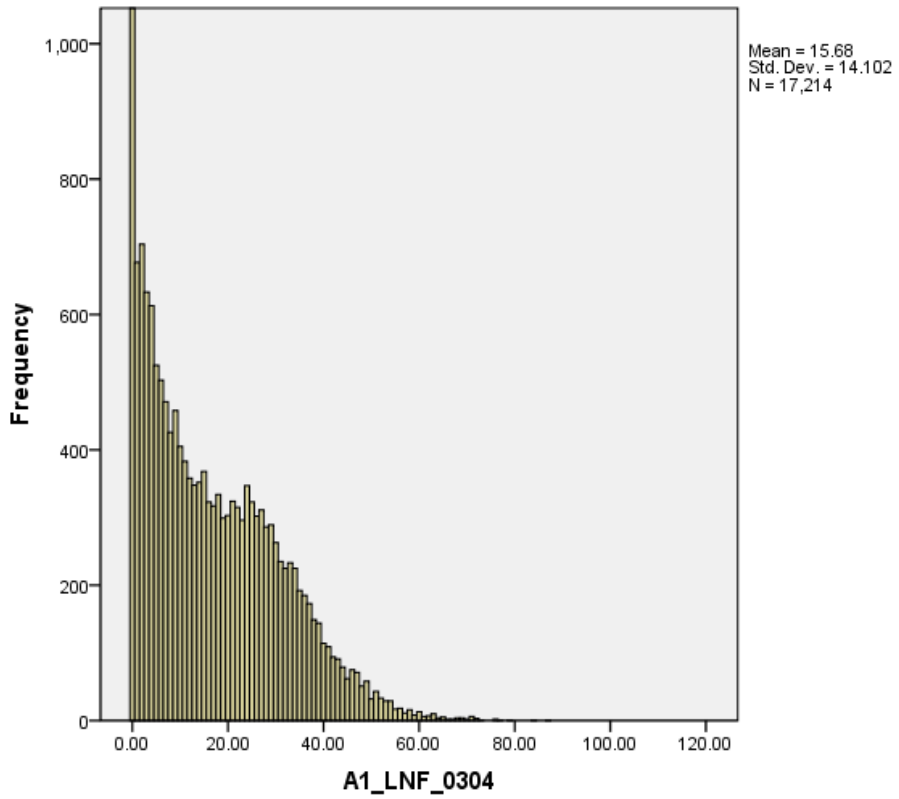
- “15 years of teaching, I never learned about dyslexia either. Then my son got diagnosed. I read Dr. Sally Shaywitz's book "Overcoming Dyslexia" & learned everything I was taught about reading was based on beliefs, not neuroscience. This has to change. Thanks, @ehanford. #edchat
- “It is easy to go along with these fads because my idea has always been that if everyone else is doing it, it must be the right way. Surely, the majority of people in education aren't wrong. Well, I couldn't have been further from the truth.”
- “There is an attitude that ‘kids will get it eventually’ (‘it’ being reading). If you just leave them alone, it will all click together. "

MTSS AND WORD READING

- Can use the Simple View to help with assessment and instruction
  - Use National Center on Intensive Intervention Tools Chart to find appropriate progress monitoring and assessment measures
- Be thoughtful about when to screen and progress monitor
  - For example, for kindergarten- might want to wait a few months

WHEN TO SCREEN?

- Florida Progress Monitoring Database
- Approximately 17,000 children in kindergarten
- *Dynamic Indicators of Basic Early Literacy* (DIBELS)
- Letter Name Fluency in Sept, Dec, Feb of Kindergarten
- Catts, Petscher, Schatschneider, Bridges & Mendoza (2010)


Mean = 15.68
Std. Dev. = 14.102
N = 17,214
Frequency
1,000
800
600
400
200
0
0.00
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40.00
60.00
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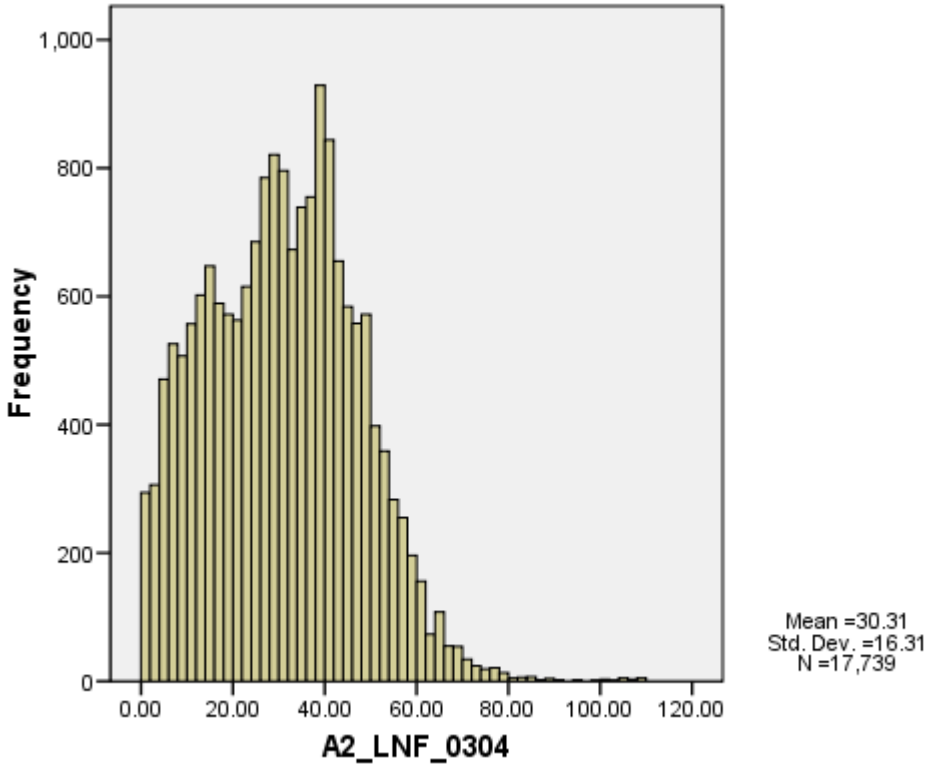
120.00
A1_LNF_0304

September


1,000
800
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400
200
0
Frequency
0.00
20.00
40.00
60.00
80.00
100.00
120.00
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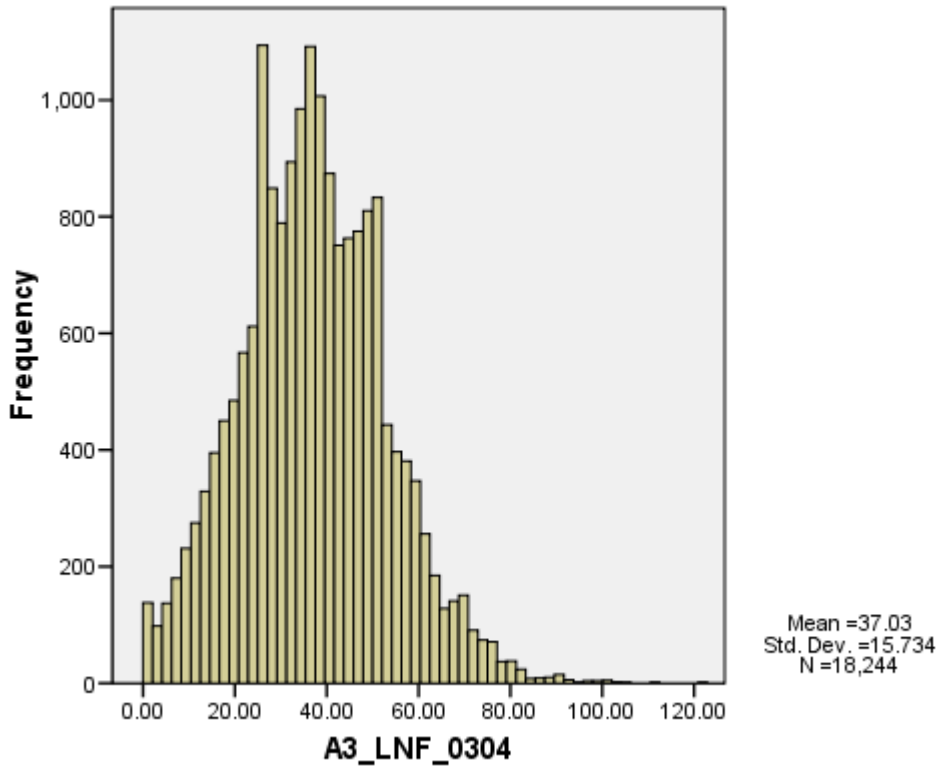
Mean =30.31
Std. Dev. =16.31
N =17,739

December


Frequency
1,000
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200
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0.00
20.00
40.00
60.00
80.00
100.00
120.00
A3_LNF_0304
Mean =37.03
Std. Dev. =15.734
N =18,244

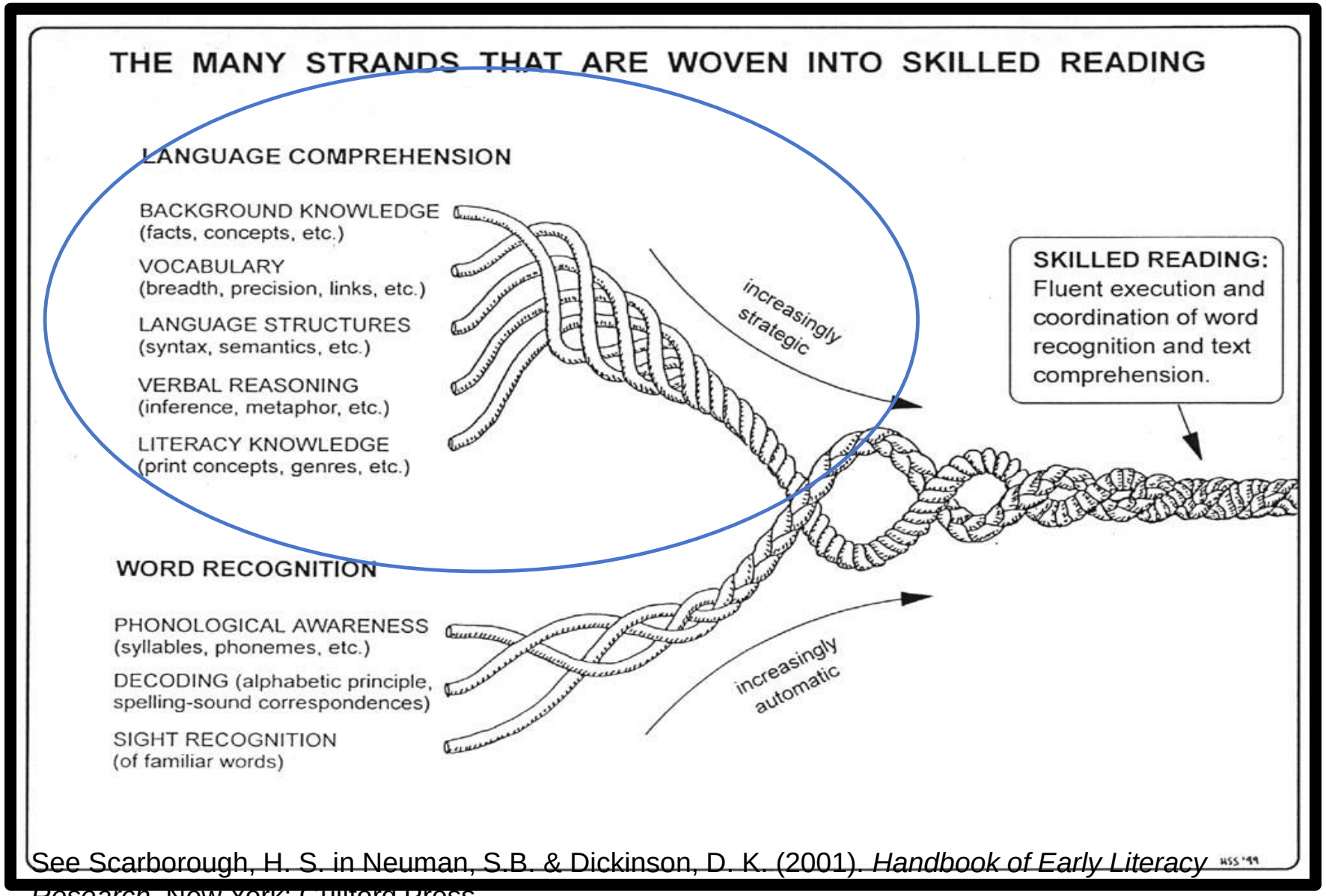
February

INSTRUCTIONAL RESOURCES

- Example resources for PA, alphabetic knowledge, and word recognition instruction and intervention
  - Florida Center for Reading Research
  - What Words Clearinghouse (WWC)
  - National Center on Intensive Intervention Tools Chart
  - IRIS Center (out of Vanderbilt)- Evidence-based practice summaries

- Know that phonemic awareness and alphabetic knowledge is highly correlated with later reading (e.g., Catts, Fey, Zhang, & Tomblin, 2001)
  - When providing PA instruction or intervention, get to the phoneme level as soon as possible
  - Once students can decode, then READ
    - Don't mess around with PA

- Speech-language pathologists
  - Very likely to be the most knowledgeable about PA (Spencer et al., 2008)



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

HMMMM….WHO ALSO KNOWS A LOT ABOUT MOST OF THESE THINGS?

The speech-language pathologist

- Lower- and higher-level language skills enable readers to engage in higher level comprehension (e.g., Cain et al., 2004; Hogan, Cain, & Bridges, 2013; Kintsch & Van Dijk, 1978; Perfetti, 2007)
  - Vocabulary, syntax, comprehension monitoring, inferencing, and understanding text structure
- Early language skills impact later reading comprehension skills (Catts, Fey, Tomblin, & Zhang, 2002; National Early Literacy Panel, 2008; Scarborough, 1991; Storch & Whitehurst, 2002)
  - By third grade, children's language skills explained ~60% of variance in children's reading comprehension (Language and Reading Research Consortium, 2015)

MBRC
Monolingual & Bilingual Reading Comprehension

- Multi-site collaboration between University of Kansas Medical Center (Bridges), Arizona State University (ASU), and Lancaster University
- Building on what we learned in LARRC
  - Following approximately students (English and DLL, ~100 per cohort) to 6th and 8th grade
  - Obtaining cross-sectional cohorts of 6th and 8th grade students
- Results will provide a sound basis for the development and testing of reading comprehension assessment, instruction, and intervention for elementary and adolescent students as well as bilingual students.

LANGUAGE LESSONS

- Pre-K to Grade 3

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

-click read ‘curriculum download’ button on upper right side

Let's Know!

- Designed to increase the quantity and quality of language-focused instruction
- 26-week scope and sequence
- Four content-focused units:
  - Compare/contrast
  - Sequences or cycles
  - Description
  - Cause and effect
- Complement to the language arts curriculum

¡Vamos a Aprender! (PK Only)

Same conceptual framework as *Let's Know!*

Delivered bilingually

- 50% Spanish/50% English
- New concepts introduced in Spanish lessons (native language)
- Each lesson delivered in only one language
- All books bilingual Spanish-English

- Teachers implementing Let's Know! used significantly more language-facilitating techniques than teachers implementing business-as-usual (LARRC et al., 2014)
- Preliminary results from a randomized controlled trial including one cohort of students whose teachers implemented *Let's Know!* showed statistically significant effects measures of comprehension monitoring and vocabulary relative to control (Language and Reading Research Consortium et al., 2017).
- In a pilot study utilizing Let's Know! in small groups of preK students, preservice SLPs implemented the intervention with average implementation fidelity of .96
  - This is much higher than what is seen with this intervention implemented by teachers in LARRC

LANGUAGE LESSONS

- Pre-K to Grade 3

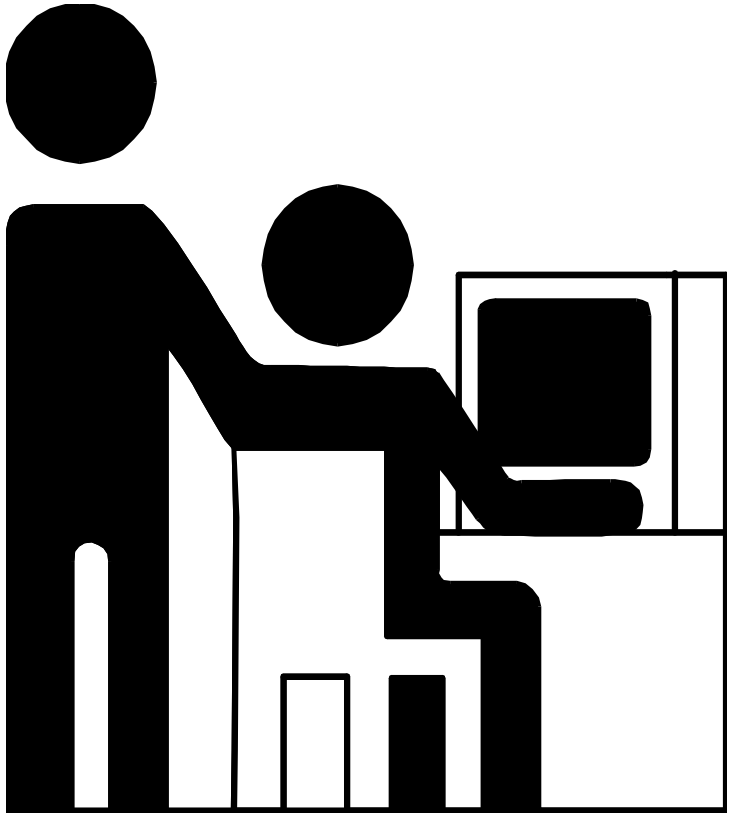
https://larrc.ehe.osu.edu/

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

- Grades 6-9

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

PRINCIPLES OF INSTRUCTION- THERE IS NO MAGIC!!!



- explicit
- systematic
- supportive
- intensive

SPEECH LANGUAGE PATHOLOGISTS

- Speech-language pathologists are well-suited to take a seat at the table
  - We have a lot of knowledge regarding the science of reading (even if we don't know it)
  - We have extensive training in assessment procedures
  - We have extensive knowledge in intervention
    - Particular strength in language-facilitating techniques which have been shown to affect later reading comprehension
  - We are taught about important concepts such as implementation fidelity

BACK TO MTSS/RTI

"RTI is a thoughtful, logical, well-designed program. It has only one flaw: it has to be implemented in real-world environments that are often inhospitable."

"The deeper problem is that the effectiveness of RTI is undercut by the disagreements about how reading works, how it should be taught, and how reading problems should be addressed that pervade reading education……the approach does not work, however, if the child's instruction has been inadequate."

Taken from Language at the Speed of Sight, p. 162

- Questions?

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