Pearson

Dyslexia is Here to Stay: Advanced Workshop on Reading Disorders; Part 2

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GASP 2018

Disclaimer Statement

Maggie Kjer is a full time employee of Pearson Clinical (NCS Pearson).

In the context of best practices in assessing dyslexia, Maggie will be mentioning tests published by Pearson Clinical.

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AGENDA

- What is Dyslexia?
- Diagnosing Reading Disorders
  - Reading Disorder Subtypes
- Reading Interventions for Dyslexia and Reading Disorders
- Q & A

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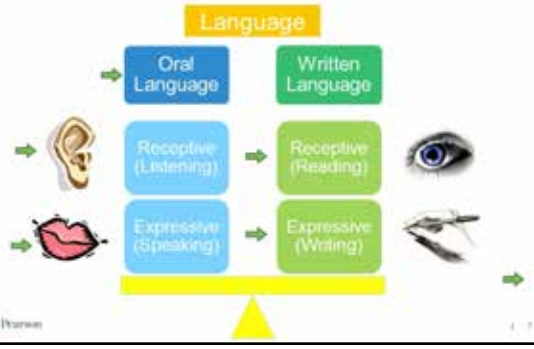
Typical Development of Reading Skills

Pre-K → Kindergarten → Grade 1 → Grade 2/3 → Grade 3/4

- "Pre-reading": Letter ID, Rhyming, ID Letters/phonemes in spoken words
- Letter/sound correspondence
- Sight word development
- Decode new words accurately…fluently.
- Transfer oral language vocab to written language vocab
- Integrate word decoding and sentence comprehension.
- Read for comprehension

Reading is Language



Language is One of Multiple Cognitive Skills

Pearson Language and Learning

International Dyslexia Association

*Dyslexia is a **specific learning disability** that is **neurobiological** in origin.*
*It is characterized by difficulties with accurate and/or fluent **word recognition** and by poor **spelling and decoding abilities**. These difficulties typically result from a deficit in the **phonological** component of language that is often **unexpected** in relation to other cognitive abilities and the provision of effective classroom instruction.*

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

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Dyslexia Difficulties

- Students identified as having dyslexia typically experience primary difficulties in ***phonological awareness, including phonemic awareness and manipulation, single-word reading, reading fluency, and spelling***.
- Consequences may include difficulties in ***reading comprehension and/or written expression***.
- These difficulties in phonological awareness are ***unexpected*** for the student's age and educational level and are not primarily the result of language difference factors.
- Additionally, there is often a ***family history*** of similar difficulties.

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Primary Dyslexia Characteristics

- Difficulty ***reading words*** in isolation
- Difficulty accurately ***decoding*** unfamiliar words
- Difficulty with ***oral reading*** (slow, inaccurate, or labored)
- Difficulty ***spelling***

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Associated Academic Difficulties

- May also have problems in written expression, reading comprehension, and mathematics
- ***Most common co-occurring disorders are ADHD & specific developmental language disorders***
- May also experience symptoms such as ***anxiety, anger, depression, lack of motivation, or low self-esteem***

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Common Risk Factors Associated with Dyslexia

- Difficulty pronouncing words (e.g., "pusgetti" for "spaghetti," "mawn lower" for "lawn mower")
- Trouble learning and naming letters and numbers and remembering the letters in his/her name
- Aversion to print (e.g., doesn't enjoy following along if book is read aloud)
- Difficulty remembering the names of letters and recalling their corresponding sounds

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Common Risk Factors Associated with Dyslexia

- Difficulty decoding single words (reading single words in isolation)
- Difficulty spelling words the way they sound (phonetically) or remembering letter sequences in very common words seen often in print (e.g., "sed" for "said")
- Difficulty with written expression
- AND MORE…

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Best Practice Assessment Model

- Primary component: have more than one data point
  - Identifications using a single criterion are prone to measurement error and show poor stability over time.
  - At minimum use more than one measure for the same construct…rinse and repeat.
  - However, don't over collect/analyze/interpret
- A hybrid model of dyslexia identification considers:
  1. Multiple sources of information
  2. The degree to which a student responds to effective instruction and/or intervention

Johnson, E. S., Jenkins, J. R., & Petscher, Y. (2010). Improving the accuracy of a direct route screening process. Assessment for Effective Intervention, 35, 131–140.
Johnson, E. S., Jenkins, J. R., Petscher, Y., & Catts, H. W. (2009). How can we improve the accuracy of screening instruments? Learning Disabilities Research & Practice, 24, 174–185.

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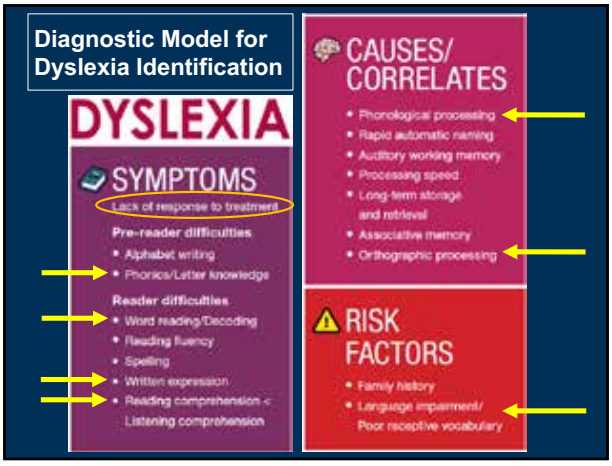
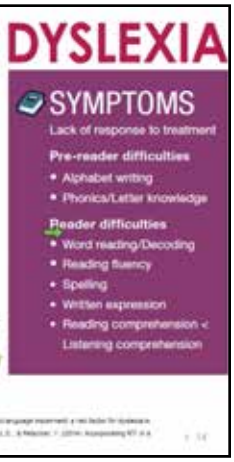


- Poor response to instruction is considered an important symptom!
  - But it's not enough
- Pre-reader Symptoms
  - alphabet writing, letter identification, and/or phonics (letter-sound correspondence).
- Reader Symptoms
  - decoding pseudowords, word reading, reading fluency (oral reading fluency, in particular), spelling, and written expression.
  - In addition, reading comprehension is poor relative to listening comprehension



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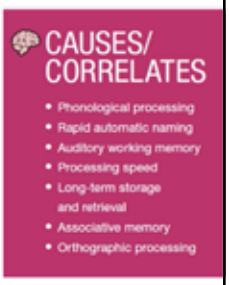
- Cognitive processing weaknesses
  - Not as easily observed.
  - Symptoms either attributed to or related to one/several of these processes
  - Phonological processing, RAN, Auditory WM considered key for dyslexia evaluation (IDA, 2016)



Pennington, B. F. (2006). From single to multiple deficit models of developmental disorders. Cognition, 101, 385–413.
Ramus, F., & Ahissar, M. (2012). Developmental dyslexia: The difficulties of interpreting poor performance, and the importance of normal performance. Cognitive Neuropsychology, 29, 104–122.

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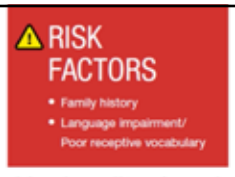

- When we combine hereditary/correlated risk factors + behavioral symptoms = Robust Assessment!
- Low scores on a dyslexia screening test
- ↑ risk for dyslexia:
  - family history of dyslexia
  - a history of language impairment
  - and/or weaknesses in receptive vocabulary.

Snowling, M., Bishop, D. V. M., & Stothard, S. E. (2000). Is preschool language impairment a risk factor for dyslexia in adolescence? Journal of Child Psychology and Psychiatry, 41(5), 587–600.
Thompson, P. A., Hulme, C., Nash, H. M., Gooch, D., Hayiou-Thomas, E., & Snowling, M. J. (2015). Developmental dyslexia: Predicting individual risk. Journal of Child Psychology and Psychiatry, 56(9), 976–987.

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Consider Possible Strengths

- Possible strengths in:
  - Fluid reasoning and problem solving
  - Oral language (including listening, speaking, vocabulary, and grammar)
  - Math
- The development of interventions/strategies should consider an individual's cognitive processing strengths.

Reynolds, C. R. (1981). Neuropsychological assessment and the habilitation of learning: Considerations in the search for the aptitude x treatment interaction. School Psychology Review, 10(3), 343–349.
Shaywitz, S. E. (2005). Overcoming dyslexia. New York, NY: Alfred Knopf.

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Knowledge Check:

Best practices in diagnosing dyslexia include gathering data from multiple sources such as response to instruction, classroom artifacts and family history as well as testing results.

- True
- False

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Texas Dyslexia Handbook

- **Areas for Assessment**
- *Academic Skills*
- Letter knowledge (name and associated sound)
- Reading words in isolation
- Decoding unfamiliar words accurately
- Reading fluency (both rate and accuracy are assessed)
- Reading comprehension
- Spelling

- *Cognitive Processes*
- Phonological/phonemic awareness
- Rapid naming of symbols or objects

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TX Dyslexia Handbook: Special Ed?

Special education and the assessment through IDEA 2004 may occur when ***dyslexia is associated with factors complicating dyslexia****, thus requiring more support than what is available through the general education dyslexia program.*

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Discussion Point:

Since no Dyslexia Regs in Georgia…

What should be considered when a child is referred for SPED and has either a Dyslexia diagnosis or a teacher/parent suspects Dyslexia?

Which psychological processes might be assessed to determine co-occurring weaknesses?

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History of Dyslexia

- Dates back to 19th century as "word blindness"
- "Dyslexia" first used in 1887 by an ophthalmologist
- Professionals now see dyslexia as Language-based
  - But public still defines as a Visual problem

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Dyslexia and Reversals in Writing

Myth: Dyslexia is a visual problem – they see words backwards and letters reversed.
Fact: This was proven inaccurate in a study by Vellutino. He asked dyslexic and non-dyslexic students to reproduce a series of Hebrew letters that none of them had ever seen before. The dyslexic students were able to perform the task just as accurately as the non-dyslexic students, showing that dyslexia did not affect their eyesight or ability to distinguish different characters.

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Dyslexia and Reversals in Writing

Myth: Any child who reverses letters or numbers has dyslexia.
Fact: Up to a certain point, it is considered normal for children to reverse their letters and numbers, and this is actually quite common. However, if this does not stop after two years of handwriting instruction, it becomes a red flag for dyslexia

Discussion Point:

Are your schools teaching handwriting skills in K-4?
How might this affect letter reversals?

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PROBLEMS

- Wide ranging incidence rates of Dyslexia reported from 3% to 20%
- Researchers don't agree on the nature and features of "dyslexia."
  - Definitions used in research are different from definitions used in educational training and resources
- Research is not clear on the cause of early reading difficulties
  - Deficits are Phonological? Visual & auditory? Rapid naming? Working memory?

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PROBLEMS

- Wide ranging incidence rates of Dyslexia reported from 3% to 20%
  - NOTE:According to Shaywitz, "Prevalence depends on definition, cut-scores, sampling (school, clinical, large population)"
    - Shaywitz's research supports that 20% have dyslexia
- Other groups and other countries report 10% prevalence rate
- Shaywitz predicts the rate may drop to 2-6% if all children were given the most effective instruction and the most effective interventions, when needed

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PROBLEMS

- Dyslexia is a neurological, brain based disorder (not environment/poor teaching) but it is difficult to tease out
- There is a lack of agreement about role of IQ in dyslexia
- The label of dyslexia doesn't suggest interventions different from those for other poor decoders in spite of the different pattern of strengths and weaknesses in readers with dyslexia

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Dyslexia Symptoms

- Difficulty with decoding single words
  - All poor decoders or just a subset??
- May also have problems with comprehension, fluency, motivation
- Symptoms have included poor phonological awareness, verbal working memory, weak spelling, slow processing, impaired verbal fluency, frequent letter reversals, and more…

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Knowledge Check:

Which weaknesses listed below are synonymous with most of the current definitions of dyslexia? (may choose more than 1 answer)

1. Phonological Processing
2. Spelling
3. Word Reading
4. Visual Processing
5. All of the Above

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UNEXPECTED?

- Definitions often include "unexpected poor performance"
  - Difficult to define unexpected
  - Based on intelligence testing? Or based on failure to respond to intervention? Or both?
- Shaywitz says within a "*sea of strengths*"
  - But some poor readers have flat cognitive profiles
  - Certainly not everyone with dyslexia is gifted…
- IQ does not appear to predict which poor readers will be successfully remediated

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The belief that those with dyslexia are high-functioning poor readers, rather than those who represent the full continuum of intellectual ability, has continued to persist despite all evidence to the contrary.

The Dyslexia Debate
Elliot & Grigorenko, 2014

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General Agreement on:

- Importance of phonological awareness, especially in the early years
- Importance of early intervention for reading difficulties
- Instruction should be structured, comprehensive, and individualized
  - Highest effect sizes for early intervention (1st grade or earlier) and smaller group sizes
  - There is a lack of evidence for visual/auditory training, visual-motor activities, vision therapy, tinted lenses, biofeedback, fatty acids supplements

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Cognitive Deficits in Dyslexia

- **Primary: Phonological deficit**
- Extensive research also regarding Dyslexia and:
  - Rapid Naming
  - Working Memory
  - Auditory processing
  - Visual processing

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Dyslexia is often synonymous with:

Reading Disability
Reading Disorder
Learning Disability in Reading
Specific Reading Disability
Specific Reading Difficulty

Sometimes used to refer to a more specific group of ***poor decoders***

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Dyslexia Facts

- In the US, NIH research has shown that dyslexia affects 5-10% of the population
- Some people may have more mild forms, while others may experience it more severely.
- Dyslexia is one of the most common causes of reading difficulties in elementary school children.
- Only 1 in 10 children with dyslexia will qualify for an IEP and receive special education services

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Why is it more desirable to have dyslexia than a reading disability?

- Dyslexia is a ***meme***
  - Unit of cultural transmission
  - Meme survives because it's easy to understand, communicate & remember
    - Not because it is true or useful

»*The Dyslexia Debate*

What about ELLs?

How are the basic psychological processes, learning to read, and English language acquisition related?

Memory?
Attention?
Processing?
Mental control?
Problem-solving?
Language use?

Knowledge Check:

Why is Dyslexia currently a HOT TOPIC?

1. Parent group involvement
2. Many children are struggling readers who are not progressing
3. It's a meme
4. All of the above

Knowledge Check!

LD Reading Subtypes

- Phonological
- Orthographic
- Mixed Phonological-Orthographic
- Language
- Comprehension deficit
- Fluency subtype
- Global
  - Dysgraphia (included as a co-occurring condition with one of the other listed subtypes)

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LD Reading Subtype: Phonological

- Students with a phonological core deficit have difficulty mentally representing the sound patterns of the words in their language, which causes great difficulty in using the phonological route to reading and spelling.
- In place of the phonological route, they visual route reading and spelling. These students over-rely on visual and orthographic cues while reading and may memorize whole words as a strategy for word recognition.

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LD Reading Subtype: Phonological

- Students with a phonological core deficit are sometimes referred to as dysphonetic or phonological dyslexia.
- Students with phonological dyslexia rarely use letter-to-sound conversion and they have marked difficulty reading nonsense words, but typically show a relative strength in reading exception (irregular) words, which they have memorized.
- A phonological core deficit may be accompanied by deficits in cognitive processing and may impact functioning in other academic skills such as writing and spelling.

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LD Reading Subtype: Orthographic

- Children with orthographic reading disorders have strong phonemic processing skills and strong listening comprehension skills.
- They know the answer to teachers' questions. They glean a lot of information from the classroom experience.
- They have weak word recognition skills and weak orthographic coding (ability to hold word in memory and access the whole word pattern).

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LD Reading Subtype: Orthographic

- Students with an orthographic deficit have difficulty in using the visual-lexical route to reading and writing words.
- In place of the visual-lexical route, the phonological route to lexicon is used. These students tend to sound words out letter by letter, over relying on sound-symbol relationships.
- Pseudoword reading is typically better than real word or exception word reading.

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LD Reading Subtype: Orthographic

- Children with Orthographic Reading Disorders depend on sounding out words, but rarely hold the words in their sight word list (lexicon).
- They struggle with spelling new words. Generally writing is also deficit for these children.
- Sometimes referred to as *surface dyslexia, visual form dyslexia* or *dyseidetic dyslexia.*
- Impacts learning to read and decode words, thus, impacting overall reading fluency

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LD Reading Subtype: Mixed Phonological and Orthographic

- Children with Mixed Phonological and Orthographic reading disorders are strong in Listening Comprehension only. They learn better with direct instruction and experiential learning.
- Mixed LD reading is manifested in weaknesses in the following areas: Phonological Processing, Decoding, Word Reading, Reading Fluency, and Spelling
- This is Dyslexia

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LD Reading Subtype: Mixed Phonological and Orthographic

- More frequently occurring than either Phonological or Orthographic
- Causes great difficulty in using the phonological route to reading and spelling, as well as difficulty in using the visual-lexical route to reading and writing words
- Causes severe impairment in learning to read

LD Reading Subtype: Mixed Phonological and Orthographic

- Characterized by:
  - difficulty using the phonological route as well as the visual-lexical route to reading and writing words.
  - These readers are severely impaired because they have no usable key to the reading and spelling code, and seemingly arbitrary error patterns are often observed.
  - Difficulty mentally representing sound patterns of words in language

LD Reading Subtype: Language

- Students with a language impairment, sometimes referred to as Oral and Written Language Learning Disability (OWL-LD), (Grammatical) Specific Language Impairment (SLI or G-SLI), or Language Learning Disability (LLD), have problems in both oral and written language
- Students with OWL-LD show particular difficulty processing grammar and syntax. Adequate *nonverbal* cognitive ability is observed.

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LD Reading Subtype: Language

- Children with Language Reading LD have weaknesses in reading comprehension, listening comprehension, orthographic coding, and oral grammar.
- Strong word recognition and decoding/ nonsense word reading skills

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LD Reading Subtype: Language

- Some children respond well to a multisensory or VAKT (verbal-auditory-kinesthetic-tactile) approach
- They need input from more than one modality to help them perceive or retain information.
- Other children are overloaded by multisensory inputs and become confused by having to assimilate information through multiple systems at the same time

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LD Reading Subtype: Reading Fluency

- Students with poor reading fluency due to a *naming speed deficit* typically have *adequate phonological processing* skills
- They are able to read and decode words accurately, but they read connected text very slowly.
- Reading fluency deficits cannot be identified until word-reading skills are acquired; however, naming speed deficits may be identified earlier.
- Specific deficits in naming speed have been shown to impede reading fluency.

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LD Reading Subtype: Reading Fluency

- According to the Double-Deficit Hypothesis, most students with reading disorders can be classified as one of two single-deficit subtypes that are relatively independent of each other (phonological or rate deficit) or as one combined double-deficit subtype.
- Weaknesses in reading fluency due to a **naming speed deficit** is sometimes referred to as a *rate deficit* or *specific reading fluency deficit.*
- Reading fluency is considered the bridge to comprehension; hence, slow reading fluency typically impedes comprehension.

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LD Reading Subtype: Global

- A global reading impairment is sometimes associated with the term nonspecific language impairment or, as a group, garden variety poor readers.
- Students with global reading impairment are remarkably similar to younger children reading at the same grade level.
- Probably the most common profile of reading difficulty but not SLD (they don't qualify).

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LD Reading Subtype: Global

- They have problems with all reading-related skills, including word recognition, decoding, reading fluency, reading comprehension, and listening comprehension.
- A subset of students with a global reading impairment also show phonological processing deficits due to difficulty mentally representing the sound patterns of the words in their language.
- These students have low average verbal and nonverbal cognitive processing abilities (IQ standard scores between 70 and 90), but they do not exhibit deficits in adaptive functioning.

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LD Reading Subtype: Global

- Given that these students have learning problems that are consistent with estimates of their cognitive ability (in other words, their learning difficulties are not unexpected), this subtype does not meet contemporary operational definitions of a specific learning disability.
- Research suggests that students with global reading impairment can benefit from intervention in a comparable manner to students with higher IQs and more specific areas of weakness

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LD Reading Subtype: Comprehension

- A specific comprehension deficit is sometimes referred to as hyperlexia.
- Hyperlexia has been used to refer to students who exhibit poor language comprehension skills and exceptional word recognition and decoding skills as well as students with poor language comprehension and relatively good basic reading skills.

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LD Reading Subtype: Comprehension

- Have difficulty with listening comprehension and reading comprehension;
  - -they read accurately and fluently, but fail to grasp the meaning of what they read
- Specific difficulties include ***making inferences, monitoring understanding, using strategies to resolve ambiguity, and inhibiting irrelevant information.***
- Relative strengths are observed in phonological processing and naming speed

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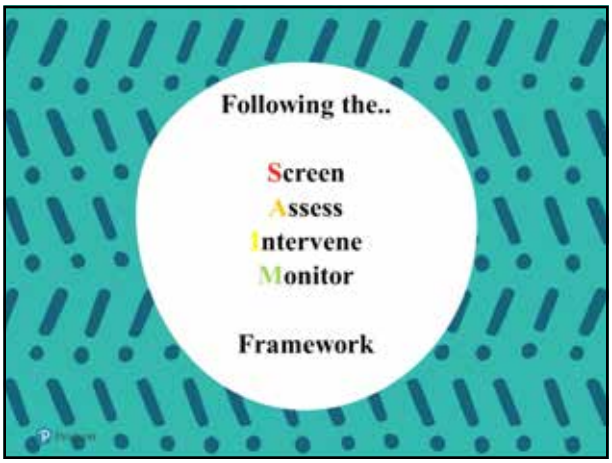
Knowledge Check:

A child with a Mixed Phonological and Orthographic Reading Disorder will most likely have the following symptoms?

1. Good listening comprehension skills
2. Poor RAN skills
3. Poor Spelling skills
4. Poor Phonological Processing skills



Test or index score	Grade/ Age	Subtests/Items	Mean reliability	Effect size	AUC	Administration time (min.)
Shaywitz DyslexiaScreen™: Form 0	Kindergarten	10 items	.87	1.48	.81	< 5
Shaywitz DyslexiaScreen™: Form 1	1	12 items	.90	0.96	.89	< 5
Shaywitz DyslexiaScreen™: Form 2	2	10 items	.82	1.47	.92	< 5
WRAT5: Reading Composite	1–12+ Ages 6–89+	Word Reading + Sentence Comprehension	.96	1.70	.89	10-20
KTEA™-3 Brief: RA-3 composite	K–12+ Ages 5–25	Letter & Word Recognition + Spelling + Math Computation	.98	2.11	.93	20
KTEA™-3 Comprehensive Dyslexia Index 1	K–1	Phonological Processing + Letter Naming Facility + Letter & Word Recognition	.92	1.79	.90	20
KTEA™-3 Comprehensive: Dyslexia Index 2	2–12+ Ages 7–25	Word Recognition Fluency + Nonsense Word Decoding + Spelling	.97	1.76	.89	15
WIAT®-III Dyslexia Index 1	K–1	Early Reading Skills + Spelling	.94	1.66	.88	12
WIAT®-III Dyslexia Index 2	2–12+ Ages 7–25	Oral Reading Fluency + Pseudoword Decoding + Spelling	.98	1.84	.90	15

Note. AUC = Area Under the Curve estimate. Data for KTEA-3, WIAT-III, and WRAT5 were derived from age-based standard scores. Alpha reliability is reported for the Shaywitz DyslexiaScreen forms, split half reliability is reported for all other tests. All scores from the dyslexia groups were significantly ($p < .01$) lower than those of the nondyslexic matched control groups. Clinical n counts for the KTEA-3 and WIAT-III Dyslexia Index scores at grades K–1 were insufficient (< 20) for group comparisons; for this reason, group means, effect sizes, and AUC estimates for the Dyslexia Index 1 scores were based on a sample of students in grades 1–8, ages 6–10.

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Shaywitz DyslexiaScreen

Shaywitz DyslexiaScreen

- Brief teacher survey for identifying students at-risk for dyslexia.
- Intended for use with students experiencing academic difficulties, but can also be used to screen all students.
- Therefore…universal or Tier 2 capable
- 5 minutes (or less) using an online form
- Digital administration and scoring
- The classification accuracy data indicate moderately high sensitivity and specificity

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What does the SDS measure?

Shaywitz DyslexiaScreen

Observational Ratings Analyze:
1. Phonological,
2. Linguistic, and
3. Academic performance

Ratings based on classroom teacher observations
- Subjectivity limited because teacher answers questions after having worked with student daily for 6-8 weeks.

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Shaywitz DyslexiaScreen

- The Shaywitz DyslexiaScreen offers three forms:
  - **Form 0**: Grade K (Ages 5-6) consists of 10 items.
  - **Form 1**: Grade 1 (Ages 6-7) consists of 12 items.
  - **Form 2**: Grade 2 (Ages 7-8) consists of 10 items.
  - **Form 3:** Grade 3 – to be released soon

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More on Orthographic Processing..

- The KTEA-3 Orthographic Processing Composite (SP + LNF + WRF) subtests involve processing orthographic representations by retrieving them from LTM (Spelling) or recognizing/naming them with automaticity (WRF+ LNF).
- In this way, it involves both the receptive (reading) and expressive (spelling) components of orthographic processing.
- The Orthographic Processing Composite score produced large effect sizes for the SLD and language disorder clinical groups.

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KTEA-3 Reading-Related Subtests and Composites

Orthographic Processing
Spelling
Letter Naming Facility
Word Recognition Fluency

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KTEA–3 and WIAT–III Dyslexia Index Scores

- Ideal for screening purposes due to their brief administration time and clinical sensitivity
- Also sufficiently rigorous to contribute to a more comprehensive diagnostic evaluation

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Essentials of KTEA-3 and WIAT-III Assessment

Kristina C. Breaux,
Elizabeth O. Lichtenberger
ISBN: 978-1-119-07687-2
$55.00
October 2016

Wiley Publishing
www.wiley.com

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KTEA–3 and WIAT–III Dyslexia Index Scores

- Technical & normative tables for Dyslexia Index Scores are available in the Essentials of KTEA-3 and WIAT-III Assessment
- Evaluators without access to this resource may also generate a brief dyslexia screening battery by administering the subtests that contribute to these index scores and interpreting the level and profile of scores.
- For more information, see *Pearson Clinical Assessment Solutions: A Dyslexia Toolkit*, September 2017 by Kristina Breaux, PhD, & Tina Eichstadt, MS CCC-SLP (white paper)

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KTEA–3 and WIAT–III Dyslexia Index Scores

Dyslexia Index	Grades	Subtests
KTEA-3	K-1	Phonological Processing, Letter Naming Facility, Letter & Word Recognition
	2-12+	Word Recognition Fluency, Nonsense Word Decoding, Spelling
WIAT-III	K-1	Early Reading Skills, Spelling
	2-12+	Oral Reading Fluency, Pseudoword Decoding, Spelling

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Knowledge Check:

Before considering which interventions to use, it is important to first determine:

1. The nature of the child's reading disorder
2. The child's strengths and weaknesses in reading and reading related skills
3. The child's processing strengths and weaknesses
4. What worked and didn't work in RtI
5. All of the Above

Knowledge Check!

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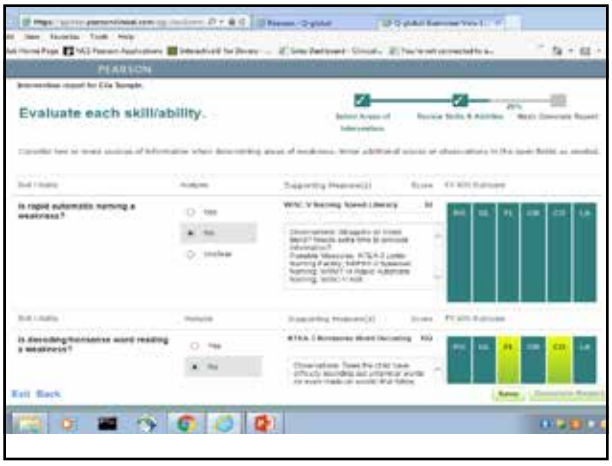
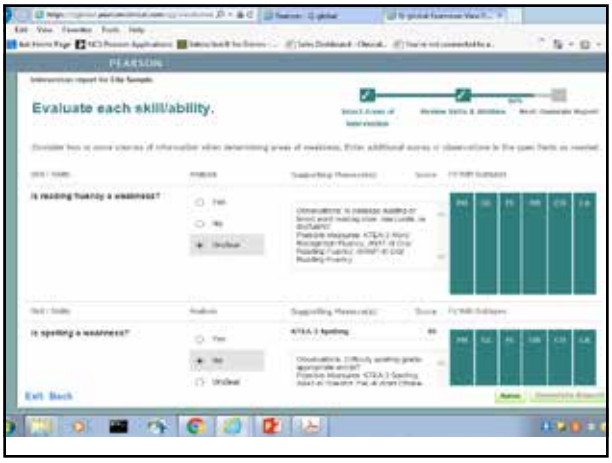
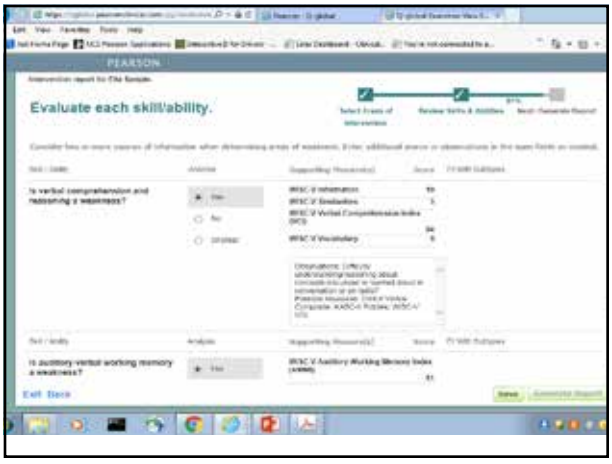
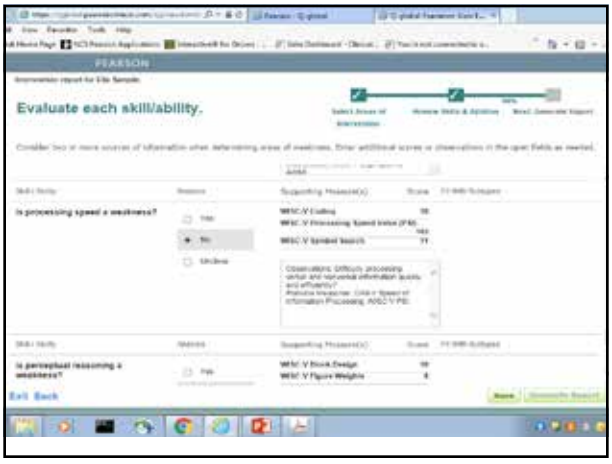
Evaluate each skill/ability.
Is phonological processing a weakness?
Exit Back

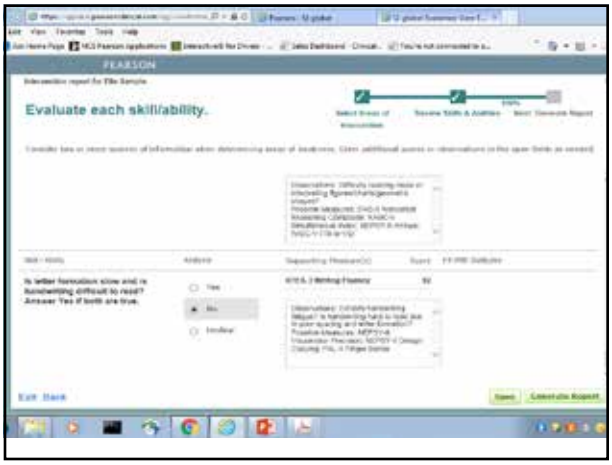

PEARSON
Evaluate each skill/ability.
Is rapid automatic naming a weakness?
Is decoding/nonsense word reading a weakness?
Exit Back

PEARSON
Evaluate each skill/ability.
Is reading comprehension a weakness?
Exit Back


PEARSON
Evaluate each skill/ability.
Is reading fluency a weakness?
Is spelling a weakness?
Exit Back


PEARSON
Evaluate each skill/ability.
Is verbal comprehension and reasoning a weakness?
Is auditory-verbal working memory a weakness?
Exit Back


PEARSON
Evaluate each skill/ability.
Is processing speed a weakness?
Is perceptual reasoning a weakness?
Exit Back



Intervention Guide for LD Subtypes

Intervention Report

Description of Subtype: Mixed Phonological-Orthographic

{Student}'s pattern of performance across key cognitive, language, and academic domains is similar to that of students with *mixed phonological/orthographic deficits*…

Double-Deficit

{Student}'s areas of weakness indicate a double deficit in phonological processing and naming speed. Students with double deficits in phonological processing and naming speed sometimes experience even greater reading difficulty due to difficulty with both the orthographic and phonological aspects of reading…

Dysgraphia

{Student}'s poor handwriting legibility and automaticity suggests that {he} may also benefit from interventions designed for students with *dysgraphia*, which is a disorder that affects handwriting and spelling…

Intervention Guide for LD Subtypes

Intervention Report: Sample

Teach relationships between layers of language (phonology, orthography, morphology, syntax, semantics)

- Ask {Student} to spell groups of words with suffixes that mark tense or number. For example, include words with plural endings pronounced /ez/ (*horses*, *pieces*), /s/ (*bats*), or /z/ (*knees*) (Berninger & Fayol, 2008).

Write for communication

- After alphabet writing work, incorporate writing tasks that involve composing for an audience, such as writing a letter or sharing a story with peers (Berninger, 2012).
- Emphasize legibility and good form, not necessarily perfect penmanship. Reinforce the goal of writing as effective communication.

Intervention Guide for LD Subtypes

Intervention Report: Sample

Examples of Evidence-Based Intervention Programs

If supportive instructional materials are required, examples of products and programs are listed below that are appropriate for {Student}'s grade and learning profile.

Grade 2 – Adult	XXX Reading System	This sequential multisensory program facilitates individual or small group 60-90 minute lessons in decoding and encoding, emphasizing phoneme segmentation, blending, syllabication, and vocabulary building.
Grade K – 5	XXX Reading–Spelling Program	Teaches phonemic awareness, sound/symbol recognition, and syllabication involving kinesthetic/tactile memory among other multisensory strategies. Strands for reading comprehension, written expression, and linguistics are optional.

In Summary…

- We need to understand the nature of a child's reading disorder so we can target instruction and interventions to benefit that child
- Most researchers agree that Dyslexia is characterized by weaknesses in Phonological Processing, Word Reading, Reading Fluency, and Spelling
- Dyslexia may include additional symptoms
  - Dyslexia has high rates of co-morbidity (ADHD, Language Disorders, etc.), that also impact learning

ALWAYS LEARNING

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Comments? Questions?

Wrap-Up

Evaluation Forms

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