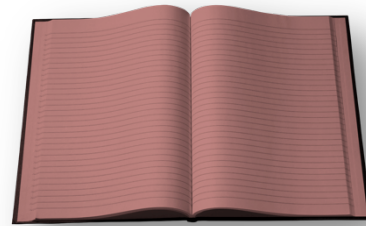


ABC

Decoding the Cognitive Assessment



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Definition of Dyslexia

International Dyslexia Association:

*“Dyslexia 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.”*

Importance of Evaluation

Early Diagnosis

- **Don't delay!** "Reading problems are not outgrown or temporary, they are persistent," (Shaywitz, 2003)
- Identifies source of problem
- Identifies patterns of strengths and weaknesses

Intervention Planning

- Specialized approach
- Instruction should begin at student's current level

Documentation

- Determines eligibility, accommodations, modifications, etc.

Red Flags: Clues



Pre-School Years:

- Difficulty with rhyming
- Difficulty learning letter names
- Persistent “Baby Talk”
- Delays in acquiring appropriate speech/language
- Mixes up sequence of sounds (i.e. “Jothanan” for “Jonathan”)

Primary Grades:

- Difficulty blending sounds together (i.e. “s” “a” “t” → sat)
- Difficulty understanding that words come apart (i.e. *sat* → “s” “a” “t”)

Red Flags: Clues (cont.)

Primary Grades (cont.)

- Reading errors
- Avoids reading
- Difficulty with sound/symbol connection

Second Grade and Above

- Slow progress in acquiring reading skills and strategies
- Difficulty learning phonetic rules (i.e. magic “e”, digraphs such as “sh”, “ph”, “th”)
- Trouble remembering dates, names, lists
- Stronger listening comprehension than reading comp.
- Disastrous spelling

High Level Thinking Processes (Shaywitz, 2003)

- Great curiosity
- Vivid imagination
- Strong problem solving skills
- Strong listening comprehension
- Maturity
- Solid understanding of new concepts
- Creativity
- Talented with blocks, puzzles, building models

Components of Comprehensive Evaluation

- Background Information/History
- Observation
- Intellectual Ability
- Language
- Information Processing
- Academics (Reading, Spelling, Math)

Background Information/History

- Family History
- History of Delayed Speech/Language
- Previous/Current Intervention
- Developmental Milestones
- Relevant Medical History
- Teacher/Tutor Interview

Observation

School and during testing sessions:

- Level of Engagement (i.e. on/off task)
- Participation
- Level of Understanding
- Pattern of Errors
- Guessing
- Over-reliant on context clues

Intellectual Ability

Key Points:

- Discrepancy model no longer utilized
- Oral language is a solid predictor of reading skills
- Verbal vs. Nonverbal tasks
- Quality of verbal responses
- Artificially depress IQ scores

Language

- Expressive and Receptive
- Low Level vs. High Level
- Phonemic Awareness
 - Core factor that separates readers
 - Auditory skill
 - Ability to process and manipulate individual sounds
 - ID of sounds (“count or say each sound”)
 - Blending (i.e. “c” “a” “t” → “cat”)
 - Segmenting
 - Adding, deleting, moving sounds in words

Language: Phonemic Awareness (cont.)

- *“Phonemic awareness is more highly related to learning to read than intelligence, reading readiness, and listening comprehension.”*

Keith Stanovich

- *“Phonemic Awareness is the core and causal factor that separates normal readers from disabled readers.*

G. Reid Lyon

Information Processing

- Short-Term Working Memory
- Phonological Memory
- Auditory Processing (discrimination)
- Visual Processing (discrimination and sequencing)
- Executive Functioning

Academics: Reading Assessment

Word Identification

- Regular words (i.e. garden, quote, graze)
- Irregular words (i.e. island, sure, come)

Sound-Symbol Knowledge

- Ability to produce appropriate sounds (phoneme) with corresponding letters
 - *Pseudo Words (i.e. flaip, cheed, slaun)
 - *Letters/ Sounds (i.e. vowel teams, oi/oy, r-controlled, igh, tion, ture, etc.)

Academics: Reading Assessment (cont.)

Reading Fluency

- Speed and accuracy
- Automaticity
- Number of Words Read Correct (WRC)/Minute
- Number and Types of Errors
- Number of Self-Corrections
- Use of Intonation
- Mindful of Punctuation
- Pauses, breaks, “Um...”
- Laborious oral reading?
- Overall quality of oral reading

Academics: Reading Assessment (cont.)

- Reading Comprehension
 - Read several passages and answer comp questions
 - Often, dyslexic students do fairly well due to solid high-level language skills
 - Learned usage of context clues
 - Vocabulary skills may interfere with comprehension
 - Slow, deliberate, laborious oral reading

Academics: Spelling

- Spelling of individual words from memory (phonological, visual)
- Decoding (Reading) vs. Encoding (Spelling)
- Linked to reading; pairing letter-sounds
- Patterns of letters that cluster (i.e. igh, eigh)
- Plurals (i.e. s, es, ies)
- Regular (i.e. church) and Irregular words (i.e. captain)
- Dependent also on ease or difficulty of letter formation

Academics: Writing

- Difficulties in spelling (chooses familiar words)
- Difficulties in handwriting (letter formation, spacing)
- Verbal explanation does not match written expression
 - Limited written words
 - Quality of words
- Poor editing skills (proofreading)

Academics: Math

- Similar to reading, math ability involves many cognitive processes/systems:
 - Conceptualize number sense
 - Think logically
 - Memorize math facts
 - Organize thoughts
 - Edit work, neatness
 - Read word problems

Academics: Math (cont.)

- Discuss, explain, evaluate response
- Math Difficulties:
 - Sequencing
 - Short-term working memory
 - Orientation of symbols
 - Number reversal
 - Sign Confusion
 - Laborious oral reading

Interventions “Overcoming Dyslexia”

Shaywitz, 2003

Systematic, multi-sensory, direct instruction in:

- Phonemic Awareness
- Phonics Instruction
- Repetitive Practice of skills
- Application of skills in reading, spelling,
written expression
- Fluency Training
- Enriched Language Experiences