Literacy how

Empower teaching excellence.

Assessing and Instructing Students with SLD/Dyslexia

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The Many Faces of Dyslexia

1. The differences are personal.

2. The identification is informed by scientific and educational research.

3. The treatment is educational.

4. The understanding is scientific.
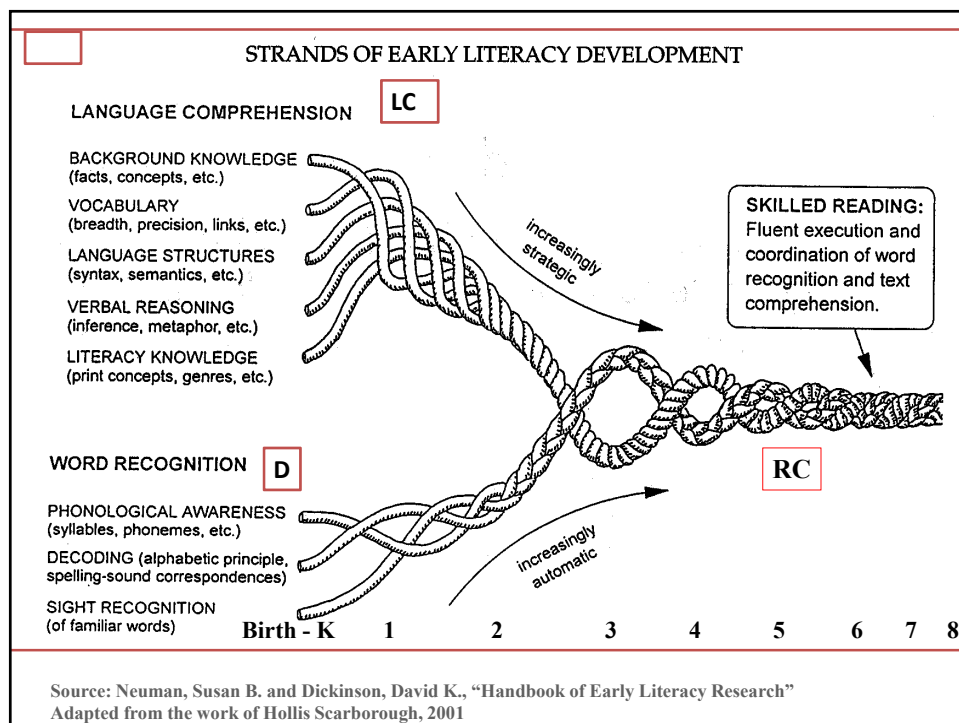
Margaret Byrd Rawson, 1996

What We Know From Research

Thousands of studies have addressed these critical questions:

- How does a good reader read?
- How do students learn to read?
- Why do some students fail to learn easily?
- What is the relationship between spoken language and reading?
- How can we be most helpful to students with problems?

Moats and Dakin, 2008

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STRANDS OF EARLY LITERACY DEVELOPMENT

LANGUAGE COMPREHENSION — LC

BACKGROUND KNOWLEDGE (facts, concepts, etc.)
VOCABULARY (breadth, precision, links, etc.)
LANGUAGE STRUCTURES (syntax, semantics, etc.)
VERBAL REASONING (inference, metaphor, etc.)
LITERACY KNOWLEDGE (print concepts, genres, etc.)

increasingly strategic

SKILLED READING: Fluent execution and coordination of word recognition and text comprehension.

WORD RECOGNITION — D — RC

PHONOLOGICAL AWARENESS (syllables, phonemes, etc.)
DECODING (alphabetic principle, spelling-sound correspondences)
SIGHT RECOGNITION (of familiar words)

increasingly automatic

Birth - K   1   2   3   4   5   6   7   8

Source: Neuman, Susan B. and Dickinson, David K., "Handbook of Early Literacy Research"
Adapted from the work of Hollis Scarborough, 2001

Simple View of Reading (D x LC = RC)
(Gough & Tunmer, 1986)

Phonological Skills

	Poor Word Reading	Good Word Reading
Poor Comp **Nonphon. Language Skills**	Garden Variety Poor Readers: Majority of poor readers (weak phon processing AND comprehension-related issues)	Specific Comprehension Deficit (weak vocab, morphology, syntax, discourse-level processing & comp strategies)
Good Comp	*Dyslexic/RD (phonological processing problems - including decoding and encoding)*	Skilled readers

Dyslexia: Addressed in LD Guidelines

Specific Word Decoding Difficulties	Specific Reading Comprehension Difficulties	Mixed Reading Difficulties
• Nonalphabetic Word Reader • Inaccurate Word Reader • Nonautomatic Word Reader	• Nonstrategic Comprehender • Suboptimal Comprehender	• Mix of Both Word Recognition and Comprehension Difficulties

Guidelines for Identifying Children with Learning Disabilities (2010)

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CSDE Working Definition of Dyslexia: Essential Components

– Is **a Specific Learning Disability**/ Neurobiological in Origin

– **Impacts Reading**

  – Decoding

  – Accurate Word Recognition

  – Fluent Word Recognition

  – Spelling

– Is **Unexpected** and/or **Inconsistent** with Student's Other Abilities

– **Persists** Despite the Provision of Appropriate Instruction

– Results from Significant Deficits in **Phonological Processing** (i.e., a persistent difficulty in the awareness of and ability to manipulate the individual sounds of spoken language).

IEP Manual and Forms (CSDE, 2006, 2015)
http://www.sde.ct.gov/sde/lib/sde/pdf/deps/special/sld_workgroup/sld_dyslexia_faq.pdf

Dyslexia as a Subcategory of SLD

Dyslexia is a sub-category of Specific Learning Disability (SLD) and has been added so that the Department can distinguish students with Dyslexia from other students with SLD who are reported in this disability category. For a child to be identified as "SLD/Dyslexia," the child must first meet the overall eligibility requirements for SLD and then meet the more specific requirements for Dyslexia as follows:

IEP Manual and Forms (CSDE, 2006, 2015)

Specific Word Reading Difficulty Subgroup

- Otherwise known as *dyslexia*
- Most common and best understood type of learning disability because they can be identified early
- Primary difficulty is in the phonological component of language
  - Problems with word recognition that are rooted in difficulties with PA; impact on decoding, encoding (spelling), and fluency (inaccurate reading and/or non-automatic reading)
- Other components of language system are usually intact (e.g., syntax, semantics); listening comp and oral vocabulary is at least average

Specific Reading Comprehension Subgroup

- At least average phonological and word recognition skills (no history of decoding difficulties)
- Reading comprehension problems linked to *oral* **language** comprehension difficulties and/or *oral* vocabulary knowledge
- Basis is in **oral language** development
- Many of these students, though struggling with **language** comprehension, don't qualify for speech and language support
- Many of these students' difficulties emerge later (LERDs)
- May have reading fluency difficulties related to **language** comprehension

Mixed Reading Difficulty Subgroup

- Difficulties with phonological skills that impact word recognition
- Poor reading comprehension and fluency that may be caused by decoding AND language comprehension difficulties
- Difficulties with oral comprehension and/or vocabulary
- Difficulties emerge early but persist even if decoding is addressed

Each Profile of Reading Difficulties:

- Has different intervention needs (e.g., Aaron et al., 2008; Spear-Swerling, 2015)
- Has different needs for progress-monitoring (e.g., Spear-Swerling, 2015)
- Tends to benefit from different types of assistive technology (Erickson, 2013)
- May be associated with a variety of underlying causes (e.g., intrinsic learning disabilities, inadequate instruction, limited exposure to English language/literacy)

Louise Spear-Swerling, 2016

Reading Profiles and Dyslexia

- Children with dyslexia typically have the first profile (SWRD)
- Other reading disabilities besides dyslexia exist
- Many other considerations besides profile information are required to diagnose dyslexia and other SLDs in reading
- Children with all profiles of reading difficulty, including those with SLD, can be helped with good instruction and intervention

Louise Spear-Swerling, 2016

National Early Literacy Panel

- National Early Literacy Panel (2003-2008) reviewed research on the teaching of reading in preschool and kindergarten
- Largest meta-analysis of research data on the teaching of reading during these years (examined more than 7000 potential studies, about 400-500 were included in the final review)
- Set out to determine which skills needed to be taught early on and what confers literacy learning advantages to young children

Tim Shanahan, 2015

Strong to Moderate Predictors

Alphabet Knowledge

Concepts About Print

Phonological Awareness

Oral Language

Writing Name/Writing

RAN (Rapid Automatic Naming/Lexical Access)

Tim Shanahan, 2015

KH [2]1

Critical Reading Skills for Early Identification and Intervention

- Phonological awareness
- Accurate and automatic letter naming
- Letter-sound association
- Word reading accuracy and fluency
- Passage reading fluency and comprehension

Moats and Dakin, 2008

KH [2]1   Kim Herard, 9/4/2016

CSDE Working Definition of Dyslexia:
Essential Components

Early identification of phonological processing deficits and intervention may minimize educational impact.

"Unless they (children) understand that words have sound segments at the level of the phoneme,

they cannot take advantage of an alphabetic script" (Liberman, Shankweiler, & Liberman, 1989).

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Four Types of Assessments

TYPE	DESCRIPTION/USE	PURPOSE
Outcome (Summative) Formal	Evaluate success of a program or a school based on student performance after instruction is completed (standardized).	"Reaching our goals"
Universal Screening (Formative) Formal	**Identify students who need more intense assessment to determine the potential for intervention. External benchmarks or norms are used.**	**"First Alert"**
Progress Monitoring (Formative) Formal	Determine student progress over time as compared to a validated trajectory and to plan differentiated instruction.	"Growth Charts"
Diagnostic (Formative) Formal or informal	Understand student performance in authentic context, especially to inform instruction and intervention strategies. These are most closely aligned with instruction.	"In-depth View"

Universal Screening

- As early as pre-school, universal screeners can identify children at risk for reading difficulties.
- Strongest indicators of *dyslexia* in K are difficulties with: phonemic awareness, learning letter-sound relationships, and learning to decode using phonemic decoding strategies(1st grade)
- It's not always possible to rule out if poor performance is due to dyslexia or other other reasons: poverty, limited exposure to Standard English.
- CSDE Menu Referenced here

Screening for Dyslexia

- Timed tests of *letter naming or letter-sound associations* in kindergarten and early first grade

- *Phoneme awareness* tasks in kindergarten and beginning first grade level

- Direct measures of *decoding and word recognition* toward the middle and end of first grade and beyond

- *Oral reading fluency*, a timed test that combines reading rate and accuracy, once the student can read connected text
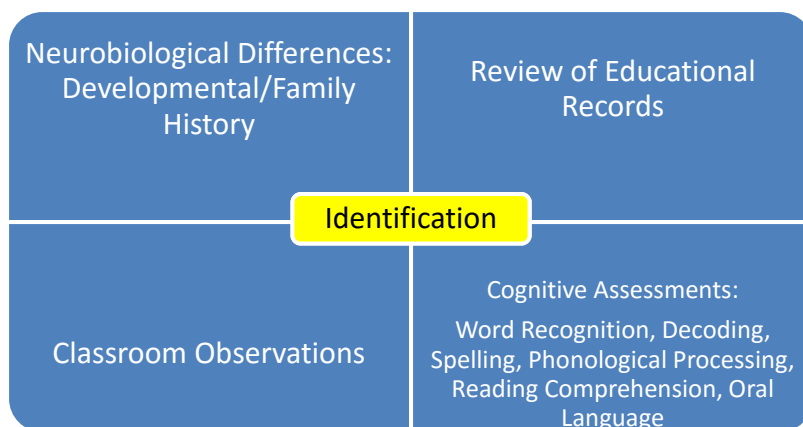
Moats and Dakin, 2008

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Need to Dig Deeper

"CBMs are tests that are designed and constructed using classroom materials in the hope of measuring what has actually been taught."

Farrell, 2012

However, CBMs don't tell us everything we need to know – especially if a student is at risk.

Diagnostic assessments can tell us WHY a student is struggling by providing information on specific skills that a student may or may not have mastered.

Dyslexia: Formal Evaluation

Neurobiological Differences: Developmental/Family History	Review of Educational Records
Identification	
Classroom Observations	Cognitive Assessments: Word Recognition, Decoding, Spelling, Phonological Processing, Reading Comprehension, Oral Language

Assessment of Dyslexia: A Component-Based Approach

- Family and student developmental and school history
- Phonological Processing (phonological awareness, phonological memory, rapid automatic naming)
- Decoding, word recognition, and spelling
- Orthographic Processing (awareness and memory)
- Oral reading in context (sentences and paragraphs)
- Passage- level reading comprehension
- Receptive vocabulary
- Writing skills (sentence and paragraph)
- Math skills (computation, reasoning, and fluency)

Lowell, Felton, and Hook, 2014

What is Phonological Processing?

- The neurological mechanisms by which we use speech sounds to process oral and written language
- It includes 3 main skills:
  - Phonological awareness – the conscious awareness of sound patterns in words)
  - Phonological memory – the ability to store representations of speech sounds in memory)
  - Rapid naming – the ability to retrieve language labels in series from memory with speed and accuracy

Melissa Farrall, 2012

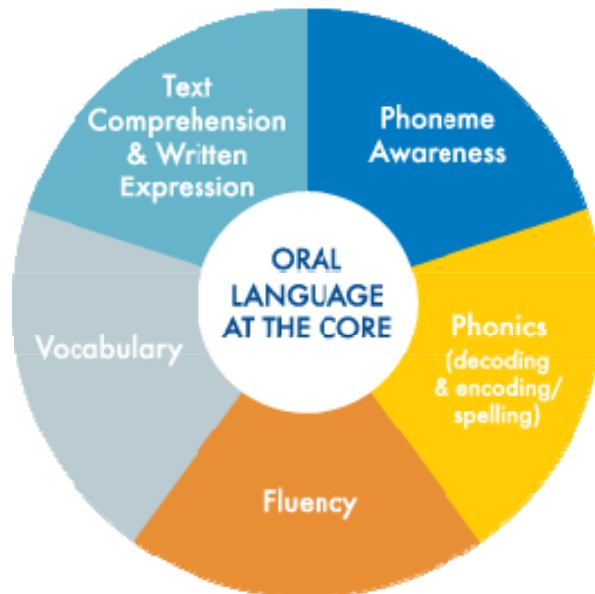## How to Assess Phonological Processing

- Phonological (Phonemic) Awareness (PA)
  - Robertson and Salter
  - CTOPP-2 (Segmenting, Blending, Elision)
  - Woodcock Reading Mastery Test
- Phonological Memory (i.e., Working Memory / Attention) (PM)
  - Sentence recall/ story recall
  - WISC – digit span
  - CTOPP-2 – digit span; nonsense word repetition
- Processing/Naming Speed (PS/NS)
  - Rapid Automatized Naming – objects, colors, letters, numbers (RAN speed) – CTOPP-2
  - Word retrieval

CSDE Working Definition of Dyslexia: Essential Components

Without **targeted, systematic** and **explicit instruction** and the provision of accommodations, students with dyslexia may have:

Reduced reading experiences that can impact the growth of vocabulary and background knowledge,

Difficulty with written expression,

Difficulty learning a second language, and/or
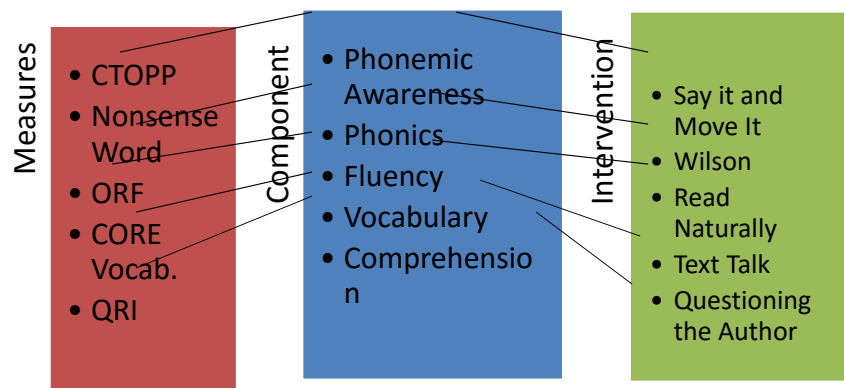
Behavioral or emotional reactions

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The First Literacy How Reading Wheel (based on the National Reading Panel)
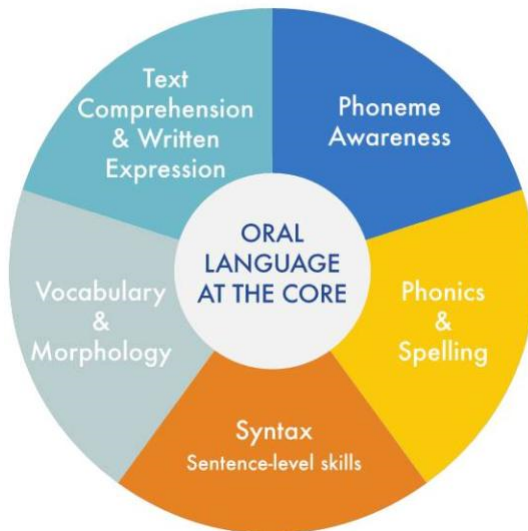

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Linking Assessment Data to Reading Interventions

Measures	Component	Intervention
• CTOPP • Nonsense Word • ORF • CORE Vocab. • QRI	• Phonemic Awareness • Phonics • Fluency • Vocabulary • Comprehension	• Say it and Move It • Wilson • Read Naturally • Text Talk • Questioning the Author

The Literacy How Reading Wheel©

> "Each new reader comes to reading with a 'fresh' brain -- one that is programmed to speak, see, and think, but not read. Reading requires the brain to rearrange its original parts to learn something new." (Maryanne Wolf)
>
> *"Teaching Reading is Rocket Science."*
> *(Louisa Moats)*

Literacy How, Inc.

Dyslexia and Reading Disabilities: A **Continuum** of Severity ….

Mild	Moderate	Severe

…that requires a **continuum** of instruction

Tier 1	Tier 2	Tier 3

…and increasing amounts of teacher knowledge and expertise

High	Higher	Highest

Expert Teaching is the Treatment

"One of the most important conclusions from research is that for children with learning problems, learning is hard work. A corollary to this finding is that for their teachers, instruction is very hard work and requires an enormous amount of training and support. Children who have difficulty learning to read or completing mathematics problems will likely not benefit from 'more of the same' but require an **alternative method of teaching** to assist their learning."

Semrud-Clikeman, 2005

Common Elements of Successful Interventions

1. They include multiple instructional components, but always focus on *explicit* and *systematic* instruction in *phonology* and the *alphabetic code*.
2. They are *engaging* and *interactive*, often incorporating manipulatives.
3. They allow students *many opportunities to respond.*
4. Students are provided *many opportunities to practice* through *cumulative reviews* to support *mastery learning*.
5. Data are used to *monitor progress* and ensure *intervention fidelity*.

Al Otaiba, Connor, et al., 2009

Progress Monitoring and Data Analysis

Dual Discrepancy

- **Discrepancy 1:** The student is found to be performing academically at a level significantly below that of his or her typical peers (**discrepancy in initial skills or performance relative to peers).**

- **Discrepancy 2:** Despite the implementation of one or more well-designed, well-implemented interventions tailored specifically for the student, he or she fails to 'close the gap' with classmates (**discrepancy in rate of learning relative to peers).**

LD Guidelines, 2010 (page 49)

Structured Literacy Instruction Includes Two Important Components

- Elements of language are taught to address the language basis of the SLD/dyslexia – for example, sounds and symbols, meaning (semantics), and sentence structure (syntax).

- Principles of instruction that guide how the elements are taught (for example, explicit, cumulative, and diagnostic teaching).

https://dyslexiaida.org/effective-reading-instruction/

Elements of Structured Literacy Instruction

1. Phonology
2. Sound-symbol Association
3. Syllable Instruction
4. Morphology
5. Syntax
6. Semantics

Principles of Instruction

- **Explicit**: Deliberate teaching and explanation of all concepts with continuous student-teacher interaction
- **Systematic**: Material follows the logical order of the language from easier to more difficult and each skill/step requires mastery before moving on
- **Cumulative**: Each step is based on previously learned concepts
- **Diagnostic:** Instruction is individualized based on formal and informal data including observation of reading behaviors
- **Prescriptive**: Scaffolds used to manage the level of difficulty and corrective feedback is given so students know how monitor their reading errors

Comparison of RTI Approaches

	Problem Solving	*Standard Treatment Protocol*
Universal Screening	Class-wide assessment/universal screening is administered to determine the effectiveness of classroom instruction. Struggling readers are identified.	
Tier 1	Frequent progress monitoring is conducted to assess struggling students' performance levels and rates of improvement.	
Tier 2	A team makes instructional decisions based on an individual student's performance. Struggling students are presented with a variety of interventions, based on their unique needs and performance data.	The person delivering the intervention makes instructional decisions that follow a standard protocol. Struggling students are presented with one standard, validated intervention that addresses a variety of skills.
Tier 3	Students whose progress is still insufficient in Tier 2 may receive even more intensive instruction. Depending on a state's or district's policies, some students may qualify for special education services based on the progress monitoring data. In some states or districts, they may receive either an abbreviated or comprehensive evaluation for the identification of a learning disability.	

http://iris.peabody.vanderbilt.edu/module/rti01-overview/cresource/q2/p05/

Standard Treatment Protocol

- A single, consistent intervention is used
- This ensures accurate implementation – that is, treatment fidelity.
- The interventionists must receive comprehensive training.
- 'They also need to receive ongoing support and professional development while delivering the standard treatment protocol procedures to ensure that the intervention is delivered correctly.'

Problem-Solving Approach

The student intervention teams meet to discuss what will work best for the individual student. This team will use a menu of intervention options that begins with assessment data that is diagnostic in nature so that the student will receive an intervention that is matched to his/her profile and academic needs.

'**On the other hand, the quality of the instruction depends on the skills, knowledge, and training of the team personnel who plan each individualized program**.'

http://iris.peabody.vanderbilt.edu/module/rti01-overview/cresource/q2/p05/

Intensive Tier 3 Intervention

WORD READING	SPELLING	COMPREHENSION
Letter Knowledge (Accuracy & Automaticity) **Phonemic Awareness** **Phonics / Decoding** (Accuracy & Automaticity)	**Sound – Symbol** (Automaticity) **Word Spelling** **(Accuracy)** **Sentence Dictation** **(Accuracy)**	**Reading Comprehension** Text Reading (at reading level) Vocabulary Comprehension Monitoring Inference Making Text Components
High Frequency Words (Accuracy & Automaticity) **Repeated Accurate Practice** (Automaticity) Nonsense & Real Words Phrases, Sentences, Passages	**Morphology**	**Listening Comprehension** Text (above reading level) Vocabulary Comprehension Monitoring Inference Making Text Components
Morphology		

Tim Odegard, 2016

The Team Approach with Strategies

Student

Parents/Guardians

Classroom Teacher

Content Area Teachers

Special Educator

School Psychologist

Reading Specialist

Intervention Specialist

Occupational Therapist

Speech & Language Pathologist

- Continuous and proactive communication between and among team members
- Accommodations and modifications at school and home
- Regular progress monitoring and reporting
- Gradual release of responsibility to student

Moats and Dakin, 2008

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Social/Emotional Consequences

- Frustration, fear, anxiety
- Learned/chronic helplessness
- Avoidance behaviors/misbehaviors
- Trouble expressing self in social situations
- Feelings of inadequacy

Moats and Dakin, 2008

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Characteristics of the
Successful Student with Dyslexia

- Ability to solve problems and navigate in spite of the learning difficulty (i.e., resilience, flexibility, self-advocacy)

- One or more strengths that provide success and bolster self esteem

- Strong, constant, supportive relationship with at least one adult who believes in the child's worth and capabilities (i.e., role model, advocate, mentor, charismatic other)

Moats and Dakin, 2008

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Thank You!!

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