Unraveling the Mystery of Dyslexia: Utilizing the Pearson Dyslexia Toolkit

TEDA Conference
December 2019

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Definition of Dyslexia

Dyslexia

Dys
Poor or Inadequate

Lexis
Words or Language

Symptoms

1 Lack of response to treatment
   • Alphabet Writing
   • Phonics/Letter Knowledge

2 Pre-reader difficulties
   • Word Reading/Decoding
   • Reading Fluency
   • Spelling
   • Written Expression
   • Reading Comprehension < Listening Comprehension

3 Reader difficulties

Causes/Correlates

Phonological Processing

Rapid Automatic Naming

Auditory Working Memory

Processing Speed

Associative Memory

Long-term Storage and Retrieval

Orthographic Processing

Risk Factors

• Family History
• Language Impairment/Poor Receptive Vocabulary

Dyslexia Guidelines in Texas - 2018

THE DYSLEXIA HANDBOOK

2018 Update

Procedures Concerning Dyslexia and Related Disorders
**TX Handbook: 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.

**Dyslexia or LD in Reading? Depends upon**
- Where you live
- How the terms are defined

**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

**UNEXPECTED?**
- Definitions often include “unexpected poor performance”
  - Difficult to define unexpected
  - Based on intelligence testing? Or failure to respond to intervention?
- 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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Anise Flowers, Ph.D.
Pearson Clinical Assessment
Unraveling the Mystery of Dyslexia
TEDA December 2019

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) and smaller group sizes
  - Lack of evidence for visual/auditory training, visual-motor activities, vision therapy, tinted lenses, biofeedback, fatty acids

Cognitive Deficits in Dyslexia

- **Primary: Phonological deficit**
- Also have been researched:
  - 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*

Facebook Survey of School Psychologists:
Tell me your thoughts on “Dyslexia” vs “SLD in Reading.”

DYSLEXIA VS SLD

- Same thing
- Medical term
- Different

Facebook Survey of School Psychologists:
Tell me your thoughts on “Dyslexia” vs “SLD in Reading.”

- I get so tired of the discussion of dyslexia vs. SLD vs. learning disability vs. Reading disability. #samething
- To me it's like saying hypertension vs. high blood pressure. Or broken bone vs fractured bone
The purpose of this letter is to clarify that there is **nothing in the IDEA that would prohibit the use of the terms dyslexia, dyscalculia, and dysgraphia in IDEA evaluation, eligibility determinations, or IEP documents.**

**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, useful, or potentially harmful

  » *The Dyslexia Debate*

**Qualifying for Special Education**

1. Student has an IDEA disability condition
2. Student has a need for special education and related services

Specially Designed Instruction (SDI) = adapting the content, methodology, or delivery of instruction to address the unique needs of the student that result from the disability

**Types of Reading Difficulties**

\[ R = D \times LC \]

<table>
<thead>
<tr>
<th>Strong Language Comprehension</th>
<th>Weak Language Comprehension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong Word Reading</td>
<td>Typical Reader</td>
</tr>
<tr>
<td>Weak Word Reading</td>
<td>Dyslexic or Compensator</td>
</tr>
</tbody>
</table>

**Phonological vs Orthographic Processing**

- **Phonological processing disorder and orthographic processing** disorders refer to the particular brain processes at work in people who experience difficulty when they read.

- **An individual who has a phonological processing disorder will have difficulty perceiving and manipulating the phonemes that would enable them to “hear” the sounds of the words they read.**

  
Phonological vs Orthographic Processing

- **Orthographic processing** involves recognizing and remembering the **spatial orientation and sequence of language symbols**. When individuals with orthographic processing disorders attempt to read, their brains have trouble perceiving and/or processing the direction and sequence of written language.


Learning Disorders Reading: Subtypes

1. **Phonological**
2. **Orthographic**
3. **Mixed Phonological-Orthographic**
4. **Language**
5. **Comprehension deficit**
6. **Fluency subtype**

*Dysgraphia (often a co-occurring condition with one of the other listed subtypes)*

1. **LD Reading Subtype: Phonological**
   - Phonological is the core deficit
   - Have difficulty mentally representing the sound patterns of the words in their language
     - Causes great difficulty in using the phonological route to reading and spelling
   - Over-rely on visual and orthographic cues while reading
   - May memorize whole words as a strategy for word recognition
   - Sometimes referred to as dysphonetic or phonological dyslexia.

2. **LD Reading Subtype: Orthographic**
   - Have difficulty in using the visual-lexical route to reading and writing words.
   - Instead, the phonological route to lexicon is used
   - 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 because non-words are usually phonetically decodable
   - Sometimes referred to as surface dyslexia, visual form dyslexia or dyseidetic dyslexia

3. **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
     - 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

3. **LD Reading Subtype: Mixed Phonological and Orthographic**
   - Strong in Listening Comprehension
     - Learn better with direct instruction and experiential learning
   - Mixed LD reading is manifested in weaknesses in:
     - Phonological Processing
     - Decoding
     - Word Reading
     - Reading Fluency, and
     - Spelling
4. LD Reading Subtype: Language

- Have problems with both Oral and Written language
- Referred to as Oral and Written Language Learning Disability (OWL-LD), (Grammatical) Specific Language Impairment (SLI or G-SLI), or Language Learning Disability (LLD)
- Students with OWL-LD show particular difficulty processing grammar and syntax.

5. LD Reading Subtype: Comprehension

- A specific comprehension deficit is sometimes referred to as hyperlexia.
- Hyperlexia can refer to
  - Students who exhibit poor language comprehension skills and exceptional word recognition and decoding skills OR
  - Students with poor language comprehension and relatively good basic reading skills
- Have difficulty with listening comprehension and reading comprehension
  - Read accurately and fluently, but fail to grasp the meaning of what they have read

6. LD Reading Subtype: Reading Fluency

- Students with poor reading fluency due to a naming speed deficit typically have adequate phonological processing skills
- 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.

Pearson Dyslexia Toolkit

<table>
<thead>
<tr>
<th>SCREEN</th>
<th>ASSESS</th>
<th>INTERVENTE</th>
<th>MONITOR</th>
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<tbody>
<tr>
<td>Dyslexia Screener</td>
<td>Relevant Test of Informational Abilities® Third Edition</td>
<td>Informational Reading: Subskills</td>
<td>Informational Reading: Subskills</td>
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<tr>
<td>Multi-syllable</td>
<td>Relevant Test of Informational Abilities® Third Edition</td>
<td>Informational Reading: Subskills</td>
<td>Informational Reading: Subskills</td>
</tr>
</tbody>
</table>
| TEXAS Dyslexia Handbook 2018

Suspicion of Dyslexia or a Related Disorder

What type of instruction is needed?

☑ Standard protocol dyslexia instruction
☑ Specially designed instruction under IDEA
☑ defined under IDEA as “adapting . . . the content, methodology, or delivery of instruction”
☑ Must address the unique needs of the child that result from the child’s disability and must ensure access to the general curriculum so that the child can meet the state’s educational standards (34 C.F.R §300.39(b)(3)).
Referrals

- Suspicion of Dyslexia or a Related Disorder AND the Need for Special Education Services = Evaluate under IDEA
- Suspicion of Dyslexia or a Related Disorder = Evaluate under 504

Two Types of Assessment from Sattler

- Focused = “detailed evaluation of a specific area of functioning
- 504 Evaluation (Dyslexia)

- Diagnostic = “detailed evaluation of a child’s strengths and weaknesses in several areas such as cognitive, academic, language, behavioral, emotional and social functioning”
- Full Individual and Initial Evaluation (FIIE)

TX Dyslexia Handbook (unchanged)
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

Areas for Assessment

Possible Additional Areas

- Vocabulary
- Listening comprehension
- Verbal expression
- Written expression
- Handwriting
- Memory for letter or symbol sequences (orthographic processing)
- Mathematical calculation/reasoning
- Phonological memory
- Verbal working memory
- Processing speed

TX Dyslexia Handbook (unchanged)

Dyslexia Assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>WRMT-III</th>
<th>KTEA-3</th>
<th>WIAT-III</th>
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<tbody>
<tr>
<td>Phonological Awareness</td>
<td>Y</td>
<td>Y</td>
<td>Y (within Early Reading Skills)</td>
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<tr>
<td>Rapid Naming</td>
<td>Y</td>
<td>Y</td>
<td>NO</td>
</tr>
<tr>
<td>Letter Knowledge</td>
<td>Yes</td>
<td>Y (within Letter &amp; Word ID and qualitatively)</td>
<td>Y (within Early Reading Skills)</td>
</tr>
<tr>
<td>Decoding</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Word Recognition</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Fluency</td>
<td>Y (passages)</td>
<td>Y (right words, nonsense words, silent)</td>
<td>Y (passages)</td>
</tr>
<tr>
<td>Spelling</td>
<td>NO</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>Y (sentences)</td>
<td>Y</td>
<td>Y</td>
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Dyslexia Assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>PAL-II</th>
<th>Other</th>
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<tbody>
<tr>
<td>Phonological Awareness</td>
<td>Y</td>
<td>CTOPP2</td>
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<tr>
<td>Rapid Naming</td>
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<tr>
<td>Letter Knowledge</td>
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<tr>
<td>Decoding</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Word Recognition</td>
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<td>Fluency</td>
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<td>GORT-5</td>
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<tr>
<td>Spelling</td>
<td>Y</td>
<td>GORT-5</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>
Do you screen cognitive ability for 504 evaluations?
What tests do you use?
Pearson Level B assessments:
KBIT-2
Ravens-2

8 Areas of Specific Learning Disability (SLD) in IDEIA:
- Basic Reading Skills (BRS)
- Reading Comprehension (RC)
- Reading Fluency (RF)
- Math Calculation (MC)
- Math Problem Solving (MPS)
- Written Expression (WE)
- Oral Expression (OE)
- Listening Comprehension (LC)

Approaches to Pattern of Strengths and Weaknesses Analysis
- The “3 Major Models”
  Most prominent research-based
  - Concordance-discordance method (C-DM; Hale & Fiorello)
  - Discrepancy/consistency method (Naglieri)
  - Flanagan DD-C Model for SLD
- Also
  - Dehn’s PSW model
  - C-SEP

PSW Assessment
- Cognitive tests
- Achievement tests

KTEA3 OR WIATIII Dyslexia Index Scores - Purposes
- Screening
  - Results differentiate between individuals with and without dyslexia.
- Brief administration time & clinical sensitivity
- Identify which students require more frequent progress monitoring, more intensive instruction or intervention, or a comprehensive psychoeducational evaluation.
KTEA3 Dyslexia Index scores

- Identify risk for dyslexia in Kdg – 12th grade or ages 5 through 25
- Obtain Dyslexia Index score in 20 minutes or less
- A single score such as the Dyslexia Index is not sufficient to diagnose dyslexia. Rather, a diagnosis of dyslexia is based on a convergence of evidence gathered from multiple sources.

Dyslexia Index Scores - Purposes

- Evaluation
  - The KTEA-3 Dyslexia Index scores can serve as a starting point for a more comprehensive psychoeducational test battery.
  - If the Dyslexia Index results suggest that further testing is necessary, administer the KTEA–3 Comprehensive Form
- All standard scores from the Dyslexia Index subtests can validly be applied to a more extensive assessment using the KTEA–3 Comprehensive

Predictors of Dyslexia: Early Grades

- Best Diagnostic Predictors:
  - Letter knowledge (name/sound)
  - Rapid automatic naming
  - Phonological awareness
  (Kirby, Parrila, & Pfeiffer, 2003; Schatschneider & Torgesen, 2004)

Predictors: Later Grades
Breaux & Lichtenberger (2016)

- Best Diagnostic Predictors:
  - Decoding fluency
  - Text reading fluency

Not measures of phonological awareness and rapid automatic naming
(Schatschneider & Torgesen, 2004).
Dyslexia Index Scores: Features and Benefits

- Excellent reliabilities (.90s) at every age/grade
- Strong clinical sensitivity
- Administration times range from 12-20 minutes for each score
- Composite structures are based on clinical data as well as a strong empirical foundation
- Results are easy to interpret: 6 categories of Risk for Dyslexia (ranging from very low to very high)
- Manual provides recommendations for next steps
- Response Booklet pages for Spelling subtest (applies to Grades 2-12+ scores) are included as reproducible forms

Dyslexia Index Scores: Features and Benefits

- Useful as a quick dyslexia screener that can also contribute to a more in-depth subsequent evaluation using the KTEA-3 or WIAT-III (without re-administering those subtests)
- Included in each of the Dyslexia Index Manuals:
  - Dyslexia Index composite norms tables, reliability, and validity data
  - Score Computation Form and Graphical Profile (reproducible forms for hand scoring)
  - Interpretation guidance and recommendations for next steps
- Manual can be found in Q-interactive or Digital Assessment Library

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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.

Subtests/Composites Recommended for Dyslexia Testing

KTEA-3:
Orthographic Processing Composite – Spelling, Word Recognition Fluency, and Letter Naming Facility

Associational Fluency subtest

Sound-Symbol Composite - Phonological Processing and Nonsense Word Decoding
WIAT4 & Dyslexia

Features
5 New Subtests
• Phonological awareness
• Orthographic fluency
• Decoding fluency
• Sentence writing fluency
• Orthographic choice (Q-i only)

• Automated Scoring of Essay Composition
• Dyslexia Index Scores in every kit!

PAL-II
Process Assessment of the Learner
Virginia Beringer, Ph.D.
An integrated assessment and intervention package

Reading Subtests

<table>
<thead>
<tr>
<th>Domain</th>
<th>Subtest</th>
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<tbody>
<tr>
<td>Phonological Decoding</td>
<td>Pseudoword Decoding</td>
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<tr>
<td>Morphological Decoding</td>
<td>Find the True Fixes</td>
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<tr>
<td></td>
<td>Morphological Decoding Fluency</td>
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<tr>
<td>Silent Reading Fluency</td>
<td>Sentence Sense</td>
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</table>

Writing Subtests

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<th>Domain</th>
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<tr>
<td>Handwriting</td>
<td>Alphabet Writing</td>
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<td>Copying Task A</td>
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<td></td>
<td>Copying Task B</td>
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<tr>
<td>Orthographic Spelling</td>
<td>Word Choice</td>
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<tr>
<td>Narrative Compositional Fluency</td>
<td>Compositional Fluency</td>
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<td>Expository Note Taking and Report Writing</td>
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<td>Cross-Genre Compositional and Expository Writing</td>
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Reading-Related Subtests

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<tr>
<th>Domain</th>
<th>Subtest</th>
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<tr>
<td>Orthographic Coding</td>
<td>Receptive Coding</td>
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<td>Expressive Coding</td>
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<td>Rimes</td>
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<td>Morphological/Syntactic Coding</td>
<td>Are They Related?</td>
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<td>Does It Fit?</td>
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<td>Sentence Structure</td>
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<td>Words</td>
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<td>Sentences: Listening</td>
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### Reading-Related Subtests (cont.)

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<tr>
<td>RAN/RAS</td>
<td>RAN–Letters</td>
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<td>RAN–Letter Groups</td>
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<td>RAN–Words</td>
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<td></td>
<td>RAS–Words and Digits</td>
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<td></td>
<td>Oral Motor Planning</td>
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<td></td>
<td>Finger Sense</td>
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<td></td>
<td>Finger Localization</td>
</tr>
<tr>
<td></td>
<td>Finger Recognition</td>
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### Intervention Guide for LD Subtypes

**Purpose:**
- Provides targeted intervention suggestions based on research-supported LD subtypes.
- Does not identify or diagnose SLD
- Does not address difficulties attributed to SLD exclusionary criteria (e.g., sensory impairment, intellectual disability, ELL, emotional/behavioral issues)

**7 reading-related subtypes**
- Phonological
- Orthographic
- Mixed Phonological-Orthographic
- Language (OWL-LD, SLI, LLD)
- Comprehension
- Fluency/Naming speed
- Global

**10 hallmark indicators:**
- Cognitive ability
- Phonological processing
- Non-word reading
- Orthographic coding
- Word recognition
- Spelling
- Reading comprehension
- Naming speed
- Listening comprehension
- Reading fluency
Intervention Guide for LD Subtypes

Step 1
Select the area(s) of intervention for the student:
- ✔ Reading
- ✔ Spelling

Step 2
Determine the relative skills & abilities for each of the hallmark and ancillary indicators
- Indicate if the skill is a weakness or a strength
- Consider 2 or more sources of information when rating each skill/ability
- Enter additional data in the open fields

Step 3: Generate Report
Report components:
- Description of subtype
- Pattern of Strengths and Weaknesses
- Suggestions for Intervention
- General Approach
- Naming Speed (if RAN is a weakness, discuss as double-deficit)
- Language Processing: Phonological Processing, Vocabulary
- Basic Reading
- Reading Comprehension
- Reading Fluency
- Spelling
- Handwriting (if handwriting legibility/speed is a weakness)
- Examples of Evidence-Based Programs

Intervention Guide for LD Subtypes

Essentials to remember
- The focus is intervention, not diagnosis
- The skill profile relies on judgment, not calculation
- Interventions are not guaranteed, expect some trial-and-error

Intervention Guide: MEGHAN

What are the areas of Intervention?

Select the areas for which you want to evaluate Meghan’s assessment data for a specific learning disability subtype. This Intervention Guide will provide a report that describes a subtype that is likely fit and provides guidance for tailoring interventions, as well as research-supported programs to consider.

- Reading
- Spelling
Unraveling the Mystery of Dyslexia
TEDA December 2019

Example Report: Meghan

DESCRIPTION OF SUBTYPE: PHONOLOGICAL
Meghan’s pattern of performance across language and academic domains is similar to that of students with a phonological sub-type. Students with a phonological subtype have difficulty meaningfully representing the phonological patterns of words in their languages, which causes great difficulty in using the phonological system to read and spell. In contrast, students with phonological dyslexia rely on letter-to-sound conventions and they have marked difficulty reading nonsense words, but typically show a subtle strength in reading concrete words. A phonological core deficit may be accompanied by deficits in cognitive processing and may impact functioning in other academic skills such as writing.

This report lists accommodation suggestions for Meghan that may be appropriate for this subtype of learning disability. The intervention goals are not intended to identify or diagnose a specific learning disability.

PATTERN OF STRENGTHS AND WEAKNESSES
Meghan’s performance suggests the following pattern of strengths and weaknesses.

Relative Strengths
Listening Comprehension
Noting word
Reading comprehension
Orthographic coding (writing letters and words in working memory)

Weaknesses
Phonological processing
Decoding//Sequence word reading
Spelling
Reading fluency
Word recognition accuracy

SUGGESTIONS FOR INTERVENTION
General Approach
Consider the following recommendations for planning the scope and overall approach to intervention for Meghan.

Determine the specific characteristics that need to be taught:

- Gather data from multiple sources, including teacher feedback, to help identify the specific skills within each content area that need to be taught.

- Use explicit, systematic instruction, and allow discovery.

- Engage students to ensure that the intervention is meaningful and relevant.

- Use materials that explicitly highlight the role of phonics in learning to read, such as changing the initial phoneme or the number of letters in a word. Provide repeated opportunities for students to apply the rules or patterns.

Allow Meghan to discover patterns and rules through word sorting and carefully controlled materials.
Examples of Evidence-based Programs

ALPHABETIC Phonics™
Author: Gin, A. E.
Publisher: Education Publishing Service
Category: Phonological Processing, Oral Expression, Decoding, Comprehension, Spelling, Handwriting
Age Range: 5-7
Grade Range: PK-6

ANIMATED LITERACY™
Author: Snow, I.
Publisher: J. S. Holmes Creations
Category: Phonological Processing, Decoding, Vocabulary, Comprehension, Fluency
Age Range: 4-6
Grade Range: PK-5

LINZAMOOR PHONEME SEQUENCING (LPSS) PROGRAM FOR READING, SPELLING, AND SPEECH™
Author: Lindamood, P. C.; & Lindamood, P. D.
Publisher: Pro-Ed
Category: Phonological Processing, Decoding, Spelling
Age Range: 5-5
Grade Range: PK-5

Case Study – John

Background Information

• Currently: 12 years, 5 months, 6th grade
• Preschool history of expressive & receptive language delays
• In 4th grade, diagnosed with ADHD, Inattentive type and dysthyemic disorder
• Sixth grade teacher has concerns about academic performance in reading and writing

Developed in collaboration with Gail Cheramie, Ph.D.

Academic History

• John was identified as at-risk in both reading and writing at the end of 4th grade and placed in the Fountas & Pinnell Leveled Literacy Intervention (LLI) program. Continued in the program through 5th grade, but made poor progress.
• Currently his reading in DRA3 is at Level 30 and should be at Level 60.
• John did not pass the STAAR in 4th and 5th grades.
• John’s teacher indicates very poor reading comprehension and he failed reading in 5th grade (report card grade=64).

KABC-II NU Scores

```
<table>
<thead>
<tr>
<th>Scale</th>
<th>Scaled Score</th>
<th>Index</th>
<th>Standard Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Recall</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Recall</td>
<td>8</td>
<td>Sequential/Gsm</td>
<td>91</td>
</tr>
<tr>
<td>Rover</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block Counting</td>
<td>7</td>
<td>Simultaneous/Gv</td>
<td>97</td>
</tr>
<tr>
<td>Triangles</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlantis</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rebus</td>
<td>9</td>
<td>Learning/Glr</td>
<td>94</td>
</tr>
<tr>
<td>Story Completion</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pattern Reasoning</td>
<td>10</td>
<td>Planning/Gf</td>
<td>93</td>
</tr>
<tr>
<td>Verbal Knowledge</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riddles</td>
<td>9</td>
<td>Knowledge/Gc</td>
<td>97</td>
</tr>
</tbody>
</table>
```

FCI

Fluid Crystallized Index

SS 93

Overall, John demonstrates well-developed cognitive/intellectual ability, reasoning, and problem-solving skills as indicated by the Fluid Crystallized Index standard score of 93 in the average range.

Additional Tests

• Gs: WISCV PSI = 86
  • Coding = 7
  • Symbol Search = 8

• Ga: CTOPP-2 = 82
  • Elision = 6
  • Blending words = 8
  • Phoneme Isolation = 6
**KTEA-3: Achievement**

<table>
<thead>
<tr>
<th>Cluster/Test</th>
<th>Standard Score</th>
<th>Composite</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter &amp; Word Recognition</td>
<td>79</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>80</td>
<td>Low average</td>
<td></td>
</tr>
<tr>
<td>Reading Composite</td>
<td></td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Written Expression</td>
<td>76</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Spelling</td>
<td>74</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Written Language Composite</td>
<td>75</td>
<td>Below average</td>
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</tr>
<tr>
<td>Math Concepts and Applications</td>
<td>84</td>
<td>Low average</td>
<td></td>
</tr>
<tr>
<td>Math Computation</td>
<td>94</td>
<td>Average</td>
<td></td>
</tr>
<tr>
<td>Math Composite</td>
<td>86</td>
<td>Low average</td>
<td></td>
</tr>
</tbody>
</table>

**PSW-A Data Summary**

**CONCLUSIONS**

- All data converge to indicate that John displays a significant academic deficit in Basic Reading Skills.
- John has several cognitive strengths including short-term memory (Gsm), long-term storage and retrieval (Glr), fluid reasoning (Gf), and crystallized knowledge (Gc).
- He has specific weaknesses in visuospatial processing (Gv:Vz), phonetic coding (Ga:PC), and processing speed (Gs).

- John's weakness in phonetic coding is directly related to his deficit in Basic Reading Skills.
- The deficit in phonological processing reflects difficulty with the phonological skills of segmentation and manipulation of phonemes (phonemic awareness).
- These deficits affect the acquisition of basic reading skills and lead to difficulties in decoding unfamiliar words and recalling sound-symbol associations for letter patterns.
- John's spelling skills are also affected by this deficit.

- John's overall level of intellectual ability falls within the average range (KABC-II Composite=93; FCC=94), and his academic achievement in reading is unexpected.
- The cognitive weakness is domain specific.
- John does meet the criteria for a learning disability (LD) in Basic Reading Skills based on this pattern of strengths of weaknesses.

- **BUT WHAT IF WE WANT TO ADDRESS DYSLEXIA?**
Unraveling the Mystery of Dyslexia
TEDA December 2019

Anise Flowers, Ph.D.
Pearson Clinical Assessment

11/14/2019

KTEA-3: Achievement

<table>
<thead>
<tr>
<th>Cluster/Test</th>
<th>Standard Score*</th>
<th>Composite</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonological Processing</td>
<td>81</td>
<td>Low average</td>
<td></td>
</tr>
<tr>
<td>Nonsense Word Decoding</td>
<td>68</td>
<td>Average</td>
<td></td>
</tr>
<tr>
<td>Listening Comprehension</td>
<td>83</td>
<td>Low average</td>
<td></td>
</tr>
<tr>
<td>Letter Naming Facility</td>
<td>86</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Sound Symbol</td>
<td>71</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Decoding</td>
<td>72</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Dyslexia Index Score</td>
<td>71</td>
<td>High Risk for Dyslexia</td>
<td></td>
</tr>
</tbody>
</table>

Dyslexia Assessment Areas

- Letter knowledge
- Direct measurement of this skill was not performed. John knows all letters and associated sounds. Such items are included at the onset of subtests, and John’s basal was above this level.
- Reading words in isolation
- Decoding unfamiliar words accurately
- KTEA-3 Letter & Word Recognition=79, Nonsense Word Decoding=68. Low to low average standard scores indicate significant difficulties in word decoding (Decoding Composite=72).
- Reading fluency (both rate and accuracy are assessed)
- WIATIII Oral Reading Fluency = 79

John & Dyslexia

John demonstrates the primary academic skill characteristics of dyslexia: Difficulty reading words in isolation; Difficulty accurately decoding unfamiliar words; Difficulty with oral reading (slow, inaccurate, or labored); and Difficulty spelling. He displays a weakness in phonological awareness which is presumed to be the causative or underlying factor in the reading deficit. This pattern does exist within adequate ability to learn and is unexpected. Therefore, John meets the TEA criteria for the condition of dyslexia.