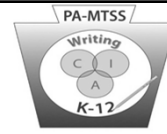**Prevention, Treatment, and Diagnosis
of Specific Reading and Writing Disabilities
within a Multi-Tiered System of Support (MTSS)**

Lana Edwards Santoro, Ph.D.

Jennifer Collins, D.Ed.

1

2

PaTTAN's Mission

The mission of the Pennsylvania Training and Technical Assistance Network (PaTTAN) is to support the efforts and initiatives of the Bureau of Special Education, and to build the capacity of local educational agencies to serve students who receive special education services.

3

PDE's Commitment to Least Restrictive Environment (LRE)

Our goal for each child is to ensure Individualized Education Program (IEP) teams begin with the general education setting with the use of Supplementary Aids and Services before considering a more restrictive environment.

4

Agenda

1. Why is Language Important for the Prevention, Treatment, and Diagnosis of Specific Reading and Writing Disabilities?
2. How Can the Tier 3 Problem Solving Process be Used to Assess and Treat Students with Reading and Writing Disabilities?
   a. Conducting Diagnostic Assessment
   b. Determining Student Instructional Profiles
   c. Selecting Interventions *(with an emphasis on Spelling-Reading)*
3. How Can it *All* be Pulled Together?: RtII/SLD Determination and Case Study Application

5

Learning Intentions

- Define specific reading and writing disabilities within the context of a continuum of language-based deficiencies
- Understand characteristics of severe reading and writing disabilities
- Contextualize diagnosis, prevention and treatment of reading and writing disabilities within MTSS
- Review a continuum of technically adequate measures that enhance diagnostic utility and treatment outcomes
- Review a continuum of evidence-based methodologies
- Discuss RtII/SLD determination using case study

6

Why is Language Important for the Prevention, Treatment, and Diagnosis of Specific Reading and Writing Disabilities?

Some people there are who, being grown, forget the horrible task of learning to read. It is perhaps the greatest single effort that the human undertakes, and he must do it as a child. . .[it is] the reduction of experience to a set of symbols. For a thousand thousand years these humans have existed and they have only learned this trick –this magic – in the final ten thousand of the thousand thousand… **I remember that words – written or printed – were devils, and books, because they gave me great pain, were my enemies.**

The Acts of King Arthur and His Noble Knights
(Steinbeck, 1976)

We Know. . .

- . . .that reading is a language based skill and that the relationship between oral language and reading is reciprocal (Catts & Kamhi, 1986).
- . . .oral language, although intimately and intricately related, are not the same (Kamhi & Catts, 1986).
- . . .teachers need to be aware of the similarities and differences (Moats & Lyon, 1996).

Language

- Phonological (speech sound) processing
- Orthographic (print) processing
- Semantic (meaning) processing
- Syntactic (sentence level) processing
- Discourse (connected text level) processing

Language

Functional Language Systems:
- Language by ear
- Language by eye
- Language by mouth
- Language by hand

Each of the Functional Language Systems is multi-leveled:
- Subword units
- Word units
- Multiword clausal/syntax
- Multisyntax discourse

(Berninger & Wolf, 2016)

We'll discuss the following components of language. . .

1. Phonological Processing
2. Orthographic Processing
3. Morphological Processing

Terminology Matters

Phonological
Orthographic

- **Phonological processing**
- **Phonological awareness**
- **Phoneme**
- **Phonemic awareness**
- **Phonics**
- **Alphabetic principle**

Own It
Heard of It
No Clue

13

1. Phonological Processing

"formation, retention, and/or use of phonological codes or speech while performing some cognitive or linguistic task or operation such as speaking, listening, remembering learning, naming, thinking, reading or writing."

(Brady & Scarborough, 2002)

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Why is this important?

Phonological awareness is a prerequisite skill for reading an alphabetic writing system.

NICHD Early Child Care Research Network, 2005

15

How Might We Define It?

"**broad class of skills** that involve attending to, thinking about, and intentionally manipulating the phonological aspects of spoken language, especially the internal structure of words."

(Brady & Scarborough, 2002)

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Phonological Progression

- phonemes
- onset rime
- syllables
- words

- Isolate
- Identify
- Categorize
↓
- Blend
- Segment
↓
- Delete
- Add
- Substitute
- Reverse
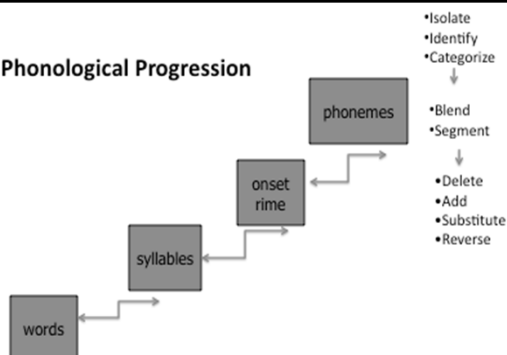
17

What is Phonemic Awareness?

"**Attending to, thinking about and manipulating the individual phonemes within spoken words and syllables.**"

(Brady & Scarborough, 2002)

18

3

So, What's a Phoneme?

"smallest units into which speech can be divided, and that makes a difference to the meaning of a words."

(Brady & Scarborough, 2002)

19

The crucial factor in becoming literate then involves a step from implicit to explicit control of the phonemic segments of language.

The productive use of an alphabetic script requires an explicit awareness of the elusive phonemes, a conscious control of these units, such that they can be manipulated, substituted, and recombined.

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Think About Your Students

- mispronounces words
- trouble remembering sounds
- difficulty sequencing sounds in spelling
- confusions with similar sounding sounds
- problems pronouncing and spelling nonsense words
- trouble remembering information presented orally
- difficulty remembering names

(Mather & Wendling, 2012)

21

Let's Look at Some Instruction. . .

22

"This is sun. I'll say the sounds in sun slowly /sssuuunnn/. The first sound in sun is /sssss/. Say the first sound in sun."

23

Guess the Word
. . .with blending
. . .with segmenting

(Notari-Syverson, O'Connor, & Vadasy, 1998)

24

Rocky the Robot

• *In this activity, we have a friend to help us called Rocky the Robot. Rocky talks in a funny way because he is a robot. When he talks, he cannot put all the sounds in words together. You have to put the sounds together to understand what he is saying. If he says /d/-og, he means <u>dog</u>. If he says /m/-om, he means _____ ?*

(Torgesen & Bryant, 1994)

25
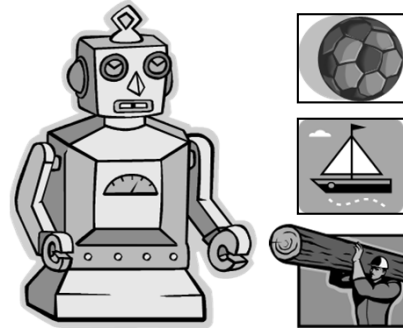
26

Say it and Move it
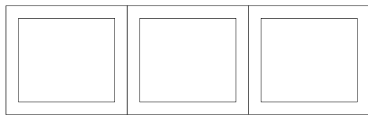
27
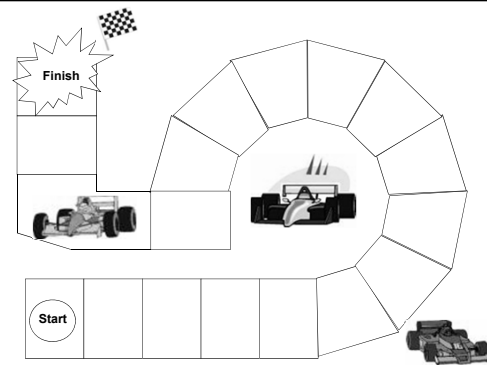
28

2. Orthographic Processing

"the ability to form, store, and access orthographic representations."

• letters
• letter patterns
• sight vocabulary
• letter formation

learning, knowledge and memory

(Stanovich & West, 1989)

29

…What is the Alphabetic Principle?

"the concept that for English and other languages, use an a alphabetic orthography the written graphemes correspond to the phonemes of spoken words."

(Brady & Scarborough, 2002)

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5

One Definition of Phonics

An approach to or type of reading instruction that is intended to promote the discovery and understanding of the <u>alphabetic principle</u>, the correspondences between <u>phonemes and graphemes</u> and phonological decoding.

(Brady & Scarborough, 2002)

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Think About Your Students

Weaknesses in "mind's eye. . ."
• phonetic spelling rules writing
• reversals of letters within word
• sight word recognition weaknesses
• slow sloppy handwriting
• reversal of letters e.g. b/d
• trouble copying

32

Important We Know That. . .

• **Phonics training alone does not necessarily provide insight into phonological awareness or the alphabetic principle.**

• **Need combination of phonological awareness, alphabet instruction with code based reading training for remediation of children with dyslexia.**

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Pause and Process
Phonological Processing (pages 3-4)

• Try the Phoneme Counting, Syllable Counting, and Phoneme Matching exercises in your Resource Packet (Moats, 2000). After you complete all the items, you may check your answers with the Answer Key provided.

Examples from: Moats, L. C. (2000). *Speech to print: Language essentials for teachers.* Baltimore: Paul H Brooks.

34

Let's Look at Some Instruction. . .

35

Use Explicit Instruction

• The name of the letter is _____.
  • What's the name of the letter?
• The sound it makes is _____."
  • What's the sound?

m

36

"This is sun. The first sound in sun is /sssss/."

p s

"I'm going to choose the letter that matches this picture's first sound."

"**s** says /sssss/ like the /sssss/ in sun."

37
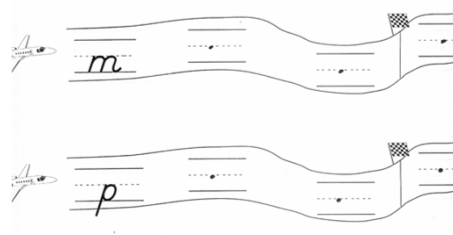
"We are going to have a letter race. I'm going to tell you the sound of a letter and you are going to write it on the right racetrack. Which letter do you think will win?"

(*Early Reading Intervention*) 38
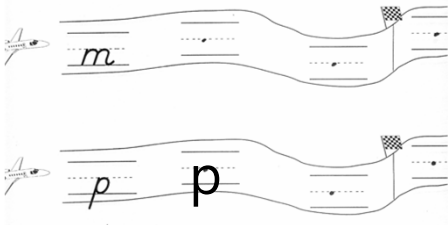
"The first sound is /p/. . .Now you write the letter that makes the sound /p/."

(*Early Reading Intervention*) 39
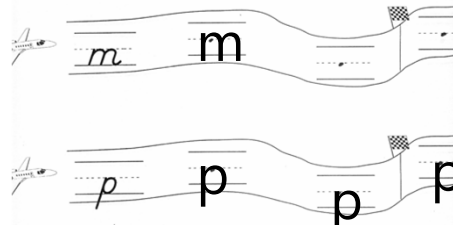
"The next sound is /__/. Write the letter that makes that sound. Start at the dot and write the letter."

(*Early Reading Intervention*) 40

Spelling AR Words
Teacher Steps
Word: card

Tell students that AR says /ar/.

Put down a letter for each sound you say.

Before putting down the letters AR, remind students that the sound is /ar/.

c	a	r	d

Blend the sounds.

card

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Word Study:
Mind's Ear, Mind's Eye (Visual Imagery)

Word Study:
Spelling Prompt

1. Look at the word and read the word.
2. Close your eyes and imagine the word in your mind's eye.
3. Name the word's letters with your eyes closed.
4. Open eyes and write word.
5. Check spelling and repeat steps 1-4 if the word is not spelled correctly.

(Berninger et al., 1998)

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Mind's Ear and Eye

• wish	• fish
• boy	• joy
• house	• mouse
• lunch	• bunch
• thin	• that
• thing	• sing

43

---

(1) *"Look at (name word)."*
   Sweep finger under word from left to right

(2) *"The sounds in (name word) are. . ."*
   Point to each color-coded spelling unit and say the sound.

(3) *"The word is (name word). Now you say the word."*
   Repeat the word and ask the student to say the word.

(4) *"Name the letters in (name word) as I point to each letter."*
   Have student name the letters while you point to each letter in left-to-right order.

(5) *"Close your eyes and picture the word in your mind's eye."*

(6) *"Keep your eyes closed and spell the word out loud from left to right."*

(7) *"Open your eyes and write (name word) with your pencil."*

(8) *"Compare the word you wrote with the target word, (name word). Do the spellings match?*

(9) If the word is spelling correctly, go to the next word. If the word is spelled incorrectly, point out where the target word and student's word differ. Provide self-correction.

lilliputian

lilliputian

44

Pause and Process
Orthographic Processing (pages 5-9)

Review the sample lesson provided in your Resource Packet (from the Early Reading Intervention program).

- How does the lesson target orthographic processing?
- Describe how the lesson employs explicit and systematic instruction. How does this lesson illustrate the use of standard-based protocols (i.e., errorless teaching)?
- Give an example of how student feedback is used in the lesson (e.g., use of task-specific or product feedback).

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3. Morphological Processing

- Awareness of the units of meaning in language.
  – base words, roots, affixes
- English spellings have developed over time to keep the morphological meaning intact over phonological representation (morphological constancy).
  – sign -> signal
  – discuss -> discussion

(Bourassa & Treiman, 2008; Moats, 1995)

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Morphological Processing = Structural Analysis

- Word formed by adding "ed"
- VCe derivatives
  – Created by adding a word edding to a VCe pattern word (e.g, care + less = careless; hope + ing = hoping)
- Adding "s" to VCe words
- CVCe derivatives
  – For example: teach a strategy for discriminating CVCe derivatives from CVC derivatives (hoping vs. hopping)
- Y derivatives
  – Formed by adding an ending to a word that ends in y (e.g., marry + ed = married, dry + ed = dried, happy + er = happier)
- Multisyllabic words formed with prefixes and suffixes

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Adding a Morphological Awareness Intervention Component

- Adding morphological awareness treatment to phonics practice was more effective than adding phonological awareness treatment to phonics practice in normalizing chemical activation in the brain and improving the rate of phonological decoding for students with dyslexia in 4th, 5th, and 6th grade.
- Students considered poor, average, and good spellers in Grades 1-4 and 3-6 showed that phonological, orthographic, *and*, morphological composites contributed to improved spelling abilities.

(Richards et al., 2002; Berninger et al, 2003).

48

Think About Your Students

Difficulties with. . .

- finding and underlining base words and circling prefixes and suffixes.
- building words from bases and affixes.
- generating new written words from a single suffix or prefix.
- transferring morphological codes to pronounce real words with prefixes and/or suffixes.
- analyzing pairs of written words to decide if common spelling units (e.g., *-er*) function as morphemes and thus relate to the two words in a pair (e.g., *build, builder*) or if they do not function as morphemes and do not represent two words semantically (e.g., *corn, corner*).
- sorting written words into categories according to whether they share spelling, sounds, and morphemes.
- choosing the word (base word plus suffix) that fits in each sentence syntax context.

49

Let's Look at Some Instruction. . .

50

Now we are going to read word parts that come at the beginning words. Where do we find these word parts?

(*Rewards;* Archer, Gleason, & Vachon, 2000)

- (dis)cover   dis

- (mis)taken   mis

- (ab)domen   ab

- (ad)vertise   ad

Point to the first word in the box. The word is discover. What word? _____
Point to the circled part. The part is /dis/. What part?_____

51

Circling Word Parts

(*Rewards;* Archer, Gleason, & Vachon, 2000)

In this activity, students practice identifying the word parts learned in the previous activity. Tell students to find the word parts and circle them.

1. (ad)dict   milkmaid   damp

2. (dis)tract   (ad)-lib   (dis)claim

3. (ad)mit   (mis)fit   digit

4. (dis)traught   (ab)stract   (mis)lay

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Multisyllabic Words
Strategy Instruction (Model)

1. Today we are going to learn a strategy for figuring out longer words. This strategy uses all the skills you have learned so far.
2. Look up here. Watch me use the strategy (Point to the word **propeller**)
3. First, I circle the word parts at the beginning and end of the word. (Circle **pro** and **er**. Point to each and ask…) What part? What part?
4. Next, I understand the vowel sounds in the rest of the word (Underline **e** in **pel.** Point to the vowel and ask…) What sound?
5. Next, I say the parts in the word (Loop under each part and say the parts). **Pro pell er**
6. Next, we say the whole word. It must be a real word. What word?
7. (Repeat these procedures with the next word).

(*Rewards;* Archer, Gleason, & Vachon, 2000)   53

Multisyllabic Words
Strategy Instruction (Guide)

1. Look up here. Let's use the strategy to read these words.
2. (Point to the word.) **Is there a word part at the beginning of this word?** ____ (If the answer is yes, circle the word part and ask…) **What part?**
3. **Is there a word part at the end of this word?** ____ (If the answer is yes, circle the word part and ask…) **What part?**
4. (Underline the vowel sounds in the rest of the word and ask…) **What sound?**
5. Say the word parts. (Loop under each of the parts and ask…) **What part? What part? What part?**
6. (Run your finger under the whole word.) **What word?**
7. Repeat with remaining words.

(*Rewards;* Archer, Gleason, & Vachon, 2000)   54

Multisyllabic Words
Strategy Instruction (Student Practice)

1. Now it's your turn. Circle word parts at the beginning and end of words and underline the vowel sounds in the rest of the word. Look up when you're down.
2. (Show an overhead transparency). Now check and fix up any mistakes.
3. Go back to your first word. Sound out the word to yourself. Put up your thumb when you can read the word. Be sure that it is a real word. What word?
4. Repeat with remaining words?

(Rewards; Archer, Gleason, & Vachon, 2000)   55

Pause and Process
Morphological Processing (page 10)

- Try the application related to morphological processing in your Resource Packet

  . . .**Is the pattern *able* or *ible*?**

56

Putting It All Together. . .

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Pause and Process
Four-Part Processing Model (page 11)

As the Four-Part Processing Model is discussed, please review the copy in your Resource Packet.

58
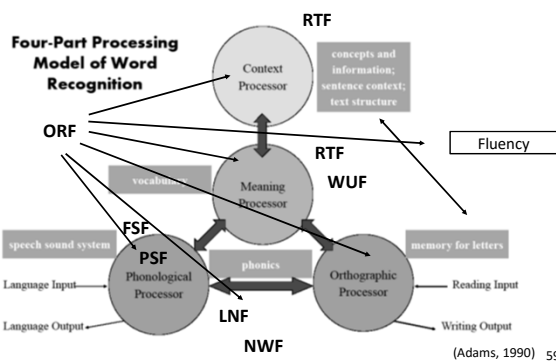
Four-Part Processing Model of Word Recognition

RTF

Context Processor

concepts and information; sentence context; text structure

ORF

RTF

Fluency

vocabulary

Meaning Processor

WUF

FSF

speech sound system

PSF

Phonological Processor

phonics

memory for letters

Orthographic Processor

Language Input

Language Output

LNF

NWF

Reading Input

Writing Output

(Adams, 1990)   59

How Can the Tier 3 Problem Solving Process be Used to Assess and Treat Students with Reading and Writing Disabilities?

60

Tier 3 Problem-Solving Steps

1. Review data from Tier 1 and Tier 2
   a. Confirm student has not made expected progress
   b. Generate hypothesis
2. Conduct more in-depth assessment (e.g., specific skill assessment, diagnostic measures, etc.)
   a. Validate the severity and significance of the problem
   b. Pinpoint actual skill levels
3. Generate hypothesis
   a. Student has not mastered specific skills
   b. Student has not had enough practice
   c. Student is unable to attend to instruction

61

Tier 3 Problem-Solving Steps

4. Select intervention
   a. Evidence-based intervention programs
   b. Evidence-based strategies
   c. Customized treatment plan
5. Monitor student progress
   a. Assess on a regular schedule (1 x week)
   b. Analyze progress monitoring data
6. Monitor integrity of intervention
   a. Schedule, Intensity, Fidelity
7. Analyze outcomes
   a. Rate of Improvement (slope)
   b. Goal attainment

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Tier 3 Problem Solving
How do you use assessment to determine a learner profile?

63

Assessment

- *Oral Language*

- **Phonological processing (awareness, memory, RAN)**
- **Orthographic Processing**

- **Word recognition (accuracy & automaticity)**
- **Spelling (phonic and orthographic errors)**
- **Decoding (familiar and unfamiliar words)**
- **Comprehension (listening & reading)**

Basic Facts About
Assessment of
DYSLEXIA
Testing for Teaching

Susan C. Lowell
Rebecca H. Felton
Pamela E. Hook

(**Lowell, Felton & Hook, 2014**)

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Example of Multi-Tier Alignment

Increasingly Diagnostic

PAL II

CBM & Mastery Measurement

Universal Screening

Tier 3:
Customized Instructional Intervention

Tier 2:
Supplemental Instructional Intervention
Extended Core Instruction

Tier 1:
Explicit and Systematic Core Reading and Writing Instruction
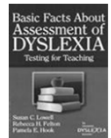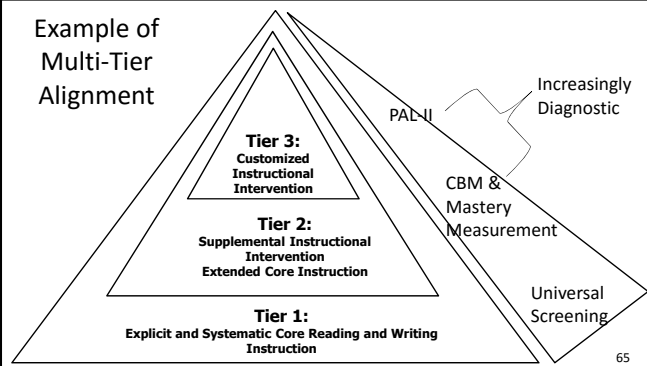
65

Non-Directional Cycle

Standardized

Observational

Curriculum Based

66

11
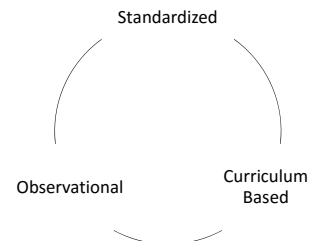
Assessment Continuum Example
Informal to Formal

Screening/Progress Monitoring	Informal Diagnostic	Formal Diagnostic
Predictive Assessment of Reading-PAR	Phonological Awareness Skills Screener-PASS	CELF-5
		CTOPP-2
AIMSweb		
DIBELS Next	CORE Multiple Measures-Phonological Awareness Screeners	Rapid Automatized Naming and Rapid Alternating Stimulus Tests-RAN-RAS
FAST		
Easy CBM		
		Test of Phonological Awareness TOPA 2+
Total Words Written	Teacher Designed Tasks	
Words Spelled Correctly		
Correct Writing Sequences		
		Process Assessment of the Learner (PAL-II)

Process Assessment of the Learner (PAL-II, 2007)

Virginia W. Berninger, Ph.D.
University of Washington

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Mental Constructs and Assessment with PAL-II

- Processes (Orthographic, Phonologic, Morphologic)
- Motor Functions (Oral-Motor and Graphomotor)
- Skills (Decoding, Silent Reading, Written Expression, Spelling)
- Working Memory (holding and manipulating verbal content)
- Executive Functions (in the direction of reading and oral motor functioning)

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Berninger's Process Assessment of the Learner (PAL-II, 2007)

Learner Profile #3 — Dysgraphia (4-20%)
Orthographic
Learner Profile #2 — Dyslexia (15-20%)
Phonological, Orthographic
Learner Profile #1 — Oral and Written Language Learning Disability (OWL LD)
Morphological/Syntax, Phonological, Orthographic
LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE
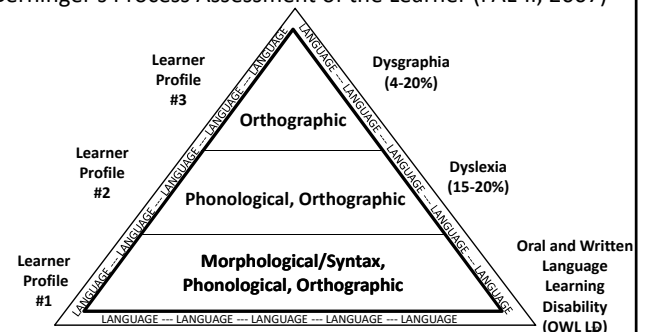
Pause and Process
Learner Profiles – Application #1
(pages 12-14)

- Review the information listed in your Resource Packet from Berninger and Wolf (2009, 2016) on the three learner profiles that describe students with reading and writing difficulties. After reviewing the descriptions of each learner profile, be ready to describe the learner profiles to members of your team. *In other words, read the information below and summarize using your own words.*

71

Pause and Process
Learner Profiles – Application #2
(pages 15-16)

For this activity, assume you have reviewed student data from Tier 1 and Tier 2 for the following two students, Miles and Cordelia, and have determined that both are not making expected progress (Tier 3 – Problem Solving: Step 1). You are now planning to conduct more in-depth assessment (Tier 3 – Problem Solving: Step 2). Read the descriptions about Miles and Cordelia and use the information we discussed on the three learner profiles to generate a hypothesis about each students' potential writing difficulties (e.g., What learner profile might best describe them?). After you draft a hypothesis, list the diagnostic assessment information you will need to collect to more fully determine student writing needs. (e.g., refer to an assessment like the PAL-II and determine what domains/sub-tests will help tell you the information you need). 72

SLDs are Neurobiological in Origin

The Neural Basis of Reading:
- Left inferior frontal gyrus
- Left temporo-parietal cortex
- Left occipito-temporal
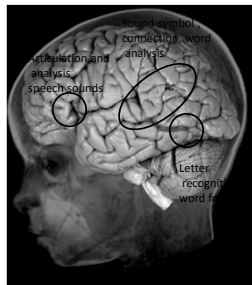
Neurobiological Basis
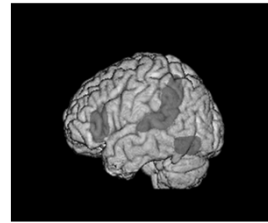
Typical Readers
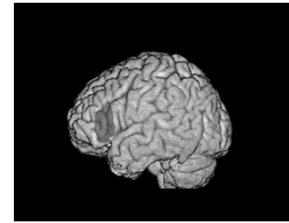
Dyslexic Readers
Brain Briefings, Society for Neuroscience

74

Working Memory

- Students with SLDs (represented by the three instructional profiles) have been shown to have impairments in the supervisory components of working memory.
  - Whether components are impaired for word forms, syntax buffer, and loops depends on the nature of the SLD.
- The multicomponent working memory system supporting language learning is internal. Thus, these SLDs are invisible disabilities (not visible to others), and they are not due to lack of motivation or effort.

(Berninger & Wolf, 2016)

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What is Working Memory?

"Our ability to hold and manipulate information in our mind over short periods of time-provides a mental workspace or a "jotting pad" to store important information over short periods of time." Gathercole & Alloway, 2008

"…preservation of information while simultaneously processing same or other information."

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Cognitive Portal
Panel of Supervisory Attention
(Low-level executive functions of working memory)

Focusing Attention ⇒ Inhibition

Switching Attention ⇒ Flexibility

Sustaining Attention ⇒ Staying on Task

Self-Monitoring Attention ⇒ Updating WM
(states of mind)

(Berninger, 2007, 2015)

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Executive Functions

Time-constrained naming letters or written words

Time-constrained writing letters or written words

Morphological

P-M   O-M

P-O-M

Phonological   P-O   Orthographic

Phonological Loop

Orthographical Loop

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13
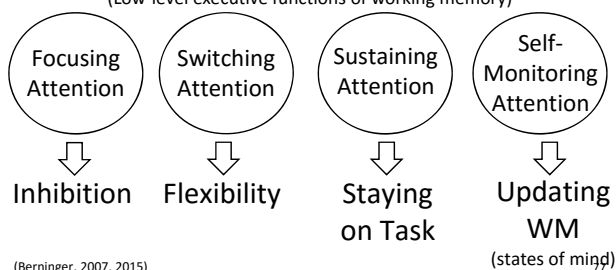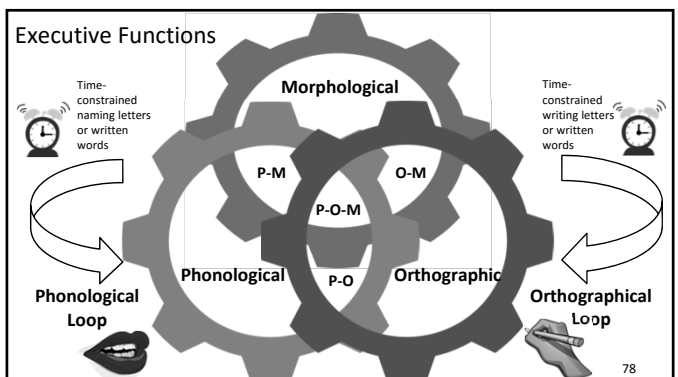
The Good News!

Intervention Normalizes Brain Function (Simos et al., 2002)
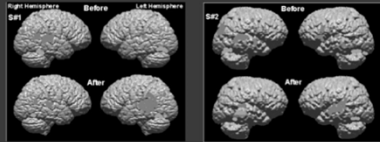
79

For example. . .

Self-regulated Strategy Development (SRSD)
- Powerful writing strategies and critical strategies for self-regulation of the writing process
- Self-efficacy for writing, motivation, and adaptive attributions

Project Write:
http://kc.vanderbilt.edu/projectwrite/

(Harris, Graham, Mason, Friedlander, 2008; Graham & Perin, 2007) 80

Pause and Process Memory (page 17)

Review the academic learning strategies from the National Center on Intensive Intervention and think about how these strategies address cognitive processing related to memory. As you review the list below, discuss how these strategies can be used when teaching reading and writing.

81

Let's Look More at the Phonological/Orthographic Learner Profile. There are Many Pieces to the Puzzle. . .

1. Word Recognition
2. Spelling
3. Phonological Processing
4. RAN
5. Unexpected
6. Secondary Consequences
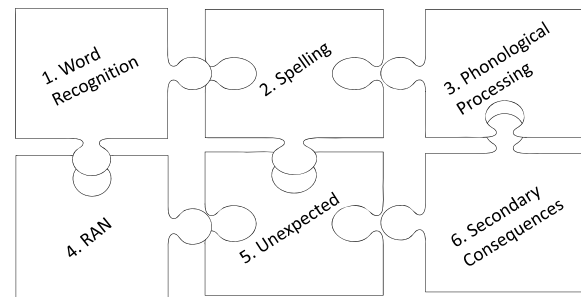
82

IDA Definition

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 the growth of vocabulary and background knowledge.

83

1. Difficulty with Accurate and Automatic Word Recognition

- Letter naming
- Letter-sound association
- Word reading
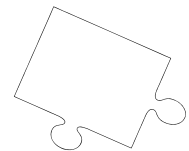
Critical Piece of the Reading Proficiency Puzzle

84

Skilled Reading

"Most of the words are known by sight. Sight reading is a fast acting process. The term sight indicates sight of the word activates that word in memory including information about its pronunciation, spelling, typical role in sentences and meaning."

(Ehri, 2005)

85

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2. Difficulty with Spelling

"Most people think dyslexia is a reading disorder but it is also a spelling and writing problem."

(Berninger, 2006)
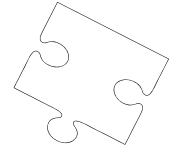
86

For Students with Phonological/Orthographic Challenges. . .

-spelling creates even greater challenges than reading.
Uhry & Clark, 2005

-spelling requires the reproduction of a word, not just the recognition of it.
Snowling & Hulme 2011

-are more resistant to intervention.
Shasty, 2007

87

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3. Deficits in Phonological Processing

– phonological and phonemic awareness.
– phonological memory- working with, storing and retrieving information from memory.
– speech perception and production- perceiving and producing phonological sequences…..
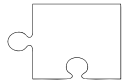
neural mechanisms that that allow us to use speech sounds to process oral and written language.

88

Accurate and Automatic Phonemes

- Identify
- Categorize
- Isolate
- *Blend*
- *Segment*
- Delete…
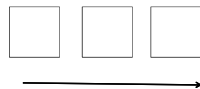
89

One More Piece to the Puzzle

*Phonological deficit can range in severity across individuals…its' **impact on reading outcome can increase or decrease** depending on co-occurring risk factors or **protective factors.***

(Pennington, Schriben & Boada, 2009)
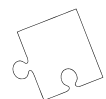
90

Potential Co-Existing Problems

- *PA a major contributor but* **dyslexia is the outcome of multiple risk factors** *interacting synergistically with the environment e.g. other aspects of language e.g. morphological awareness, RAN, early expressive language (syntax)…….*

  (Torpa et al, 2010)

- Language
- Dysgraphia
- Dyscalculia
- ADHD
- Executive Function….

91

4. RAN Can Be a Potential Contributing Factor

Some facts about naming:

- Requires that move from one code to another.
- Can be measured in pre-readers with colors or pictures; in readers with letters or numbers.
- Tasks require naming familiar pictures, letters or digits aloud.
- Influences ability to acquire fluent and automatic word reading.

92

RAN Measures: Objects
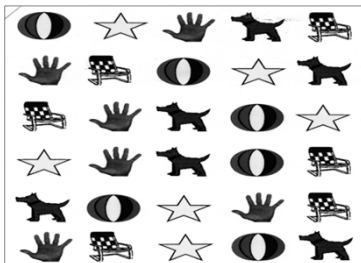
93

The RAN Measures: Numbers & Letters

9	6	7	4	2
7	2	9	6	4

a	d	s	p	o
s	o	a	d	p

94

RAN has been identified as a contributing factor in individuals with dyslexia. Children with dyslexia are often much slower at continuous serial naming than children with typically developing reading.

Double Deficit = Phonological awareness & RAN

95

5. Unexpected in Relation to Other Cognitive Abilities and Effective Classroom Instruction

- Range the range
  - age
  - IQ
  - cultures
- Frequently have spatial, mechanical, athletic, and other, talents which are, be it noted, inherent gifts, not just compensatory abilities.
- Have families who share their gifts and shortcomings, one way or another.

  (Rawson, 1982)

96

16

6. Secondary Consequences May Include Problems in Reading Comprehension and Reduced Reading Experience

"Attention to code is capacity draining-results in inability to attend to meaning that results in:
– less exposure to text, less practice
– diminished capability in areas of vocabulary, syntactic structures and declarative knowledge
– that influences verbal intelligence."

(Cunningham & Stanovich, 2002)

97

Berninger's Process Assessment of the Learner (PAL-II, 2007)

Learner Profile #3

Learner Profile #2

Learner Profile #1

LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE

Dysgraphia (4-20%)

Orthographic

Dyslexia (15-20%)

Phonological, Orthographic

Morphological/Syntax, Phonological, Orthographic

Oral and Written Language Learning Disability (OWL LD)

LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE
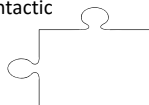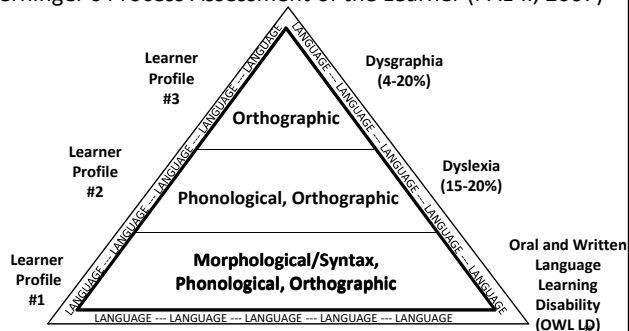
Pause and Process Discussion

- Review the IDA definition of dyslexia and the information presented on the phonological/orthographic learner profile. List "take-aways" and application ideas for each of the following:
  1. Word Recognition
  2. Spelling
  3. Phonological Processing
  4. RAN
  5. Unexpected in Relation to Other Cognitive Abilities and Effective Classroom Instruction
  6. Secondary Consequences

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Tier 3 Problem-Solving Steps

1. Review data from Tier 1 and Tier 2
   a. Confirm student has not made expected progress
   b. Generate hypothesis
2. Conduct more in-depth assessment (e.g., specific skill assessment, diagnostic measures, etc.)
   a. Validate the severity and significance of the problem
   b. Pinpoint actual skill levels
3. Generate hypothesis
   a. Student has not mastered specific skills
   b. Student has not had enough practice
   c. Student is unable to attend to instruction

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Tier 3 Problem-Solving Steps

4. Select intervention
   a. Evidence-based intervention programs
   b. Evidence-based strategies
   c. Customized treatment plan
5. Monitor student progress
   a. Assess on a regular schedule (1 x week)
   b. Analyze progress monitoring data
6. Monitor integrity of intervention
   a. Schedule, Intensity, Fidelity
7. Analyze outcomes
   a. Rate of Improvement (slope)
   b. Goal attainment

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Tier 3 Problem Solving
How do you select interventions?

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Slide 103

Tier 3 Interventions are Defined by Intensity and Specialized Instruction

Levels of Instructional Support

Continuum of Time, Intensity and Data Increases

Percentage of Students Requiring Intensive Supports Increases

Tier 3: Interventions for a Few Students

Tier 2: Interventions for Some Students — 15%

Tier 1: Foundation Standards Aligned Instruction for All Students — 80%

Orthographic

Phonological, Orthographic

Morphological/Syntax, Phonological, Orthographic

(Berninger, 2007)

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Slide 104

1	2	3
	Structured Literacy	
4	5	6

Applied to purposeful reading and writing

(Louisa Moats, 2014)

1. Linguistic Concepts
2. Systematic
3. Explicit

4. Cumulative
5. Multisensory
6. Intensive

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Slide 105

Tier 3 Intervention Menu

Language
- Listening and Reading Comprehension
- Oral and Written Language Expressions
- Vocabulary

Spelling (Reading)
- Phonological Awareness
- Word Reading
- Word Spelling

Transcription and Sentence Writing
- Tracing
- Copying
- Memory

(**Handwriting**, Spelling, Mechanics)

Composition
- Sentence-level
- Passage-level

(Self-Regulated Strategy Development)

Other Supports
- Mindset
- Accommodations
- Assistive Technology

FLUENCY --- FLUENCY --- FLUENCY --- FLUENCY ---- FLUENCY --- FLUENCY

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Slide 106

Tier 3 Interventions (PAL-II aligned)

Language

Aural/Oral language (Language by ear and mouth)
- Oral Vocabulary
- Aural-Oral Syntax
- Aural-Oral Text Comprehension
- Pragmatics
- Word Finding

Oral Reading (Language by eye and mouth)
- Oral Text Reading

Reading Comprehension (Language by eye and mouth)
- Reading Comprehension: Text Accuracy
- Silent Reading

Comprehension
- Silent Reading Comprehension: Word-level and Content
- Vocabulary

Composing (Word-, Sentences-, Texts)

Spelling (Reading)
- Orthographic coding
- Phonological coding
- Morphological/ syntactic coding
- Verbal Working Memory
- Vocabulary

Transcription
- Orthographic coding
- Motor execution

Composition
- Orthographic coding
- Motor execution
- Phonological coding
- Morphological/ syntactic coding
- Verbal Working Memory
- Conventions
- Vocabulary
- Central Executive Functioning

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Slide 107

Using the Intervention Menu to Create an Instructional Diet

- To facilitate transfer of transcription skills to composition and integrate the various writing components in resource-limited working memory, transcription and composition instruction should be taught together in the same lesson so they become functionally integrated.

- Therefore, instruction must strategically combine micro- and macro-level related skills (lower-level and high-level processes).

(Berninger et al., 1997, 1998; Berninger, Rutberg et al., 2006; Berninger, Vaughan, et al., 2000)

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Slide 108

Specialized Diet (based on Instructional Profile)

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Sample Weekly Intervention Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Language	Transcription + Spelling (Reading) + Composition	Transcription + Spelling (Reading) + Composition	Transcription + Spelling (Reading) + Composition	Language

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Sample Weekly Intervention Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Transcription + Spelling (Reading)	Transcription + Spelling (Reading)	Transcription + Spelling (Reading) + Composition (Sentence-level)	Transcription + Spelling (Reading) + Composition (Passage-level)	Transcription + Spelling (Reading) + Composition (Passage-level)

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Sample Weekly Intervention Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Transcription (Spelling) + Composition (Sentence-level)	Transcription (Handwriting & Mechanics) + Composition (Sentence-level)	Transcription (Handwriting & Mechanics) + Composition (Sentence- / Passage-level)	Transcription (Handwriting & Mechanics) + Composition (Passage-level)	Transcription (Spelling) + Composition (Passage-level)

111

Sample Lesson Structure
(from *Early Reading Intervention*)

Writer's Warm-Up 2-3 minutes	Phonologic/ Alphabetic 2-3 minutes	Phonologic/ Spelling 6-8 minutes

+

Read Alouds with Oral and Written Retells (15 minutes)

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Sample Lesson Structure
John Muir's Workshop

- **Part 1: Phonological-Orthographic Awareness**
  - Listening to "Jabberwocky Words"
- **Part 2: Developing Listening (Oral Language) and Writing Connections**
  - Listening to CD of John Muir's life story. Taking notes while listening. Summarizing from listening memory.
- **Part 3: Developing Orthographic-Phonological Connections**
  - Reading "Jabberwocky Words"
- **Part 4: Reading-Writing for Note Taking**
  - Teacher modeling of strategies for note taking. Listening to and re-reading primary source text.
- **Part 5: Writing-Reading for Report Writing**
  - Modeling strategies for planning, drafting, reviewing, revising science reports

(Berninger, V. W., & Wolf, B. J. (2009). *Helping students with dyslexia and dysgraphia make connections: Differentiated instruction lesson plans in reading and writing.* Baltimore, MD: Paul H. Brookes.)

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Pause and Process
Lesson Structure Review (pages 18-19)

Review the sample lessons in your Resource Packet. What do you notice about the lesson's instructional design and the sequencing of activities? Specifically, how do the activities, and the sequence of activities, reflect the needs of students who have working memory deficits and challenges with phonological, orthographic, and morphological processing?

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Sample Lesson Structure
Sequoyah Writing Reading Club (Lessons 1-5)

- Warm-up
  - Talking letters cards
- Listening to Bird Names
  - Counting syllables, counting phonemes
- Sounding out Jabberwocky Words
  - Reading sentences out loud in the book, *Sequoyah: The Cherokee Man Who Gave His People Writing*
- Written Summarization and Jabberwocky Probes
  - Written summary of text
  - Graph with # of Jabberwocky words pronounced

(Berninger, V. W., & Wolf, B. J. (2009). *Helping students with dyslexia and dysgraphia make connections: Differentiated instruction lesson plans in reading and writing.* Baltimore, MD: Paul H. Brookes.)

115

Sample Lesson Structure
Sequoyah Writing Reading Club (Lessons 6-12)

- Warm-up
  - Spelling and word sorts
- Reading
  - Read excerpts from *If You Lived with the Iroquois*
- Summaries and Writing Journals
  - Main ideas and details
- Read Naturally
  - Oral reading fluency practice
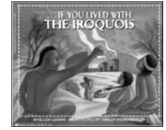
(Berninger, V. W., & Wolf, B. J. (2009). *Helping students with dyslexia and dysgraphia make connections: Differentiated instruction lesson plans in reading and writing.* Baltimore, MD: Paul H. Brookes.)

116

Tier 3 Problem-Solving Steps

1. Review data from Tier 1 and Tier 2
   a. Confirm student has not made expected progress
   b. Generate hypothesis
2. Conduct more in-depth assessment (e.g., specific skill assessment, diagnostic measures, etc.)
   a. Validate the severity and significance of the problem
   b. Pinpoint actual skill levels
3. Generate hypothesis
   a. Student has not mastered specific skills
   b. Student has not had enough practice
   c. Student is unable to attend to instruction
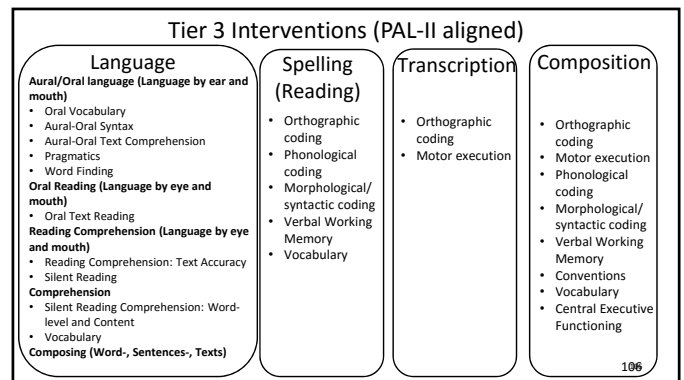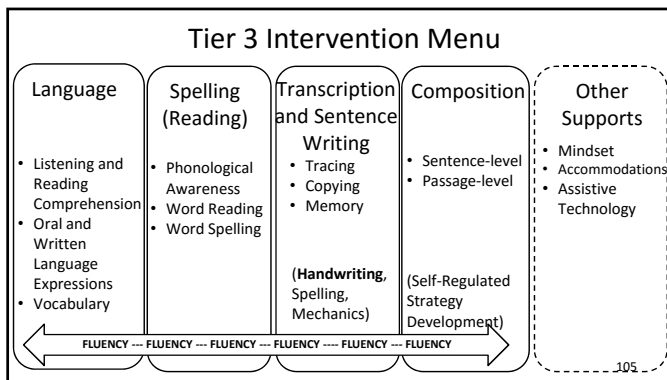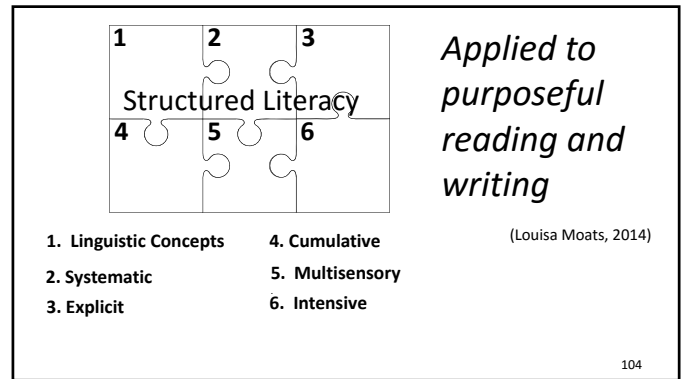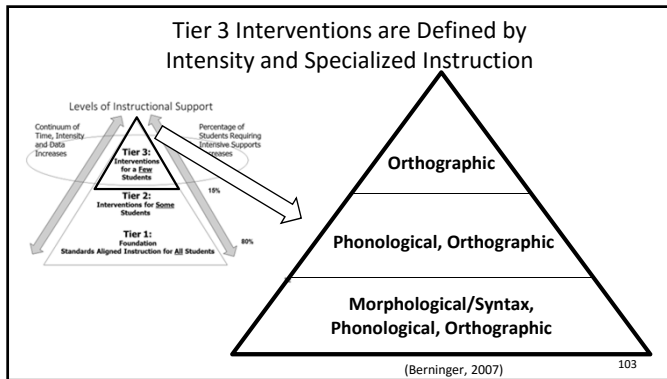
117

Tier 3 Problem-Solving Steps

4. Select intervention
   a. Evidence-based intervention programs
   b. Evidence-based strategies
   c. Customized treatment plan
5. Monitor student progress
   a. Assess on a regular schedule (1 x week)
   b. Analyze progress monitoring data
6. Monitor integrity of intervention
   a. Schedule, Intensity, Fidelity
7. Analyze outcomes
   a. Rate of Improvement (slope)
   b. Goal attainment

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Selecting Interventions: Break Down Step #4

- **First**: Use diagnostic assessment information to determine what areas on the Tier 3 Intervention Menu need to be considered for instruction. In other words, do students require language, spelling (reading), transcription, and/or composition instruction? Use the Tier 3 Interventions – Conceptual Framework (Appendix) to help with your planning.
- **Second**: Create a "specialized," instructional diet for the student from the Tier 3 Intervention Menu.
- **Third**: What programs will be used for intervention? What will the intervention look like across the week?
- **Fourth**: Consider how micro- and macro-level skills are integrated across and within lessons. For example, what will individual lessons look like?

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Pause and Process
Intervention Selection Template
(pages 20-22)

- Review the Intervention Planning Template provided in your Resource Packet. Discuss how you could incorporate the use of this tool for Intervention Planning. In other words, how could you use a tool like this to move from assessment data to intervention planning?
- For a Tier 1, Tier 2, and/or Tier 3 intervention emphasizing composition, explore *Step Up to Writing*:
  - http://www.voyagersopris.com/curriculum/subject/literacy/step-up-to-writing-fourth-edition/overview

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Tier 3 Problem Solving
Why is spelling an essential intervention component?

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Thinking about Spelling (Reading) Interventions

- "People read the spellings of words. People spell the spellings of words. People read the spellings they have spelled. The lack of clear distinction between these terms raises the possibility that we have been misled by our language that reading and spelling are more similar than we recognize." (Ehri, 1997)

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Thinking about Spelling (Reading) Interventions

- Spelling is a complex skill that requires ". . .more auditory and visual discrimination, memory, sequentialization, analysis and synthesis, and integration simultaneously than perhaps any other skill. . ." (Johnson & Myklebust, 1967)

123

Phonological Recoding
(and Encoding)

"man"
⇩
m, a, n
(convert into component letters)
⇩
/m/, /a/, /n/
(translate into corresponding sounds)
⇩
Mmmaaaannnn
(blend into phonological referent, "man"
⇩
Access Word's Meaning in Memory

124
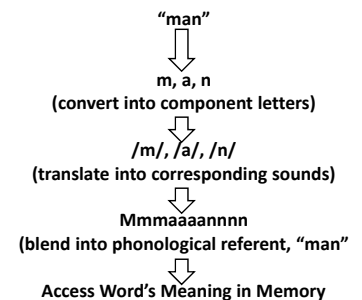
I am a deer

not an ordinary

rain(?) deer

I am a buck

the mom

deer walks the

baby deer

125

Error Analysis
Beyond Total Correct/Incorrect

- **Phonological Errors** (Sounds)
  - do/dog, sick/stick, sed/sled, bet/but, jran

- **Orthographic Errors** (Letter and Letter Patterns)
  - bick/back, hav/have, rane/rain, boyl/boil, mad/made, bak/back, frit/fright

- **Morphological Errors** (Compounds, Prefix, Root, Endings)
  - stoping/stopping, happy/unhappy, livd/lived, sumbody/somebody

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Error Analysis

Target Word	Student A's Response	Error type
stated	staoled	orthographic
few	few	no errors
bridge	breg	orthographic
root	rot	orthographic
shout	shot	orthographic
wall	wall	no errors
stay	stad	orthographic
boats	bos	orthographic phonological

Error Analysis Practice

Target Word	Student B's Response	Error type
stated	state	
few	fue	
bridge	bradge	
root	rt	
shout	shot	
wall	wall	
stay	sta	
boats	bote	

Intervention Planning
Phonological Errors

- Instruction should include explicit and direct teaching of the identify of consonant vowel phonemes within the English sound system of 25 consonants and 19 vowel sounds.
  - Work on building phonemic awareness skills.
  - Make sure students understand the alphabetic principle.

Intervention Planning
Orthographic Errors

- Instruction would systematically build understanding of correspondences and patterns within words and between syllables, while encouraging automatic recognition of whole words once they are accurately decoded.
  - Teach the unknown letter-sound correspondences.
  - Make the rules of letter-order and spelling patterns explicit through instruction and continued practice.

Intervention Planning
Morphological Errors

- Instruction would focus on prefixes, roots, both kinds of suffixes (inflections and derivational suffixes), combining forms, word origin and the relationship between meaning and spelling.
  - Explicitly teach the rules for adding prefixes and suffixes.
    - What happens to the y when you add a suffix such as '-ed' to a word like 'try?'
  - Morphology requires knowing what prefix or suffix add AND knowing when to alter the base/root word.
    - Hope → hoping
    - Hop → hopping

Sample Spelling-Reading Lesson Structure

- Phonological awareness activities
- Sound dictation
- Word/sentence dictation
- Introduction of a new concept
- Teaching of high frequency words
- Activities e.g. sorting by pattern
- Use of a spelling notebook

(Carreker, 2005)

Pause and Process
Spelling - Error Analysis Template
(pages 23-24)

Review the Spelling – Error Analysis Template in your Resource Packet. Consider how you can review student writing samples and use spelling error analysis to help determine potential interventions.

Pause and Process
Appendix Materials

Review the materials in the Appendix of your Resource Packet. Specifically note the Tier 3 Interventions listed, and how the interventions are aligned with the intervention planning framework we've discussed.

How Can it *All* be Pulled Together?:
RtII/SLD Determination and Case Study Application

Case Study: Alex

4th Grade; no IEP
Reading skills are relatively intact
Teacher noticed writing is difficult for Alex

Archived Data (3rd Grade)
- Spring On-Demand Writing Rubric scores (each domain out of 4 points):
  - Focus = 2; Content = 2; Organization = 1; Style = 2; Conventions = 3

- End of Year (EOY) Spelling Grade was a C

- Spring CBM CWS = 16 (Below Average; <25th Percentile Rank)

- English Language Arts PVAAS Projected = 50% probability of proficiency at spring 4th grade (3rd Grade = Basic performance)

Alex: Beginning of 4th Grade (current year)

- CBM scored for CWS (and others) administered in early September
  - Spring 4th Grade CWS Goal = 39
- Teacher and Literacy Coach decided to progress monitor performance to assess Alex's response to the intensity of core instruction and supplemental intervention: self-regulated strategy development (tier 2; http://kc.vanderbilt.edu/projectwrite/)

CWS Data for September – early October
- September 9 = 13 CWS
- September 17 = 11 CWS
- September 30 = 10 CWS
- October 7 = 13 CWS

Next slide has data graphed using ChartDog Graph Maker (www.interventioncentral.org)

Spring CWS Benchmark (39 CWS)

Graphed data and ordinary least squares trend line (dotted)

Raw Data
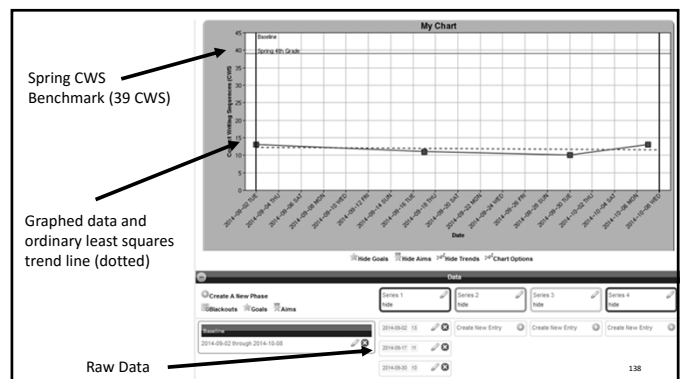
Mean and Trend Line in Baseline

Mean By Phase ON

PHASE	SERIES	MEAN
Baseline	Series 1	11.75

Fall 4th Grade Benchmark = 27 CWS;
50th Percentile Rank = 31 CWS

ChartDog computes a **Daily** ROI.
Conversion to weekly ROI = Slope X 7
= (-0.02 X 7)

Trend Line (Ordinary Least Squares)

SLOPE	INTERCEPT	R²	SERIES	PHASE	
-0.02	12.20	0.06	Series 1	Baseline	🖉❌

Alex's weekly ROI for CWS = -0.14 / week

139
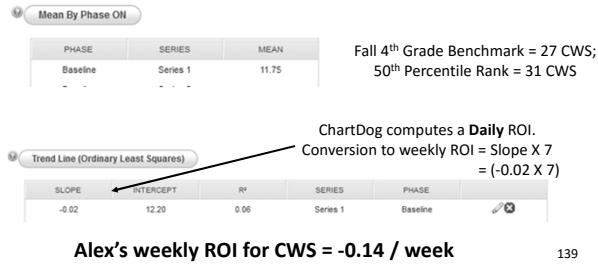
Mid-October Team Meeting

3rd Grade	**4th Grade (current)**

• Spring On-Demand Writing Rubric scores (each domain out of 4 points):
   – Focus = 2; Content = 2; Organization = 1; Style = 2; Conventions = 3
 	
• End of Year (EOY) Spelling Grade was a C
 	
• Spring CBM WSC = 16 (Below Average; <25th Percentile Rank)
 	
• English Language Arts PVAAS Projected = 50% probability of proficiency at spring 4th grade (3rd Grade = Basic performance)
	• Alex's CWS progress since the beginning of school
	
	• Fall On-Demand Writing Rubric scores (each domain out of 4 points)
	   – Focus = 2; Content = 2; Organization = 1; Style = 1; Conventions = 2
	
	• *Test of Written Language - 4th Edition*
	   – Spelling scaled score = 8; 25th PR
	   – Story Composition scaled score = 7; 16th PR

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Writing Intervention Plan Design and Actions Taken:

What	By Whom	Frequency/Duration
Total Words Written (TWW) Step Up to Writing	Classroom Teacher	5 times/week. 30 minutes/day.
Correct Writing Sequences (CWS) Step Up to Writing	Classroom Teacher	5 times/week. 30 minutes/day.
Self-Regulated Strategy Development (Project Write)	Intervention Teacher	5/times/week. 30 minutes/day.
Family Support: Review Writing Samples and provide corrective feedback.	Parent	2 evenings/week. Reinforcement for complex sentences.
Measurement of Progress: TWW, CWS TOWL-4	Interventionist Interventionist	Every week Pre and Post as per manual
Step up to Writing classroom samples Analytic Rubric-re-administer	Classroom Teacher Classroom Teacher	Ongoing Winter and Spring
How will we ensure instructional fidelity?	Self -Assessment by Classroom Teacher and Interventionist Principal or principal designee	Completion of fidelity checklist once per month TBD

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Alex: Intervention Began October 8th

CWS Data during Intervention

• October 15 = 12 CWS • October 29 = 16 CWS • November 6 = 18 CWS • November 12 = 18 CWS • November 18 = 17 CWS • November 25 = 19 CWS	• December 2 = 21 CWS • December 9 = 24 CWS • December 16 = 20 CWS • December 22 = 17 CWS • January 5 = 17 CWS • January 12 = 20 CWS • January 19 = 19 CWS

Next slide has data graphed using ChartDog
Graph Maker (www.interventioncentral.org)

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How is Alex Doing?
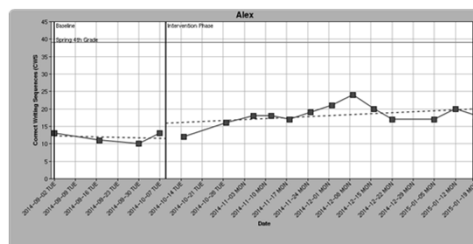
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Alex's Mean and ROI in Intervention
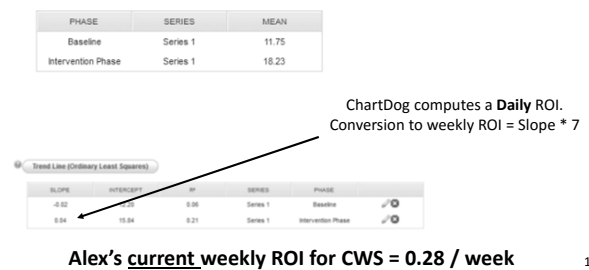
PHASE	SERIES	MEAN
Baseline	Series 1	11.75
Intervention Phase	Series 1	18.23

ChartDog computes a **Daily** ROI.
Conversion to weekly ROI = Slope * 7

Trend Line (Ordinary Least Squares)

SLOPE	INTERCEPT	R²	SERIES	PHASE	
-0.02	12.20	0.06	Series 1	Baseline	🖉❌
0.04	15.84	0.21	Series 1	Intervention Phase	🖉❌

Alex's <u>current</u> weekly ROI for CWS = 0.28 / week

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Additional Post-Intervention Data (January meeting)

- Winter On-Demand Writing Rubric
  - Focus = 1; Content = 3; Organization = 2; Style = 1; Conventions = 2

- TOWL-4 Spelling and Story Composition subtests
  - Spelling scaled score = 8; 25th Percentile Rank
  - Composition scale score = 6; 9th Percentile Rank

145

Comparing Alex's Performance

Baseline (September - October)	Intervention (October- January)
• Average = 11.75 CWS	• Average = 18.23 CWS
• ROI = -0.14 CWS / week	• ROI = 0.28 CWS / week
• Fall TOWL-4 Spelling = 16th PR; Story Composition = 16th PR	• Winter TOWL-4 Spelling = 25th PR; Story Composition = 9th PR

• Fall On-Demand Writing Rubric scores (each domain out of 4 points)
  – Focus = 2; Content = 2; Organization = 1; Style = 1; Conventions = 2
	• Winter On-Demand Writing Rubric scores (each domain out of 4 points)
	  – Focus = 1; Content = 3; Organization = 2; Style = 1; Conventions = 2

146

How is Alex doing?

Do you need any other data?

Assuming intervention fidelity was confirmed,
what would you recommend next for Alex?

147

How Slow is Too Slow?

Teams need to determine whether current ROI can bring a student to
an *acceptable level of proficiency* ***in a reasonable amount of time***...

By answering two questions:
- What is an acceptable level of proficiency?
- What is a reasonable amount of time?

Adapted from Boneshefski & Kovaleski (2014)

148

What is…An Acceptable Level of Proficiency?

Level that demonstrates "proficiency" of the skill
- e.g., benchmark

Level that is no longer low enough to meet Criterion 1

Adapted from Boneshefski & Kovaleski (2014)

149

What is a reasonable amount of time?

- 1 year? 2 years? 3 years?

- Consider a student's
  - Age
  - History
  - Current progress/ROI

- Project a student's ROI into the future to determine how long it will take the student to "catch up"
  - Using ROI trajectories

Adapted from Boneshefski & Kovaleski (2014)

150

ROI Trajectories

- Provide practitioners with a quantifiable means for determining a deficient ROI
  - Extrapolate ROI into the future

- Guidance on determining a discrepant ROI

- Graphically depict how long it will take a student to catch up

- Compare current ROI with needed ROI to:
  - Determine whether there is a "lack of progress" (Criterion 2)
  - Determine whether a student is making *meaningful growth*

Adapted from Boneshefski & Kovaleski (2014)

151

Conducting a Trajectory Analysis

1. Determine an acceptable level of proficiency.
   - Benchmark?
2. Calculate needed ROI.
3. Compare needed ROI to student's current ROI.
4. Can we sustain this growth in general education or is specially designed instruction needed?

Adapted from Boneshefski & Kovaleski (2014)

152

Calculate Needed ROI

1. Identify student's current level of performance.
2. Using the Alex case study, Alex's terminal level of performance after intervention was:
   19 CWS

3. Determine the target level in 1, 2, and 3 years.

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	Total Words Written	Words Spelled Correctly	Correct Writing Sequence	Percent of Words Spelled Correctly	Percent of Correct Writing Sequence	Correct Minus Incorrect Writing Sequence
	M	M	M	M	M	M
Grade 5						
Fall	37-51	37-48	35-46	94	83	37
Spring	42-67	50-65	45-63	97	86	53
Grade 6						
Fall	41-47	42-44	39-41	94	84	34
Spring	53-60	55-56	51-54	96	85	45
Grade 7						
Fall	48-54	49-55	47-49	96	84	39
Spring	58-61	56-62	53-64	96	86	46
Grade 8						
Fall	49-74	54-70	49-70	96	88	61
Spring	58-68	66-70	56-67	98	91	60

Note. Based on data from AIMSweb (2012 norms), Malecki and Jewel (2003), Mirken et al. (1981), and Shinn (1989). Data from columns 4-6 are from Malecki and Jewell (2003).

Table reprinted from C. K. Malecki (2014). Best practices in written language assessment and intervention. In P. Harrison & A. Thomas (Eds.). *Best practices in school psychology: Data-based and collaborative decision making*, (pp. 187-202). Bethesda, MD: National Association of School Psychologists.

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- Alex is in 4th grade, so projecting to the Spring benchmarks:
  - Grade 5 (1 year): 45-63 CWS
  - Grade 6 (2 years): 51-54 CWS
  - Grade 7 (3 years): 53-64 CWS

- Subtract the student's current level from the desired target level (using the lower number of the range).

- For example, choosing a target level to attain in two years (by the end of 6th grade) of 51 CWS minus Alex's current level or 19 CWS, Alex needs to improve by 32 CWS in two years.

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To obtain the needed ROI, divide the number of units (CWS) needed by the number of weeks of the projection.

To project for Alex in 6th grade, it is roughly 72 weeks. So,
32/72 = .44 CWS per week

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Compare Needed ROI to Current ROI

1. How long will it take the student to catch up?
2. Alex's level is 19 CWS.
3. His current ROI is .28 CWS per week
4. The needed ROI (2 year projection) is .44 CWS per week.
5. Alex's current ROI can be considered to be very deficient.
6. In fact, at his current ROI, in 2 years he will have gained only 20 more CWS (72 weeks x .28).
7. At that rate, his level will only be 39 (19 *current* + 20 *ROI*) CWS compared to the benchmark of 51 CWS **in two years**.

157

Long-Range Trajectory - Compare Needed ROI to Current ROI
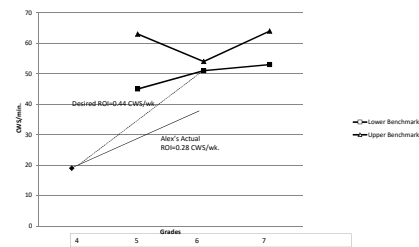
158

Expanded Use of Trajectory Analyses

Alex example used CWS; however, depending on the student, grade, and skill deficiencies:

– TWW
– WSC
– CWS

Evidence indicates TWW and WSC appropriate for K-3

CWS appropriate for grades ≥4

159

Sustaining Growth Through an On-Going Problem-Solving Process

- For Alex, it is concluded that special education services are needed to accelerate ROI and achieve the desired level through on-going collaboration and shared instruction between general and special education teachers.

- The team needs to ensure that the intervention is effective enough to sustain the ROI over time. The team should collect regular progress monitoring data to determine whether the needed ROI is being sustained.

Adapted from Boneshefski & Kovaleski (2014)

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Important Points

ROI trajectories provide teams and **parents** with:

– A clear picture of how far behind the student is
– An understanding of how fast their child is progressing
– A graphic depiction of whether the intervention is working
– An understanding of how long it will take their child to reach proficiency
– More clarity when compared to traditional procedures

Adapted from Boneshefski & Kovaleski (2014)

161

Considerations for Identifying a Student with a Dual Discrepancy using RtII

A student may be eligible for special education after an RtII intervention if:

- the student continues to display a significant deficiency in level (criterion #1), and
- the student's ROI is not sufficient to meaningfully close the gap in level in a reasonable amount of time, and
- the intervention that was used was evidence-based and implemented with a high degree of fidelity.

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Slide 163

Is Alex eligible for special education?

Failure to meet age- or grade-level State standards in … **written expression** **Alex:** TOWL-4 Spelling: 25th %ile Story Comp.: 9th %ile **On-demand writing rubric: (out of 4 pts.):** Focus: 1, Content: 3, Organization: 2, Style: 1, Conventions: 2 **CBM: 19 CWS (benchmark = 39)** **Qualifies under Criterion #1**	RTI: Lack of progress in response to scientifically based instruction. **Alex: ROI during intervention = 0.28 CWS/wk. compared to needed ROI of 0.44 CWS/wk.** **Qualifies under Criterion #2**	Rule out: ▪Vision, hearing, or motor problems ▪Intellectual disability ▪emotional disturbance ▪cultural and/or environmental issues ▪limited English proficiency	Rule out lack of instruction by documenting: Appropriate instruction by qualified personnel Repeated assessments

Inclusionary ___ *Observation* ___ Exclusionary

Specific Learning Disability

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Slide 164

Middle School Student – Sydney

CASE STUDY #2

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Slide 165

Case Study: Sydney

7th Grade; no IEP
Reading skills are relatively intact.
Teacher noticed writing is difficult for Sydney.
Sydney received some initial writing interventions during 6th grade (Tier 2).

Archived Data (6thGrade)
- Spring On-Demand Writing Rubric scores (each domain out of 4 points):
  – Focus = 2; Content = 2; Organization = 1; Style = 2; Conventions = 3

- Spring CBM CWS = 30 (Below benchmark: 51-54)

- English Language Arts PVAAS Projected = 50% probability of proficiency at spring 7th grade (6th Grade = Basic performance)

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Slide 166

Sydney: Beginning of 7th Grade (current year)

- CBM scored for CWS (and others) administered in early September
  – Fall 7th Grade CWS Goal = 47-49
- Teacher and Literacy Coach decided to progress monitor performance to assess Sydney's response to the intensity of core instruction and supplemental intervention: self-regulated strategy development (tier 2; http://kc.vanderbilt.edu/projectwrite/)

CWS Data for September – early October
- September 2 = 28 CWS
- September 16 = 31 CWS
- September 30 = 27 CWS   Next slide has data graphed using Excel.
- October 6 = 30 CWS

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Slide 167

Sydney's CWS

Fall Benchmark

Sydney's Data

Sydney's Trend

Sydney's ROI = 0.1 CWS per week

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Slide 168
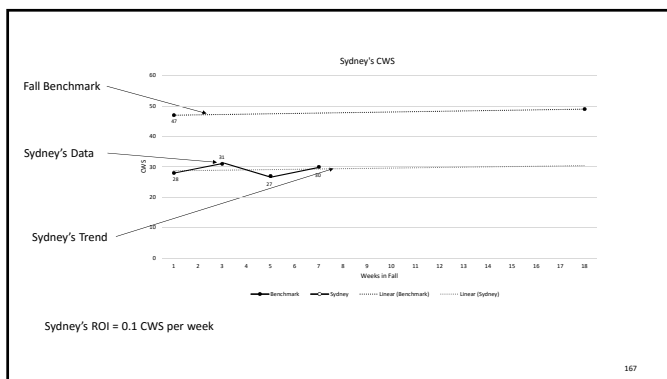
Mid-October Team Meeting

6th Grade	7th Grade (current)

- Spring On-Demand Writing Rubric scores (each domain out of 4 points):
  – Focus = 2; Content = 2; Organization = 1; Style = 2; Conventions = 3
 	
- Spring CBM CWS = 30 (Below benchmark: 51-54)
 	
- English Language Arts PVAAS Projected = 50% probability of proficiency at spring 7th grade (6th Grade = Basic performance)
	- Sydney's CWS progress since the beginning of school
	
	- Fall On-Demand Writing Rubric scores (each domain out of 4 points)
	  – Focus = 2; Content = 2; Organization = 1; Style = 1; Conventions = 2
	
	- *Test of Written Language - 4th Edition*
	  – Spelling scaled score = 7; 16th PR
	  – Story Composition scaled score = 7; 16th PR

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Slide 169

Writing Intervention Plan Design and Actions Taken:

What	By Whom	Frequency/Duration
Total Words Written (TWW) Step Up to Writing	Classroom Teacher	5 times/week. 30 minutes/day.
Correct Writing Sequences (CWS) Step Up to Writing	Classroom Teacher	5 times/week. 30 minutes/day.
Self-Regulated Strategy Development (Project Write)	Intervention Teacher	5/times/week. 30 minutes/day.
Family Support: Review Writing Samples and provide corrective feedback.	Parent	2 evenings/week. Reinforcement for complex sentences.
Measurement of Progress: TWW, CWS	Interventionist	Every week
TOWL-4	Interventionist	Pre and Post as per manual
Step up to Writing classroom samples	Classroom Teacher	Ongoing
Analytic Rubric-re-administer	Classroom Teacher	Winter and Spring
How will we ensure instructional fidelity?	Self -Assessment by Classroom Teacher and Interventionist	Completion of fidelity checklist once per month
	Principal or principal designee	TBD

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Slide 170

Sydney: Intervention Began October 8th

CWS Data during Intervention

- October 15 = 31 CWS
- October 29 = 34 CWS
- November 6 = 35 CWS
- November 12 = 33 CWS
- November 18 = 32CWS
- November 25 = 33 CWS

- December 2 = 34 CWS
- December 9 = 34 CWS
- December 16 = 33 CWS
- December 22 = 32 CWS
- January 5 = 35 CWS
- January 12 = 33 CWS
- January 19 = 34 CWS

Next slide has data graphed using Excel

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Slide 171

How is Sydney Doing?
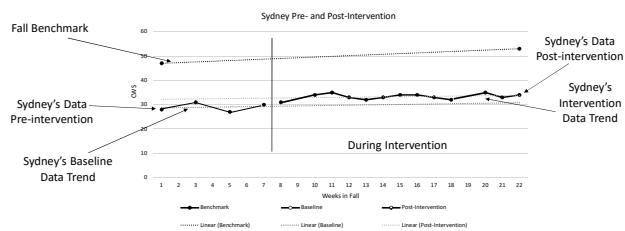
Sydney's ROI during intervention = 0.01 CWS/week

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Slide 172

Additional Post-Intervention Data (January meeting)

- Winter On-Demand Writing Rubric
  - Focus = 1; Content = 3; Organization = 2; Style = 1; Conventions = 1

- TOWL-4 Spelling and Story Composition subtests
  - Spelling scaled score = 7; 16th Percentile Rank
  - Composition scale score = 6; 9th Percentile Rank

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Slide 173

Comparing Sydney's Performance

Baseline (September - October)	**Intervention** (October- January)
• Average = 29.3 CWS	• Average = 33.3 CWS
• ROI = 0.10 CWS / week	• ROI = 0.01 CWS / week
• Fall TOWL-4 Spelling = 16th PR; Story Composition = 16th PR	• Winter TOWL-4 Spelling = 16th PR; Story Composition = 9th PR
• Fall On-Demand Writing Rubric scores (each domain out of 4 points) — Focus = 2; Content = 2; Organization = 1; Style = 1; Conventions = 2	• Winter On-Demand Writing Rubric scores (each domain out of 4 points) — Focus = 1; Content = 3; Organization = 2; Style = 1; Conventions = 1

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Slide 174

How is Sydney doing?

Do you need any other data?

Assuming intervention fidelity was confirmed, what would you recommend next for Sydney?

174

How Slow is Too Slow?

Teams need to determine whether current ROI can bring a student to an _acceptable level of proficiency_ **_in a reasonable amount of time_**...

By answering two questions:
- What is an acceptable level of proficiency?
- What is a reasonable amount of time?

175

What is...An Acceptable Level of Proficiency?

Level that demonstrates "proficiency" of the skill
- e.g., benchmark

Level that is no longer low enough to meet Criterion 1

176

What is a reasonable amount of time?

- 1 year? 2 years? 3 years?

- Consider a student's
  - Age
  - History
  - Current progress/ROI

- Project a student's ROI into the future to determine how long it will take the student to "catch up"
  - Using ROI trajectories

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ROI Trajectories

- Provide practitioners with a quantifiable means for determining a deficient ROI
  - Extrapolate ROI into the future

- Guidance on determining a discrepant ROI

- Graphically depict how long it will take a student to catch up

- Compare current ROI with needed ROI to:
  - Determine whether there is a "lack of progress" (Criterion 2)
  - Determine whether a student is making _meaningful growth_

178

Conducting a Trajectory Analysis

1. Determine an acceptable level of proficiency.
   - Benchmark?
2. Calculate needed ROI.
3. Compare needed ROI to student's current ROI.
4. Can we sustain this growth in general education or is specially designed instruction needed?

179

Calculate Needed ROI

1. Identify student's current level of performance.
2. Using the Sydney case study, Sydney's terminal level of performance after intervention was:

   34 CWS

3. Determine the target level in 1 year (end of 8th grade). We can't project further because norms end at 8th grade.

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	Total Words Written	Words Spelled Correctly	Correct Writing Sequence	Percent of Words Spelled Correctly	Percent of Correct Writing Sequence	Correct Minus Incorrect Writing Sequence
	M	*M*	*M*	*M*	*M*	*M*
Grade 5						
Fall	37-51	37-48	35-46	94	83	37
Spring	42-67	50-65	45-63	97	86	53
Grade 6						
Fall	41-47	42-44	39-41	94	84	34
Spring	53-60	55-56	51-54	96	85	45
Grade 7						
Fall	48-54	49-55	47-49	96	84	39
Spring	58-61	56-62	53-64	96	86	46
Grade 8						
Fall	49-74	54-70	49-70	96	88	61
Spring	58-68	66-70	56-67	98	91	60

Note. Based on data from AIMSweb (2012 norms), Malecki and Jewel (2003), Mirken et al. (1981), and Shinn (1989). Data from columns 4-6 are from Malecki and Jewell (2003).

Table reprinted from C. K. Malecki (2014). Best practices in written language assessment and intervention. In P. Harrison & A. Thomas (Eds.), *Best practices in school psychology: Data-based and collaborative decision making*, (pp. 187-202). Bethesda, MD: National Association of School Psychologists.

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- Sydney is in 7th grade, so projecting to the Spring benchmarks:
  - Grade 8 (1 year): 56-67 CWS

- Subtract the student's current level from the desired target level (using the lower number of the range).

- For example, choosing a target level to attain in one year (by the end of 8th grade) of 56 CWS minus Sydney's current level of 34 CWS, Sydney needs to improve by 22 CWS in one year.

182

To obtain the needed ROI, divide the number of units (CWS) needed by the number of weeks of the projection.

To project for Sydney in 8th grade, it is roughly 36 weeks. So, 22/36 = .61 CWS per week.

183

Compare Needed ROI to Current ROI

1. How long will it take the student to catch up?
2. Sydney's level is 34 CWS.
3. Her current ROI is .01 CWS per week
4. The needed ROI (1 year projection) is .61 CWS per week.
5. Sydney's current ROI can be considered to be very slow; she will not catch up in 1 year.
6. At her current ROI, in 1 year she will have gained 0.36 more CWS (36 weeks x .01), which means she is basically staying at the same level.
7. At that rate (rounding down), her level will still be 34 (34 *current* + 0 *ROI*) CWS compared to the benchmark of 56-67 CWS.

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Sydney's Trajectory - Compare Needed ROI to Current ROI
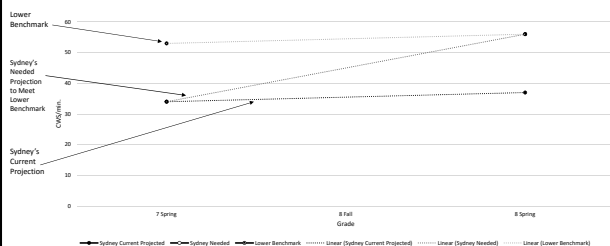
185

Expanded Use of Trajectory Analyses

Sydney example used CWS; however, depending on the student, grade, and skill deficiencies:
- TWW
- WSC
- CWS

Evidence indicates TWW and WSC appropriate for K-3

CWS appropriate for grades ≥4

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Sustaining Growth Through an On-Going Problem-Solving Process

- Sydney has demonstrated the need for intensive interventions to make minimal progress. At her current ROI, she is not projected to reach benchmark in one year, so she needs interventions that are probably beyond what is feasible in general education. Therefore, it is concluded that special education services are needed to accelerate Sydney's ROI and achieve the desired level through on-going collaboration and shared instruction between general and special education teachers.

- The team needs to ensure that the intervention is effective enough to sustain the ROI over time. The team should collect regular progress monitoring data to determine whether the needed ROI is being sustained.

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Important Points

ROI trajectories provide teams and **parents** with:

- A clear picture of how far behind the student is
- An understanding of how fast their child is progressing
- A graphic depiction of whether the intervention is working
- An understanding of how long it will take their child to reach proficiency
- More clarity when compared to traditional procedures

188

Considerations for Identifying a Student with a Dual Discrepancy using RtII

A student may be eligible for special education after an RtII intervention if:

- the student continues to display a significant deficiency in level (criterion #1), and
- the student's ROI is not sufficient to meaningfully close the gap in level in a reasonable amount of time, and
- the intervention that was used was evidence-based and implemented with a high degree of fidelity.

189

Is Sydney eligible for special education?

Failure to meet age- or grade-level State standards in ... **written expression**	RTI: Lack of progress in response to scientifically based instruction.	Rule out:	Rule out lack of instruction by documenting: Appropriate instruction by qualified personnel
Sydney: TOWL-4 Spelling: 16th %ile Story Comp.: 9th %ile	**Sydney:** ROI during intervention = 0.01 CWS/wk. compared to needed ROI of 0.61 CWS/wk.	•Vision, hearing, or motor problems •Intellectual disability •emotional disturbance •cultural and/or environmental issues •limited English proficiency	**Sydney:** Sydney was provided with core instruction and targeted interventions using Self-Regulated Strategy Development and Step Up to Writing. No evidence of lack of instruction.
On-demand writing rubric: (out of 4 pts.): Focus: 1, Content: 3, Organization: 2, Style: 1, Conventions: 1		**Sydney:** Sydney's written expression deficiencies cannot be explained by any of the factors listed above.	Repeated assessments **Sydney:** Sydney's progress was monitored weekly.
CBM: 34 CWS (benchmark = 53)	**Qualifies under Criterion #2.**		
Qualifies under Criterion #1		**Qualifies under Criterion #3**	**Qualifies under Criterion #4**

Inclusionary | ***Observation*** | Exclusionary

Specific Learning Disability

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Elementary Student – Ethan

CASE STUDY #3

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Tier 3 Planning Form

Student Name: Ethan   Grade: 5   DOB: 5/31/04
Reason For Intervention: Writing   Date: October 17, 2014   Teacher:

Tier 3 Referral Data

Referral Concerns: Describe in observable behavior what the student does and what educators want the student to do.

Current Behavior	Desired Behavior
Ethan is performing below grade level in writing.	Ethan will increase his total words written, his correct writing sequences, and words spelled correctly when writing.

Current Intervention(s):

Date	Description		Effects
9/2014	Failure Free Reading		Showing reading comprehension growth

Student Involvement in:

	Yes	No	When
Tier 3	x		2013-reading 10/14-writing
Title I	x		Extended Day Kindergarten, 1, 2, 3,4-reading
ESL		x	
IEP/504 (please note area)		x	
Outside Agency	x		Early Intervention for speech
Past MDT	x		Not eligible for SLD in reading
Gifted Support		x	

Health and Attendance:

Health Concerns	None
Attendance Record	normal

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Literacy Baseline Data:

Assessment	Date	Result
PSSA	4/2013	Reading-Basic
Star Reading	9/2014	25th percentile
Writing Sample Fall Benchmark: 14	10/2014	Total Score: 5 1 in all domains Focus, Content, Organization, Style, Conventions
DIBELS Next (DORF, Retell, DAZE)	9/2014	Intensive 85 words correct per minute, 80% accuracy, Intensive retell and Daze

CORE Phonics (CORE Multiple Measures, 2nd Edition)

	Date-9/14	Date-1/15/15
A. Letter names – uppercase	26/26	-
B. Letter names – lowercase	26/26	-
C. Consonant sounds	21/21	-
D. Long vowel sounds	4/5	5/5
Short vowel sounds	5/5	-
E. Short vowels in CVC words	15/15	-
F. Consonant blends with short vowels	13/15	15/15
G. Short vowels, digraphs, and	12/15	15/15
H. R-controlled vowels	13/15	15/15
I. Long vowel spellings	12/15	14/15
J. Variant vowels	9/15	13/15
K. Low frequency vowel and consonant spellings	10/15	13/15
L. Multi-syllabic Words	17/24	20/24

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Writing Baseline Data:

Assessment	Date	Result
PSSA-Writing		Not assessed in 4th grade
Writing Sample with Analytic Rubric Benchmark: 14	10/14	Score of 5-Below Basic F-1, C-1, O-1, S-1, C-1
AIMSweb Total Words Written	9/25/14	Median score of 28 total words written for 3 minutes. 21st %tile for 5th grade
AIMSweb Correct Writing Sequence	9/24/14	Median score 18 correct writing sequences for 3 minutes 14th %tile for 5th grade
AIMSweb Words Spelled Correctly	10/2/14	Median score 21 words spelled correctly for 3 minutes 15th %tile for 5th
PAL-II	10/4/14	Handwriting-15th percentile, low average Orthographic Spelling-15th percentile, low average Narrative Compositional Fluency-15th percentile, low average
Handwriting Sample Analysis	10/2/14	Was unable to self-generate a paragraph and was slow. There was limited space between his words. Many letters were formed incorrectly. Student noted hand cramping while writing and appeared to be fatigued.
Daily Formative Assessment (analysis of informal writing samples)	9/13-present	His writing does not make sense, is illogical and lacks detail. He has difficulty with run on sentences and capitalization. His writing is poorly sequenced and there is not a clear beginning, middle or end.

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Goal Statement:

1. Given a writing prompt, Ethan will write 44 Total Words Written (TWW) in a three minute timed writing for three consecutive trials (40th percentile for 5th grade).

2. Given a writing prompt, Ethan will write 28 Correct Writing Sequences (CWS) in a three minute timed writing sequence for three consecutive trials (25th percentile for 5th grade).

3. Given a three minute writing prompt, Ethan will spell 29 words correctly for three consecutive trials (25th percentile for 5th grade).

4. Ethan's performance across subtests on the PAL-II will fall within the average range (25th percentile or above).

5. Ethan will increase the number of complex sentences from 0 to 2 per informal writing tasks in the classroom under timed and untimed circumstances.

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Writing Intervention Plan Design and Actions Taken:

What	By Whom	Frequency/Duration
Total Words Written Step Up to Writing	Classroom Teacher	5 times/week. 30 minutes/day.
Correct Writing Sequence: Step Up to Writing	Classroom Teacher	5 times/week. 30 minutes/day.
Words Spelled Correctly: Spellography	Intervention Teacher	5 times/week. 15 minutes/day.
Failure Free Reading	Intervention Teacher	5/times/week. 30 minutes/day.
Student Motivation: Write with immediate feedback with a checklist. Menu of reinforcement with monitoring. Encouragement to write with spacing and to write neatly-try modified paper.	Classroom Teacher	Daily
Family Support: Review Writing Samples and provide corrective feedback.	Parent	2 evenings/week. Reinforcement for complex sentences.
Measurement of Progress: TWW, CWS, WSC	Interventionist	Every two weeks
PAL-II	Interventionist	Pre and Post as per manual
Handwriting	Interventionist-OT if available	Ongoing
Step up to Writing classroom samples	Classroom Teacher	Ongoing
Analytic Rubric-re-administer	Classroom Teacher	Winter and Spring
How will we ensure instructional fidelity?	Self -Assessment by Classroom Teacher and Interventionist	Completion of fidelity checklist once per month
	Principal or principal designee	TBD

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Review Meeting

Outcome: ☒ Met Goal   ☐ Did Not Meet Goal

Summary:

Ethan met his goal 2/3 times in the last 3 consecutive data points on both CWS and TWW. His last data point in Correct Writing Sequence with a score of 34 is between the 37th and 39th % ile. His last data point in Total Words Written is a score of 52 which is between the 60th-62nd % ile. Ethan exceeded his goal in Words Spelled Correctly with a score of 35 which is between the 36th-38th percentile. These measures are in the average range of achievement for 5th grade using winter norms.

Progress Monitoring Improvement Report for _____
Grade 6 : Written Expression - Correct Writing Sequences
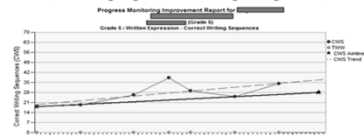
Goal Statement

In 13.6 weeks, _____ will achieve 28 Correct Writing Sequences with 44 TWW from grade 5 Written Expression - Correct Writing Sequences. The rate of improvement should be 6.77 Correct Writing Sequences per week. The current average rate of improvement is 1.34 Correct Writing Sequences per week.

Date	10/31	11/14	11/30	12/12	12/19	01/02	01/16								
CWS	18	19	28	35	28	25	34								
TWW															
Goal/Trend ROI	0.77/1.34														

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Compare Needed ROI to Current ROI

1. How long will it take the student to catch up?
2. Ethan's level is 34 CWS after the intervention.
3. His current ROI is 1.34 CWS per week.
4. To reach the 6th grade benchmark of 51 CWS by this time next year (1 year projection) he needs to gain 17 CWS (51 – 34) in 36 weeks or, which computes to an ROI of .47 CWS per week (17/36).
5. Alex's current ROI can be considered to be excellent.
6. In fact, at his current ROI, in 1 year he may gain 48 more CWS (36 weeks x 1.34).
7. At that rate, his level will be 82 (34 *current* + 48 *ROI*) CWS compared to the benchmark of 51 CWS, so he would be well above proficiency.

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200

Summary

Successes: Ethan's writing content, focus, and organization have improved. He is producing at least two complex sentences per writing sample. In the area of spelling, Ethan has demonstrated mastery spelling words that contain r-controlled vowels, long vowels, variant vowels and multi-syllabic words. His last two writing pieces, completed over a period of time, were a score of 10. Benchmark is a score of 14. He benefits from peer editing and publishing on the computer. Lastly, Ethan is producing words with adequate spacing and is not fatiguing as easily.

Concerns: Ethan will continue to receive Step Up to Writing and Spellography until he reaches proficiency in the areas of handwriting, spelling and composition.

201

Recommendation:

☐ Exit from Plan ☒ Continue plan and progress monitor. ☐ Other:	☐ Refer to MDE. ☐ Increase/Change plan intensity and monitor progress. ☐ Other:

If the student is being referred for MDE answer the questions below:
Any concerns regarding the student's functioning in other areas of the school curriculum?
Any concerns related to this student's behavioral adjustment, attention skills, impulsivity, etc.?
Does this student have any health and/or physical concerns that relate to school functioning?
Are there any concerns related to this student's communication ability?

Other referral questions:

Comments:

202

In the meantime…

The decision on how deficient a student needs to be to qualify rests with the MDE.

A rough guide: A student with a learning disability should be severely deficient in level and display a poor response to research-based interventions (slope) such that he or she is not likely to meet benchmarks in a reasonable amount of time without intensive specially designed instruction.

203

Decision-Making Framework

- Gary Troia framework?
- Then walk through assessment
- Then case
- Revisit framework
- Articulate decision making process for SLD in writing

204

Slide 205

Establishing Fidelity of Implementation across Tiered Supports and Providers (Examples)

- Evidence-based instructional and intervention methodologies were utilized and implemented with fidelity (e.g., spellography, writing next strategies were utilized during core content instruction where writing was integrated)
- The instruction and intervention during small group matched the student's needs and deficiencies (e.g., an evidenced based handwriting intervention was used during tiered intervention based upon results of Minnesota Handwriting Assessment)
- Technically adequate measures were used to assess response to writing instruction and intervention (PAL-II, CBM)
- The majority of the student's peers are exhibiting adequately developed written expression skills as evidenced by a review of extant data (PSSA, Keystone, Formative and Summative Assessments, etc.)

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Slide 206

Is Ethan eligible for special education?

Failure to meet age- or grade-level State standards in ... **written expression**	RTI: Lack of progress in response to scientifically based instruction.	Rule out: Vision, hearing, or motor problems, Intellectual disability, Emotional disturbance, Cultural and/or environmental issues, Limited English proficiency	Rule out lack of instruction by documenting appropriate instruction by qualified personnel
Ethan: 34 CWS (benchmark =35) 52 TWW (benchmark = 44) 35 WSC (benchmark =36) PAL-II = 23rd percentile in Handwriting, Spelling and Compositional Fluency **Does not qualify under Criterion #1**	**Ethan: ROI during intervention = 1.34 CWS/wk. compared to needed ROI of 0.47 CWS/wk.** **Does not qualify under Criterion #2**	**Ethan:** Ethan does not display written expression deficiencies. **Does not qualify under Criterion #3**	**Ethan: Ethan was provided with core instruction and targeted interventions using Failure Free Reading, motivational strategies, and parental support.** **No evidence of lack of instruction.** Repeated assessments Ethan: Ethan's progress was monitored bi-weekly. **Does not qualify under Criterion #4**

Inclusionary   ***Observation***   Exclusionary

Specific Learning Disability

206

Slide 207

1. Failure to meet age- or grade-level State standards in one of eight areas: ▪oral expression ▪listening comprehension ▪written expression ▪basic reading skill ▪reading fluency skill ▪reading comprehension ▪mathematics calculation ▪mathematics problem solving	2. Discrepancy: Pattern of strengths & weaknesses, relative to intellectual ability as defined by a severe discrepancy between intellectual ability and achievement, or relative to age or grade. OR RTI: Lack of progress in response to scientifically based instruction	3. Rule out: ▪vision, hearing, or motor problems ▪intellectual disability emotional disturbance ▪cultural and/or environmental issues ▪limited English proficiency	4. Rule out lack of instruction by documenting: ▪Appropriate instruction by qualified personnel ▪Repeated assessments

Inclusionary   ***Observation***   Exclusionary

Specific Learning Disability

207

Slide 208

Rule Out: Limited English Proficiency

Screening procedure	Home language screening (required by law)
If positive, assess…	Primary language assessment
Possible extraneous factor or condition that could account for learning problem	May not have BICS or CALP necessary for learning academic content

Adapted from Reschly (2005)

208

Slide 209

Is Alex eligible for special education?

Failure to meet age- or grade-level State standards in ... **written expression**	RTI: Lack of progress in response to scientifically based instruction.	Rule out: ▪Vision, hearing, or motor problems ▪Intellectual disability ▪emotional disturbance ▪cultural and/or environmental issues ▪limited English proficiency	Rule out lack of instruction by documenting: Appropriate instruction by qualified personnel
Alex: TOWL-4 Spelling: 16th %ile Story Comp.: 9th %ile **On-demand writing rubric: (out of 4 pts.): Focus: 1, Content: 3, Organization: 2, Style: 1, Conventions: 1** **CBM: 19 CWS (benchmark = 39)** **Qualifies under Criterion #1**	**Alex: ROI during intervention = 0.28 CWS/wk. compared to needed ROI of 0.44 CWS/wk.** **Qualifies under Criterion #2**	**Alex: Alex's written expression deficiencies cannot be explained by any of the factors listed above.** **Qualifies under Criterion #3**	Repeated assessments

Inclusionary   ***Observation***   Exclusionary

Specific Learning Disability

209

Slide 210

Is Sydney eligible for special education?

Failure to meet age- or grade-level State standards in ... **written expression**	RTI: Lack of progress in response to scientifically based instruction.	Rule out: ▪Vision, hearing, or motor problems ▪Intellectual disability ▪emotional disturbance ▪cultural and/or environmental issues ▪limited English proficiency	Rule out lack of instruction by documenting: Appropriate instruction by qualified personnel
Sydney: TOWL-4 Spelling: 16th %ile Story Comp.: 9th %ile **On-demand writing rubric: (out of 4 pts.): Focus: 1, Content: 3, Organization: 2, Style: 1, Conventions: 1** **CBM: 34 CWS (benchmark = 53)** **Qualifies under Criterion #1**	**Sydney: ROI during intervention = 0.01 CWS/wk. compared to needed ROI of 0.61 CWS/wk.** **Qualifies under Criterion #2.**	**Sydney: Sydney's written expression deficiencies cannot be explained by any of the factors listed above.** **Qualifies under Criterion #3**	Repeated assessments

Inclusionary   ***Observation***   Exclusionary

Specific Learning Disability

210

Slide 211

Is Ethan eligible for special education?

| Failure to meet age- or grade-level State standards in ... **written expression** **Ethan:** **34 CWS (benchmark =35)** **52 TWW (benchmark = 44)** **35 WSC (benchmark =36)** **PAL-II = 23ʳᵈ percentile in Handwriting, Spelling and Compositional Fluency** **Does not qualify under Criterion #1** | RTI: Lack of progress in response to scientifically based instruction. **Ethan: ROI during intervention = 1.34 CWS/wk. compared to needed ROI of 0.47 CWS/wk.** **Does not qualify under Criterion #2** | Rule out: Vision, hearing, or motor problems Intellectual disability Emotional disturbance Cultural and/or environmental issues Limited English proficiency **Ethan: Ethan does not display written expression deficiencies.** **Does not qualify under Criterion #3** | Rule out lack of instruction by documenting appropriate instruction by qualified personnel Repeated assessments |

Inclusionary | *Observation* | Exclusionary

Specific Learning Disability

211

Slide 212

| 1. Failure to meet age- or grade-level State standards in one of eight areas: ▪oral expression ▪listening comprehension ▪written expression ▪basic reading skill ▪reading fluency skill ▪reading comprehension ▪mathematics calculation ▪mathematics problem solving | 2. Discrepancy: Pattern of strengths & weaknesses, relative to intellectual ability as defined by a severe discrepancy between intellectual ability and achievement, or relative to age or grade. OR RTI: Lack of progress in response to scientifically based instruction | 3. Rule out: ▪vision, hearing, or motor problems ▪intellectual disability ▪emotional disturbance ▪cultural and/or environmental issues ▪limited English proficiency | 4. Rule out lack of instruction by documenting: ▪Appropriate instruction by qualified personnel ▪Repeated assessments |

Inclusionary | *Observation* | Exclusionary

Specific Learning Disability

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Slide 213

Chapter 14: Regulations

Ensure that underachievement in a child suspected of having a specific learning disability is not due to lack of appropriate instruction in reading or mathematics by considering documentation that: prior to or as part of the referral process, the child was provided underline scientifically-based instruction in general education settings, delivered by qualified personnel, as indicated by observations of routine classroom instruction.

14.125 [a] [i]

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Slide 214

Key Questions to Address

- Is Core Writing Instruction Aligned to the Standards?

- Are Core Writing Practices Empirically-Supported?

- Are there indicators of Fidelity of Core Writing Instructional Practices?

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Slide 215

Key Questions to Address

Has the student been provided with small group and/or individualized support in the area of writing in the general education classroom?

Has the student been provided with increasingly intensive, customized support using empirically-supported writing instruction and intervention practices?

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Slide 216

Considerations to assess the provision of appropriate instruction

✓Principal's observation of teacher performance through classroom visits and observations conducted during the instructional period for the targeted content/subject area on a regular basis.

✓Checklists of integrity of instruction completed by teachers as self-check measures

✓Checklists of integrity of instruction completed among teachers as peer-check measures

✓Review of student performance on common writing

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Repeated Assessments

Repeated assessments of writing skill development should be conducted at reasonable intervals, reflecting formal monitoring of student progress during the interventions.

Information regarding the student's progress should be periodically provided to the student's parents.
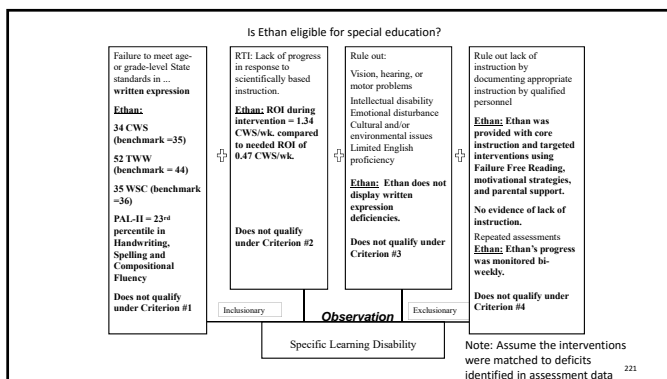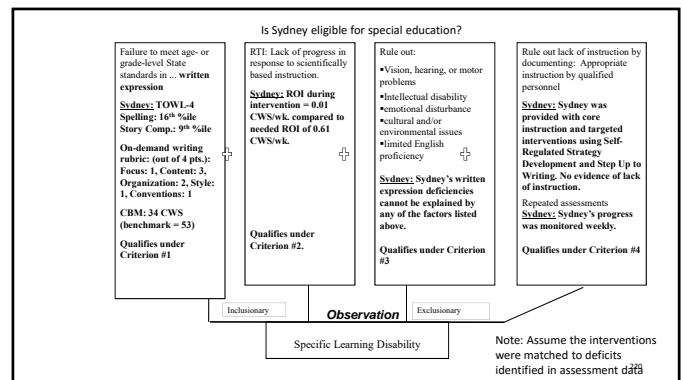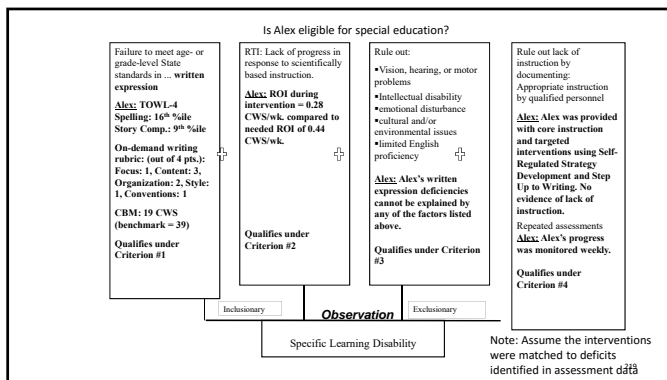
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Frequency of Repeated Assessments
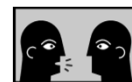
Repeated assessment information may come from:

– Universal Screening (Tier 1)
  • Typically conducted 3 times a year

– Strategic intervention (Tier 2)
  • Typically progress monitored twice a month

– Intense intervention (Tier 3)
  • Typically progress monitored twice a month

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Is Alex eligible for special education?

Failure to meet age- or grade-level State standards in ... **written expression**	RTI: Lack of progress in response to scientifically based instruction.	Rule out:	Rule out lack of instruction by documenting: Appropriate instruction by qualified personnel
Alex: TOWL-4 Spelling: 16th %ile Story Comp.: 9th %ile	**Alex:** ROI during intervention = 0.28 CWS/wk. compared to needed ROI of 0.44 CWS/wk.	▪Vision, hearing, or motor problems ▪Intellectual disability ▪emotional disturbance ▪cultural and/or environmental issues ▪limited English proficiency	**Alex:** Alex was provided with core instruction and targeted interventions using Self-Regulated Strategy Development and Step Up to Writing. No evidence of lack of instruction.
On-demand writing rubric: (out of 4 pts.): Focus: 1, Content: 3, Organization: 2, Style: 1, Conventions: 1		**Alex:** Alex's written expression deficiencies cannot be explained by any of the factors listed above.	Repeated assessments **Alex:** Alex's progress was monitored weekly.
CBM: 19 CWS (benchmark = 39)			
Qualifies under Criterion #1	**Qualifies under Criterion #2**	**Qualifies under Criterion #3**	**Qualifies under Criterion #4**

Inclusionary   **Observation**   Exclusionary

Specific Learning Disability

Note: Assume the interventions were matched to deficits identified in assessment data

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Is Sydney eligible for special education?

Failure to meet age- or grade-level State standards in ... **written expression**	RTI: Lack of progress in response to scientifically based instruction.	Rule out:	Rule out lack of instruction by documenting: Appropriate instruction by qualified personnel
Sydney: TOWL-4 Spelling: 16th %ile Story Comp.: 9th %ile	**Sydney:** ROI during intervention = 0.01 CWS/wk. compared to needed ROI of 0.61 CWS/wk.	▪Vision, hearing, or motor problems ▪Intellectual disability ▪emotional disturbance ▪cultural and/or environmental issues ▪limited English proficiency	**Sydney:** Sydney was provided with core instruction and targeted interventions using Self-Regulated Strategy Development and Step Up to Writing. No evidence of lack of instruction.
On-demand writing rubric: (out of 4 pts.): Focus: 1, Content: 3, Organization: 2, Style: 1, Conventions: 1		**Sydney:** Sydney's written expression deficiencies cannot be explained by any of the factors listed above.	Repeated assessments **Sydney:** Sydney's progress was monitored weekly.
CBM: 34 CWS (benchmark = 53)			
Qualifies under Criterion #1	**Qualifies under Criterion #2.**	**Qualifies under Criterion #3**	**Qualifies under Criterion #4**

Inclusionary   **Observation**   Exclusionary

Specific Learning Disability

Note: Assume the interventions were matched to deficits identified in assessment data

220

Is Ethan eligible for special education?

Failure to meet age- or grade-level State standards in ... **written expression**	RTI: Lack of progress in response to scientifically based instruction.	Rule out:	Rule out lack of instruction by documenting appropriate instruction by qualified personnel
Ethan:	**Ethan:** ROI during intervention = 1.34 CWS/wk. compared to needed ROI of 0.47 CWS/wk.	Vision, hearing, or motor problems Intellectual disability Emotional disturbance Cultural and/or environmental issues Limited English proficiency	**Ethan:** Ethan was provided with core instruction and targeted interventions using Failure Free Reading, motivational strategies, and parental support.
34 CWS (benchmark =35)			**No evidence of lack of instruction.**
52 TWW (benchmark = 44)		**Ethan:** Ethan does not display written expression deficiencies.	Repeated assessments **Ethan:** Ethan's progress was monitored bi-weekly.
35 WSC (benchmark =36)			
PAL-II = 23rd percentile in Handwriting, Spelling and Compositional Fluency			
Does not qualify under Criterion #1	**Does not qualify under Criterion #2**	**Does not qualify under Criterion #3**	**Does not qualify under Criterion #4**

Inclusionary   **Observation**   Exclusionary

Specific Learning Disability

Note: Assume the interventions were matched to deficits identified in assessment data

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Pause and Reflect

Take a moment with a partner near you to discuss Criteria#4: Ruling out lack of instruction, by assuring qualified personnel and repeated assessments.
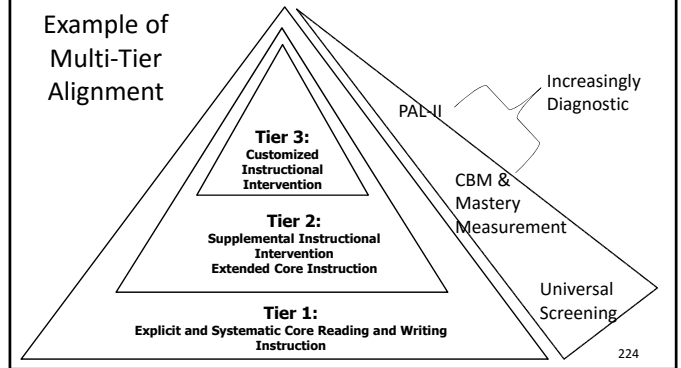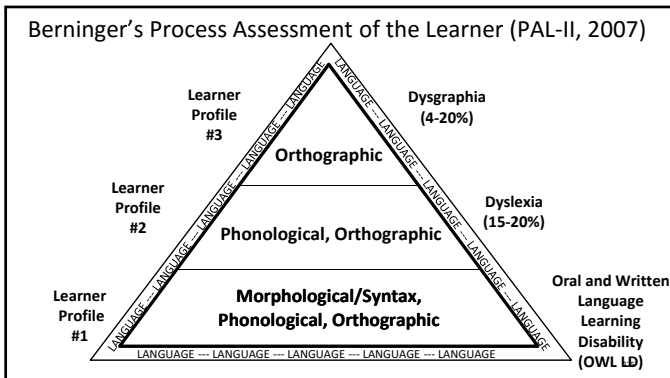

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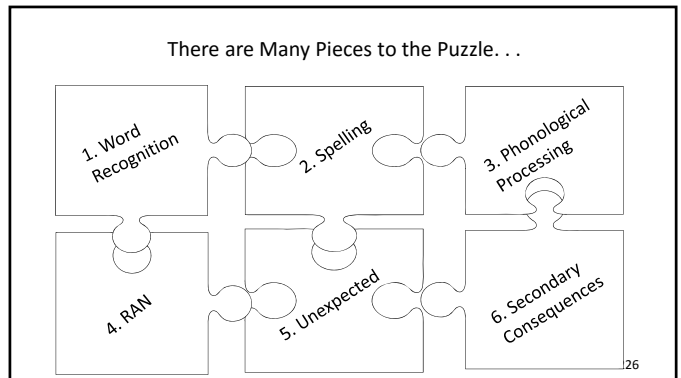## Concluding "Big Ideas"

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Example of Multi-Tier Alignment

Tier 3:
Customized Instructional Intervention

Tier 2:
Supplemental Instructional Intervention
Extended Core Instruction

Tier 1:
Explicit and Systematic Core Reading and Writing Instruction

PAL-II

Increasingly Diagnostic

CBM & Mastery Measurement

Universal Screening

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Berninger's Process Assessment of the Learner (PAL-II, 2007)

Learner Profile #3

Learner Profile #2

Learner Profile #1

Orthographic

Phonological, Orthographic

Morphological/Syntax, Phonological, Orthographic

LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE --- LANGUAGE

Dysgraphia (4-20%)

Dyslexia (15-20%)

Oral and Written Language Learning Disability (OWL LD)

There are Many Pieces to the Puzzle. . .

1. Word Recognition

2. Spelling

3. Phonological Processing

4. RAN

5. Unexpected

6. Secondary Consequences

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| 1 | 2 | 3 |
| 4 | 5 | 6 |

Structured Literacy

Applied to purposeful reading and writing

(Louisa Moats, 2014)

1. **Linguistic Concepts**
2. **Systematic**
3. **Explicit**
4. **Cumulative**
5. **Multisensory**
6. **Intensive**

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Tier 3 Intervention Menu

Language	Spelling (Reading)	Transcription	Composition	Other Supports
• Listening and Reading Comprehension • Oral and Written Language Expressions • Vocabulary	• Phonological Awareness • Word Reading • Word Spelling	• Tracing • Copying • Memory • Fluency (**Handwriting**, Spelling, Mechanics)	• Sentence-level • Passage-level (Self-Regulated Strategy Development)	• Mindset • Accommodations • Assistive Technology

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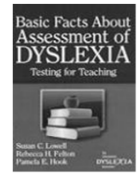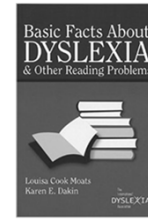
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Difficulties mastered are opportunities won.
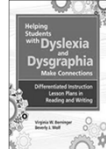
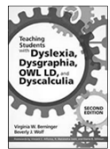   - Winston Churchill
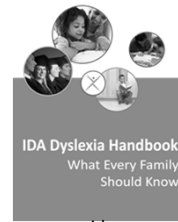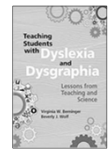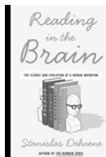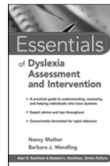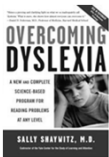

From the Bookshelf. . .

www.eida.org

From the Bookshelf. . .

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