Interpretation
LEDA, 2013

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Assessment Training Consultant

Objectives

• Provide an overview of the subtests on the KTEA-II;
• Describe interpretation of KTEA-II results.
Composites and Subtests

**Reading**
- Letter & Word Recognition
- Reading Comprehension

**Math**
- Math Concepts & Application
- Math Computation

**Written Language**
- Written Expression
- Spelling

**Oral Language**
- Listening Comprehension
- Oral Expression

Ages 4:6-25:11

Comprehensive Achievement Composite

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Reading-Related Subtests and Composites

**Sound-Symbol**
- Phonological Awareness
- Nonsense Word Decoding

**Decoding**
- Letter & Word Recognition
- Nonsense Word Decoding

**Oral Fluency**
- Associational Fluency
- Naming Facility (RAN)

**Reading Fluency**
- Word Recognition Fluency
- Decoding Fluency
Subtest Administration

Test Selection and Order of Administration

Examiners may administer:

- all subtests appropriate for examinee’s age/grade
- only the subtests required for desired composite(s)
- one or two subtests

A suggested sequence is provided (numeric order).

- See Table 2.1, p. 9 of Manual (next slide)

Deviation is allowed with three exceptions:

- Letter & Word Recognition must precede Reading Comprehension and Word Recognition Fluency
- Nonsense Word Decoding must precede Decoding Fluency
- Associational Fluency and Naming Facility must be given out of easel order (intermittently among other subtests)
Order of Administration

1. Phonological Awareness (K-6)
2. Letter & Word Recognition (PreK-12+)
3. Math Concepts & Applications (PreK-12+)
4. Nonsense Word Decoding (1-12+)
5. Math Computation (K-12+)

6. Reading Comprehension (1-12+)
7. Written Expression (PreK-12+)
8. Spelling (1-12+)
9. Listening Comprehension (PreK-12+)
10. Oral Expression (PreK-12+)
11. Word Recognition Fluency (3-12+)
12. Decoding Fluency (3-12+)
13. Associational Fluency (PreK-12+)
14. Naming Facility (RAN) (PreK-12+)

Calculate Chronological Age

After subtracting, ignore all days. Do not round up.

Complete identifying information.
Scoring
KTEA-II Training Video

Front Page Score Summary

4 Achievement Domains

Comprehensive Achievement Composite (CAC)

Reading-Related Subtests
Interpretation of KTEA-II
Gloria Maccow, Ph.D., Assessment Training Consultant

### Back Page Score Summary

- **4 Reading-Related Composites**
  - Composite Comparisons
  - Subtest Comparisons
- Ability-Achievement Discrepancy Analysis

### Completing the Record Form

- **Complete identifying information**
- **Calculate chronological age**
- **Choose confidence interval (85%, 90%, 95%) and other score options**
- **Choose norm basis**
Compute Subtest Standard Scores

Step 1:
Transfer raw scores for subtests to front cover.

Subtests are grouped by Composite, not order of administration.
Norm Tables are in this order to facilitate looking up the standard scores.
Use Norm Book:
- Table N.1 Grade Norms (Fall)
- Table N.2 Grade Norms (Spring)
- Table N.4 Age Norms

Compute Composite Standard Scores

Step 2:
Composites are based on summing the subtest standard scores, not the subtest raw scores as in KTEA.
Sum the subtest scores and enter in the oval marked “Sum.”
Transfer appropriate subtest standard scores to CAC column and sum.
Use Norm Tables:
  Table N.3 Grade Norms
  Table N.5 Age Norms
Step 3: Compute Confidence Intervals

Consult Norm Book to find the selected confidence interval (85%, 90%, 95%).

Table N.6 Grade Norms
Table N.7 Age Norms

Completing the Record Form

Reading-Related Subtests on front page of Record Form.

Special Composites are calculated on back page of Record Form.
Interpretation

Five Steps to Interpretation

Step 1: Interpret the Comprehensive Achievement Composite
Step 2: Interpret the other composite and subtest scores
Step 3: Identify strengths and weaknesses among all composites administered
Step 4: Identify strengths and weaknesses among all subtests administered
Step 5: Determine significance and unusualness of planned comparisons (see next slide)
### Sample Case
**Robyn H., Age 7:8, Grade 2**

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Raw Score</th>
<th>Standard Score</th>
<th>Composite Score</th>
<th>Confidence Interval</th>
<th>Percentage Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter &amp; Word Recognition</td>
<td>47</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>95</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math Concepts &amp; Applications</td>
<td>53</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math Computation</td>
<td>21</td>
<td>123</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written Expression</td>
<td>159</td>
<td>73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spelling</td>
<td>18</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening Comprehension</td>
<td>30</td>
<td>103</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Expression</td>
<td>65</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comprehensive Achievement Composite (CAC)**: 105

**Confidence Interval**
- 4 (95, 105) 77 2.4
- 5 (93, 105) 78 2.4
- 3 (75, 101) 75 1.4
- 8 (122, 198) 98 4.1
- 8 (115, 191) 94 3.3
- 6 (133, 135) 97 1
- 12 (61, 95) 91 1.2
- 6 (79, 91) 106 1.0
- 7 (70, 84) 8 1
- 10 (95, 115) 63 3.0
- 10 (95, 115) 63 3.4
- 8 (116, 118) 61 1

**Percentage Rank**
- 4 (90, 105) 63
Math is a normative and personal strength. Less than 10% of the norm sample has a 24 point or larger difference between CAC and Math.

Written Language is a normative and personal weakness. Less than 10% of the norm sample has a 28 point or larger difference between CAC and Written Language.

The differences between CAC and both Reading and Oral Fluency are statistically significant but not uncommon.

Are any of the subtests normative strengths or weaknesses?

Are there statistically significant and uncommon differences between any of the subtests and the CAC?
Interpretation of KTEA-II
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Are there statistically significant and uncommon differences between any of the composites or subtests?

<table>
<thead>
<tr>
<th>Composite Comparisons</th>
<th>If difference is significant, circle composite with higher standard score.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>78</td>
</tr>
<tr>
<td>Reading</td>
<td>48</td>
</tr>
<tr>
<td>Oral Language</td>
<td>86</td>
</tr>
<tr>
<td>Written Language</td>
<td>58</td>
</tr>
<tr>
<td>Oral Language</td>
<td>149</td>
</tr>
<tr>
<td>Reading</td>
<td>98</td>
</tr>
</tbody>
</table>

Are there statistically significant and uncommon differences between any of her actual and predicted scores?

<table>
<thead>
<tr>
<th>Subtest Comparisons</th>
<th>If difference is significant, circle subtest with higher standard score.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>92</td>
</tr>
<tr>
<td>Written Expression</td>
<td>73</td>
</tr>
<tr>
<td>Oral Expression</td>
<td>105</td>
</tr>
<tr>
<td>Listening Comprehension</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ability–Achievement Discrepancy Analysis</th>
<th>Ability Test and Scales: KABC-II, MPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability Standard Score</td>
<td>KTEA-II Composite or Subtest</td>
</tr>
<tr>
<td></td>
<td>KTEA-II Standard Score Predicted Actual</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>106</td>
<td>Reading Composite</td>
</tr>
<tr>
<td>106</td>
<td>Math Composite</td>
</tr>
<tr>
<td>106</td>
<td>Written Language Composite</td>
</tr>
<tr>
<td>106</td>
<td>Oral Language</td>
</tr>
</tbody>
</table>

Are there statistically significant and uncommon differences between any of her actual and predicted scores?
Summary

1. Normative strength in Math Composite & Subtests:
   a. Significant and uncommon personal strength for Composite and both Subtests.
   b. Math is significantly & uncommonly higher than the Reading, Written Language, & Oral Language Composite.

2. Normative weakness in Written Language Composite and one Subtest (Written Expression):
   a. Significant and uncommon personal weakness for Composite and both Subtests.
   b. Written Language is significantly & uncommonly lower than the Reading, Math, & Oral Language Composite.

3. Oral Expression is significantly and uncommonly higher than Written Expression.

4. There is a significant and uncommon discrepancy between her ability and Written Language achievement.

5. Robyn has a domain-specific problem in written language that is not explained by lack of ability or lack of oral language.
Error Analysis

Optional Error Analysis

Error analysis norm tables in Appendix K:
- Compares performance to the number of errors made by average grade mates (middle 50 percent) who attempted the same items.
  - More errors = weak
  - Less errors = strong
  - Errors within range = average

- Two types of error coding are available:
  - Item-level
  - Qualitative (within-item)
Error Analysis

Item-Level
- Math Concepts & Applications
- Math Computation (in EA Booklet)
- Reading Comprehension
- Listening Comprehension
- Written Expression
- Oral Expression
- Phonological Awareness

Qualitative
- Letter & Word Recognition
- Math Computation
- Nonsense Word Decoding
- Spelling

Not available for the 4 fluency subtests.

Item-Level Error Analysis

Sample Item-Level Error Analysis from Written Expression
Level 2, Items 20-21

Each item corresponds to an error category. When an item is missed, the corresponding error category is assigned to that item.
Qualitative Error Analysis

- *Why* the item was failed, not just what kinds of items were missed.
- Classifies specific error types *within* the response.
- Use the separate Error Analysis Booklet for the four subtests offering Qualitative Error Analysis.

### Error Categories for Letter & Word Recognition, Nonsense Word Decoding, & Spelling

<table>
<thead>
<tr>
<th>Predictable and unpredictable letter patterns are coded separately.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single or double consonant</td>
</tr>
<tr>
<td>Initial blend</td>
</tr>
<tr>
<td>Consonant blend</td>
</tr>
<tr>
<td>Medial or final blend</td>
</tr>
<tr>
<td>Consonant digraph</td>
</tr>
<tr>
<td>Wrong vowel</td>
</tr>
<tr>
<td>Short vowel</td>
</tr>
<tr>
<td>Misordered sounds</td>
</tr>
</tbody>
</table>

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Qualitative Error Analysis

Math Computation Example

35 - 7 = 32

Coded as: Subtracted smaller digit from larger.

1/2 + 2/3 = 3/5

Coded as: Added both numerators and denominators

Error Analysis Summary

Obtain normative information about errors made. (Use Appendix K)

1. Enter number of items attempted.
3. Enter examinee’s # of errors.
4. Circle W, A, or S:
   W=Weak
   A=Average range
   S=Strong

Located on Pages 28-29 in Record Form.
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KTEA-II: Summary

- Measures 4 academic domains
  - Reading
  - Mathematics
  - Written Language
  - Oral Language
- Covers age 4:6-25:11 and Grades K-12
- Offers alternate, parallel forms
- Co-normed with KABC-II

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