Case Studies
Adam Scheller, PhD, NCSP
Amy Gabel, PhD, NCSP

Agenda

1. Overview
2. Basal & Discontinue Rules
3. Analysis of performance
4. Case Study #1
5. Case Study #2

Woodcock Reading Mastery Tests, Third Edition (WRMT-III)

- A Comprehensive Set of 9 Individually Administered Tests of Reading Readiness and Reading Achievement
- Ages 4:6 through 79:11
- Original developed in 1973 by Dr. Richard Woodcock
- Revision in 1987, Normative Update in 1998
- WRMT-III 2011: Extensive revision, new and revised content, new norms
  - 38 years of research and development
WRMT-III Uses

- Evaluate struggling readers
- Individual program planning
  - Identify specific strengths and weaknesses in reading skills to plan targeted remediation
- Screen for reading readiness
- Appropriate level of instruction
  - Reading groups and instructional needs

Other Uses Include Evaluating Progress and Effectiveness

- Appraisal of growth (using GSV)
  - Intervention progress monitoring
- Program evaluation
  - Group program level
  - Title 1
- Research

3 Tiered Model of Intervention and Prevention

Schema adapted from Michelle Windmueller
Basal & Discontinue Rule

- **Start** at appropriate age/grade level
- Continue testing until examinee meets **discontinue rule**.
  - Two rules, which are test specific:
    - Four consecutive scores of 0
    - Administer entire section
- Determine if examinee met **basal rule** (three items correct before meeting **discontinue rule**):
  - Items do not need to be consecutive
  - On tests that state “Administer entire section,” there is no need to determine **basal**

Basal & Discontinue Rule (cont.)

- If **basal rule** was met (from start point), score items correct and add to items preceding start point (assumed correct).
- If **basal rule** was not met before meeting **discontinue rule**, go back to previous start point and test forward.
  - If **basal rule** achieved, then continue to test forward and add all items preceding “new” start point.
  - If **basal rule** not achieved, go back to previous start point and test forward.

Sequence for Analysis

- Evaluate Cluster Scores
- Evaluate Test Scores and Individual Item Responses
  - Score analysis
  - Error analysis
- Interpret profiles and evaluate clinical relevance
CASE STUDY #1

- John Doe
- 4th grade
- 9 years, 11 months old
- WRMT-III Form B
- Fall 4th grade Norms

Case Study #1: Reason for Referral

- In 1st grade experienced difficulty with reading.
  - Received intermittent tutoring from paraprofessionals and volunteers.
- In 3rd grade took part in Tier 1 testing for all students in his grade.
  - Because of low scores was placed in Tier 2 program.
    - Small group instruction twice per week with reading specialist.
    - Lack of progress with Tier 2 intervention
- Referred for testing at start of 4th grade to determine if Tier 3 intervention is warranted.
Evaluator Questions...

1. What information will we need to address the referral concern?
2. Based on the referral information, what do I predict?

Planning for Evaluation

• What info is needed?
  – Analysis of strengths and weaknesses
    • Why is this student performing, but not progressing?
    • Need to evaluate for splinter skills, which often mask other weaknesses.
  – Comparison to peer group to determine disability
• Predictions?
  – Child hasn’t mastered basic skills (sound-symbol relationship, basic sight words)
  – Dysfluent

Administration Order

WJIII-III Tests by Recommended Administration Order and Cluster Assignment

<table>
<thead>
<tr>
<th>Test</th>
<th>Initial Age Range</th>
<th>Start (Min)</th>
<th>Percentile</th>
<th>Basic Skills</th>
<th>Reading Skills</th>
<th>Total Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Identification</td>
<td>N/A</td>
<td>0-3 Days</td>
<td>0-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonological Awareness</td>
<td>N/A</td>
<td>0-3 Days</td>
<td>0-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid Automatic Naming</td>
<td>N/A</td>
<td>0-3 Days</td>
<td>0-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Identification</td>
<td>1-6 Ages</td>
<td>2</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Attack</td>
<td>1-25 Ages</td>
<td>2</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening Comprehension</td>
<td>1-12 Ages</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Word Comprehension</td>
<td>1-45 Ages</td>
<td>18</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passage Comprehension</td>
<td>1-45 Ages</td>
<td>18</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Reading Fluency</td>
<td>1-25 Ages</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Indicates children aged 4-7 who have not yet entered kindergarten. 12 indicates Grade 12 plus adults through 79 yrs.
Word Identification

- **Description**: Examinees name words presented to them in the stimulus book.
  - Consists of 46 items.
- **Discontinue Rule**: Four consecutive scores of 0

Word Attack

- **Description**: Examinees read nonsense words of increasing difficulty, applying the alphabetic and syllabication rules of the English language.
  - Consists of 26 items.
- **Discontinue Rule**: Four consecutive scores of 0
Listening Comprehension

- **New Test**
- **Does not align to a cluster**
- **Description:** Examinee listens to passages either read by the examiner or played from the audio CD and verbally responds to questions about the content.
- **Discontinue Rule:** Four consecutive scores of 0
- **Additional Materials Needed:** WRMT–III audio CD; CD/MP3 player or personal computer with external speaker(s)
Passage Comprehension

- **Description**: Using a modified cloze format, examinees read a passage and provide the missing word.
  - Passage Comprehension contains 38 items

- **Discontinue Rule**: Four consecutive scores of 0

Oral Reading Fluency

- **New Test**
- **Falls on Total Reading Cluster**
- **Description**: Measures the ability to fluently integrate learned reading abilities.
  - Examinee orally reads **one** (Grade 1) or **two** (Grades 2-adult) passages depending on grade/age.
Oral Reading Fluency

- **Discontinue Rule:** Stop testing at the completed passage or passage set for grade or age.
- **Reversal Rule:** If time exceeds limit drop back two passages.
  - For struggling readers, use judgment to either immediately stop passage or to allow them to finish before applying the reversal rule.
- **Additional Materials Needed:** Supplemental record form; a stopwatch or a watch with a second hand.

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**WRMT-III**

Richard W. Woodcock, Ph.D.

**Form B**

**ORAL READING FLUENCY**  
supplemental record form

Name:  
Testing Date: / /

**Directions:** Complete the designated passage or passages.

- grade 3: Passage A
- grade 3: Passages B-C
- grade 4: Passage D
- grade 5: Passages D-E
- grade 6: Passages F-G
- grade 7: Passages H-J

**ORAL READING FLUENCY SCORE**

- Record 6
- Subtract 3
- Record 9

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Fluency Ratings and Miscue Analysis

- Expression, phrasing, and smoothness
- Miscue analysis
  - Ask yourself two questions

<table>
<thead>
<tr>
<th>Area</th>
<th>Score</th>
<th>Expression</th>
<th>Planning</th>
<th>Smoothness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Expression</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reads with appropriate sense of phrase boundaries.</td>
<td>Reads with flow and smoothness of phrase boundaries.</td>
<td>Occasionally uses poor sentence structure or makes the work of sentences and phrases difficult.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoothness</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistently reads with difficulty, making frequent and disruptive breaks.</td>
<td>Consistently uses self-correction to resolve word and structure difficulties.</td>
<td>Reads with difficulty most of the time, resulting in occasional breaks in flow.</td>
<td>Consistently reads in a smooth, flowing manner.</td>
<td></td>
</tr>
</tbody>
</table>

Fluency

- Link to executive functioning and attention
- Difference from Word Identification and Word Attack
- Link to comprehension
Behavioral Observations

### Behavioral observation during testing:

<table>
<thead>
<tr>
<th>Skill</th>
<th>Poor</th>
<th>Marginal</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Focus</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Effort</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Relative Performance Index (RPI)

- Translates normative scores into task-performance terms
- Probability of success on tasks average person can perform “easily”
- Interpretive value
- Derived from w-scores
Descriptive Categories

Descriptive Categories Corresponding to Standard Scores, Percentile Ranks, and Standard Deviations From the Mean

<table>
<thead>
<tr>
<th>Descriptive Category</th>
<th>Standard Score Range</th>
<th>Percentile Rank Range</th>
<th>Standard Deviations From the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Below Average</td>
<td>69 and below</td>
<td>2 and below</td>
<td>-2.1 and below</td>
</tr>
<tr>
<td>Below Average</td>
<td>70–84</td>
<td>3–16</td>
<td>-2.0 to -1.1</td>
</tr>
<tr>
<td>Average</td>
<td>85–115</td>
<td>17–83</td>
<td>-1.0 to 1.0</td>
</tr>
<tr>
<td>Above Average</td>
<td>116–130</td>
<td>84–97</td>
<td>1.1 to 2.0</td>
</tr>
<tr>
<td>Well Above Average</td>
<td>131 and above</td>
<td>98 and above</td>
<td>2.1 and above</td>
</tr>
</tbody>
</table>

Cluster Comparisons

**ADDITIONAL COMPARISONS**

<table>
<thead>
<tr>
<th>Cluster Standard Score</th>
<th>Cluster Standard Score</th>
<th>Difference</th>
<th>Sig (circle)</th>
<th>Freq.</th>
<th>Inference Strength (circled)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>Basic Skills</td>
<td>N/A</td>
<td>&lt;1%</td>
<td>.01</td>
<td>NS</td>
</tr>
<tr>
<td>Reading</td>
<td>Reading Comp</td>
<td>N/A</td>
<td>&lt;15%</td>
<td>.05</td>
<td>NS</td>
</tr>
<tr>
<td>69</td>
<td>Basic Skills</td>
<td>90</td>
<td>45%</td>
<td>.05</td>
<td>BS</td>
</tr>
</tbody>
</table>
Differentiating Comprehension Relationships & Discrepancies

Listening Comprehension
Word Comprehension
Passage Comprehension

Listening Comprehension
Reading Comprehension Cluster

Instructional Ranges
Easy Level: RPI=96/90
Appropriate Level: RPI=90/90
Difficult Level: RPI=75/90
Case Study #1: Developing an Instructional Plan

- Based on WRMT-III performance, we can now develop an instructional plan for reading.
  - Link Assessment Intervention
- Focus should be in three areas:
  - Vocabulary
  - Fluency
  - Comprehension

Instructional Plan: Vocabulary

- Focus on learning to match letters and sounds beyond initial letters of a word.
  - Learning Common patterns
- Increasing sight-word vocabulary
- Combine word ID with word meaning
- Morphological changes to words

Instructional Plan: Fluency

- Assisted Reading
  - Regular sessions of reading together with teacher.
  - Benefits from seeing word at the same time hearing it.
    - Builds on strength in Listening Comprehension
- Can you think of any other strategies addressing Fluency that builds off John's strengths?
**Instructional Plan: Comprehension**

- Strength in Listening Comprehension should be supported and fostered.
- Read-aloud sessions with material of interest:
  - Likely to involve material above his present reading level.
  - Should focus on differences in meaning between question words (i.e. who, what, and how)
  - Use text from John’s 4th grade classroom
    - Present prior to introduction in classroom in order for John to become familiar with content and participate in activity/instruction.

**Case Study #2**

- Jane Doe
- Kindergarten
- 5 years, 9 months old
- WRMT-III Form B
- Fall Kindergarten Grade Norms

**Reason for Referral**

- Pre-K teacher reported being “puzzled” by Jane. She exhibited skills in some pre-reading areas and difficulties in others.
  - Jane could recognize most letters of the alphabet and had learned the sounds of those same letters.
  - She had learned few sight words.
- Jane’s Pre-K teacher referred her for a screening to determine if she experienced any problems in comparison to other kids at her grade level.
Evaluator Questions....

1. What information will we need to address a referral for screening?
2. What information is important to analyze at the Kindergarten level?

Planning for Evaluation

• What info is needed?
  – Analysis of pre-reading skills
    • Phonemic Awareness, sight word development, pre-fluency
  – Predictions?
    – Child likely developing letter recognition and sound-symbol relationship, but may have difficulties with cognitive speed and processing?
      • Often in such referral cases attention and processing speed can be implicated in early difficulties.
    – We may need to refer for other evaluations (cognitive) based on results?

Letter Identification

• Description: Examinees name uppercase and lowercase letters presented visually in the stimulus book.
  – Contains 17 items
• Discontinue Rule: Four consecutive scores of 0
• Special Considerations: If a Pre-K or K examinee successfully completes Letter Identification, you may also want to give Word Identification
  – Standardized scores are not available, but other derived scores can still be calculated.
Phonological Awareness

• **New Test**
• **Readiness Cluster**
• **Description:**
  – Consists of five sections
  • 33 total items
  – Examinee completes a series of tasks requiring the demonstration of phonemic awareness concepts.
  – Key pre-reading skills

Phonological Awareness: First Sound Matching

• **Description:**
  – Uses illustrations to depict a target word and three other words, one of which has the same first sound as the target.
  • Examinee points to or names the word with the sound that matches the target word.
• **Basal/Discontinue Rule:** All items administered

Phonological Awareness: Last Sound Matching

• **Description:**
  – Uses illustrations to depict a target word and three other words, one of which has the same last sound as the target.
  – Examinee points to or names the word with the sound that matches the target word.
• **Basal/Discontinue Rule:** All items administered
Phonological Awareness: Rhyme Production

- **Description:** Examinee listens to a word supplied by the examiner and provides a word that rhymes with the target word.
- **Basal/Discontinue Rule:** All items administered

Phonological Awareness: Blending

- **Description:** Examinee listens to phonemes or syllables supplied by the examiner and then assembles them verbally to form the target word.
- **Discontinue Rule:** Four consecutive scores of 0

Phonological Awareness: Deletion

- **Description:** Examinee names the word that remains after a piece of it is removed.
- **Discontinue Rule:** Four consecutive scores of 0
**Rapid Automatic Naming (RAN)**

- New Test
- Readiness Cluster
- Description:
  - Examinee is presented with an array of 36 items
  - These are familiar objects, colors, numbers, or letters
  - Task is to name these items as quickly as possible.
- Additional Materials Needed: RAN stimulus cards, stopwatch or watch with a second hand
- Discontinue Rule: None
- Scoring note: any task with 4 or more errors cannot be scored.

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**Behavioral Observations**

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</tr>
</tbody>
</table>

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**Score Summary**
Test Comparisons

Compare Phonological Awareness and RAN

- Subtypes of severely impaired readers (who are often described as dyslexic).
  - Subtype 1: displays deficits in phonological awareness.
  - Subtype 2: deficits in naming speed.
  - Subtype 3: most serious and shows deficits in both areas.
    - This group, referred to as the double-deficit subtype

Double Deficit Intervention

- Treatment for these examinees should include an emphasis on phonological awareness and decoding
- Explicit training in establishing automaticity in both areas
Case Study #2: Developing an Instructional Plan

- Based on the information gathered during the screening, do we develop an instructional plan?
- Is she in a good position to become a fluent reader?
- If yes on an intervention plan, then focus should be in these areas:
  - Phonological skills
  - Letter identification
  - Word building
  - Sightword vocabulary development