NAP Convention Presentation

Final Structure, Administration, and Scoring of the WISC–V

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Affiliation Disclosure
- Dr. Drozdick is an employee of Pearson
- Not incented by kit sales

Overview
1. WISC–V Test Framework
2. WISC–V Scores
3. Subtest Administration and Scoring
4. Completion of Record Form
5. Qinteractive
6. Final Q & A

Test Framework

 chasten Many factors suggested

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Broad Overview
- A choice of traditional paper and pencil or digital format.
- 5-Factor structure
- 7-Subtest FSIQ
- Addition of Complementary subtests to measure additional cognitive processes
- Supports a processing strengths and weakness analysis approach to identification of SLD
- Statistically linked to the KTEA-3 and the WIAT-III, with combination analyses
- Basic training included with the kit
- Briefer instructions, using developmentally appropriate language

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Reduced Testing Time
- 5 primary index scores: 65 minutes mean (10 minutes shorter than WISC-V mean)
- FSIQ: 48 minutes mean (27 minutes shorter than WISC-V mean)
- Shorter discontinue rules, fewer items, selecting subtests with briefer administration time to contribute to these scores
Traditional Format
Paper/Pencil

Digital Format on Q-interactive

Scoring Options
- Handscore
- Q-global Scoring & Reporting
- Automatic Scoring & Reporting via Q-interactive

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WISC-V Test Framework

Substitution and Proration = No More “Core” and “Supplemental”

- Only one substitution OR proration on FSIQ
- No substitution or prorations on any index score
- Less necessary with the expanded composite score options

WISC-V Scores

Primary Index Scores

Perceptual Reasoning Index (PRI) Replaced
Ancillary Index Scores

<table>
<thead>
<tr>
<th>Quantitative Reasoning</th>
<th>Auditory Working Memory</th>
<th>Nonverbal Block Design</th>
<th>General Ability</th>
<th>Cognitive Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arithmetic</td>
<td>Digit Span</td>
<td>Visual Puzzles</td>
<td>Similarities</td>
<td>Digit Span</td>
</tr>
<tr>
<td></td>
<td>Letter-Number Sequencing</td>
<td>Matrix Reasoning</td>
<td>Vocabulary</td>
<td>Picture Span</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Figure-Weights</td>
<td>Block Design</td>
<td>Coding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cognitive</td>
<td>Matrix Reasoning</td>
<td>Symbol Search</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On Record Form Analysis Pages and in Administration and Scoring Manual Supplement: Optional carry-along

QRI  AWMI  NVI  GAI  CPI

Descriptive Classifications

<table>
<thead>
<tr>
<th>Composite Score Range</th>
<th>WISC-V Descriptive Classification</th>
<th>Traditional Descriptive Classification (“Old”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>130 and above</td>
<td>Extremely High</td>
<td>Very Superior</td>
</tr>
<tr>
<td>120–129</td>
<td>Very High</td>
<td>Superior</td>
</tr>
<tr>
<td>110–119</td>
<td>High Average</td>
<td>High Average</td>
</tr>
<tr>
<td>90–109</td>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>80–89</td>
<td>Low Average</td>
<td>Low Average</td>
</tr>
<tr>
<td>70–79</td>
<td>Very Low</td>
<td>Borderline</td>
</tr>
<tr>
<td>69 and below</td>
<td>Extremely Low</td>
<td>Extremely Low</td>
</tr>
</tbody>
</table>

Raw Process Scores

- Simple raw scores; not age referenced, convert to base rates
- 6 Longest Span and Sequence Scores (example: LDSf, LDSb, LDSs)
- 10 Error Scores (example: rotation errors on BD, CD, and SS, number of errors on Naming Speed Literacy)
  - Interpretation on Naming Speed subtests, based only on time
- Process observations (e.g., Don’t Know, No Response)
  - Not on Record Form
  - Appendix D in Technical and Interpretive Manual

Table 1.4 Scaled and Standard Process Score Abbreviations and Score Type

<table>
<thead>
<tr>
<th>Scaled or Standard Process Score</th>
<th>Abbreviation</th>
<th>Score Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Design Time Bonus</td>
<td>BDt</td>
<td>Scaled</td>
</tr>
<tr>
<td>Block Design Partial Score</td>
<td>BDP</td>
<td>Scaled</td>
</tr>
<tr>
<td>Digit Span Forward</td>
<td>DSf</td>
<td>Scaled</td>
</tr>
<tr>
<td>Digit Span Backward</td>
<td>DSB</td>
<td>Scaled</td>
</tr>
<tr>
<td>Digit Span Sequencing</td>
<td>DSS</td>
<td>Scaled</td>
</tr>
<tr>
<td>Cancellation Random</td>
<td>CAR</td>
<td>Scaled</td>
</tr>
<tr>
<td>Cancellation Structured</td>
<td>CAS</td>
<td>Scaled</td>
</tr>
<tr>
<td>Naming Speed Color-Object</td>
<td>NSco</td>
<td>Standard</td>
</tr>
<tr>
<td>Naming Speed Size-Color-Object</td>
<td>NSsco</td>
<td>Standard</td>
</tr>
<tr>
<td>Naming Speed Letter-Number</td>
<td>NSln</td>
<td>Standard</td>
</tr>
</tbody>
</table>

Raw Score to Base Rate Conversion

- Length of Digit Span Forward (LDSf)
- Length of Digit Span Backward (LDSb)
- Length of Digit Span Sequencing (LSS)
- Length of Picture Span Estimate (LPSe)
- Length of Picture Span Response (LPSr)
- Length of Letter-Number Sequence (LNSh)
Contrast Scores

- Provide information about performance on a task of interest in comparison to other children who scored at the same level on a related task
- 6 in total (example: DSF vs. DSB)
- Not on Record Form
- Appendix C in Technical and Interpretive Manual

Dropped WISC-IV Subtests

Word Reasoning
- Redundant measure of verbal comprehension (high correlation with Information)

Picture Completion
- Construct not as representative of visual spatial ability as others (secondary verbal loading)

And we needed the space for new subtests...

New Subtests to Extend Content Coverage and Clinical Utility

- **Primary Subtests**
  - Visual Puzzles: Visual Spatial ability
  - Figure Weights: Quantitative fluid reasoning
  - Picture Span: Visual working memory

- **Complementary Subtests**
  - Naming Speed Literacy
  - Naming Speed Quantity
  - Immediate Symbol Translation
  - Delayed Symbol Translation
  - Recognition Symbol Translation
Changes to Retained Verbal Comprehension Subtests

- **Subtests:**
  - Similarities, Vocabulary, Information, Comprehension
- **Modifications**
  - Revised scoring rules with data-based queries
  - Reviewed vocabulary level (no more "advantages")
  - New, contemporary item content
  - Updated art with increased international portability

*”Why do people use passwords?”*

*all items and item images are fake to protect the innocent*

Block Design Administration

- New diamond and X-shaped designs
- Process scores:
  - BDn
  - BDp
  - BDde
  - BDre
- But first…memorizing the WISC-V (and WPPSI-IV) discontinue rules in 10 seconds or less
- Shortened discontinue
- Instructions slightly briefer
- **Frequent admin errors**
  - Presenting blocks wrong (Moon, Blakey, Gorsuch, & Fantuzzo, 1991)
  - Forgetting to start stopwatch
  - Rotations

  - How often are they corrected? When?

Most common admin error?: ____________________

Visual Puzzles Administration

- Child views completed puzzle and selects three response options that combine to reconstruct the puzzle
- Item time limit of 30 seconds
- Measures ability to analyze and synthesize abstract information

"Which three pieces go together to make this puzzle?"

Most common admin error?: ____________________

Verbal Comprehension Subtest Admin and Scoring

- No significant changes to administration, just sample responses and queries and SHORTER DISCONTINUES (3 consecutive)
- What does "3 consecutive" mean? A. numbered? or B. administered?
- Most frequent administration error on Wechsler intelligence protocols among experienced and novice examiners:
  - Second most frequent administration error on Wechsler intelligence protocols:
  - Third most frequent administration error on Verbal Comprehension subtests:

Block Design Scoring

- Optional partial score column
- Recording new process scores

Visual Puzzles Scoring

Common error alert! circle responses for later analysis
Matrix Reasoning Administration and Scoring
- Two item types retained and taught
  - 2x2 matrix
  - serial order
- New items
- Shortened and simplified discount
- Instructions slightly briefer
- Most frequent admin error?: ______________
- Most frequent scoring error?: _______________

3. Matrix Reasoning

Figure Weights Administration
- Child views scale with missing weight(s) and selects the response option that balances the scale
- Item time limit of 20 or 30 seconds
- Measures quantitative fluid reasoning
  "Which one of these weighs the same as this?"
- Most frequent admin error?: ______________

Figure Weights Scoring

Arithmetic Administration and Scoring
- New items
- One repetition on difficult items, none on others
- Cannot repeat: 1-20 (child is told explicitly)
- Can repeat: 21-34 (child is told explicitly)
- Questions longer, second half
- Pause timing if repeating
- Cannot repeat:
  - 1 digit per second
  - Don't chunk
  - Consistent tone, drop tone last digit read

Common error alert! circle response

Digit Span Administration
- Added trial to Forward ceiling
- Added some trials for gradient
- Added new Sequencing task
- Most frequent admin error: reading wrong speed or different tone/inflection across digits
  - 1 digit per second
  - Don't chunk
  - Consistent tone, drop tone last digit read
- Second most frequent admin error?
  - Why can't I do that?
- Third most frequent admin error?
  - Why can't I do that?
- What if child interrupts me while I’m reading numbers?
- Digits may occur more than once per trial: one item on Forward, multiple trials on Sequencing
- What if child fails the Sequencing qualifying item?
Digit Span Scoring

- Child views one or more pictures, then selects them in sequential order from a larger picture array.
- Two points for correct pictures in the correct order and one point for correct pictures in the incorrect order.
- Simple visual span task with proactive interference.
- Research indicates proactive interference increases processing demands of working memory tasks (Blalock & McCabe, 2011; Carroll, et al., 2010).

Stimulus Page

Response Page

"Point to the pictures in the order I showed you."

Picture Span Scoring

- Most common scoring error?
- Changing exposure time reminder.
- B D C
- Teaching Items
- Distinguishing between 1 and 2 points.
- Record Verbatim Responses.
- Change in maximum point value.

Longest Span Scores

- For first two items, incorrect to say letters before numbers now.

Letter-Number Sequencing Scoring

- Item difficulty consistent across rows.
- Changed symbols for digital.
- Rotation errors score.
- No major changes to administration (instructions a little briefer).
- Most frequent administration error on Coding?
- Most frequent scoring error on Coding?
- What is a rotation error?
- Brain teaser: Why is the Coding rotation error max raw score lower than the Coding max total raw score?
- Why isn’t the rotation error score a scaled score?
- Most frequent question about Coding norms?

Letter-Number Sequencing Administration

- Teaching modified for floor.
- Teaching change:
  - Teach to order letters before numbers first.
  - Then when multiple letters/numbers introduced, teach to sequence.
- Most frequent admin error?
  - 1 number or letter per second.
  - Don’t chunk.
  - Consistent tone, drop tone last character read.
- Second most frequent admin error?
  - Why can’t I do that?
- What if child interrupts me while I’m reading numbers?
- No rhyming characters on a single trial for improved error interpretation.
- Pop Quiz: Which letters and numbers do not appear on the new Letter-Number Sequencing?
- What if child fails either qualifying item?

Coding Administration and Scoring

- Item difficulty consistent across rows.
- Changed symbols for digital.
- Rotation errors score.
- No major changes to administration (instructions a little briefer).
- Most frequent administration error on Coding?
- What is a rotation error?
- Brain teaser: Why is the Coding rotation error max raw score lower than the Coding max total raw score?
- Why isn’t the rotation error score a scaled score?
- Most frequent question about Coding norms?
Use of Coding Scoring Template

Symbol Search Administration and Scoring
- New symbols
- Set and rotation error scores
- No major changes to administration (instructions a little briefer)
- #1 and #2 administration error
  - Why aren't the set error score and the rotation error scores scaled scores?

Symbol Search Scoring

Cancellation Administration and Scoring
- New art
- Designed by quadrant (target to distracter ratio)
- No major changes to administration (instructions a little briefer)
- Most frequent administration error on Cancellation?

Cancellation Scoring Template
Naming Speed Subtests

- Child names elements as quickly as possible
- Child takes two or three tasks, depending on age
- Each task has a sample item and a 2-page test item
- Current rapid naming tasks are relatively less sensitive to math disability if comorbid reading disability excluded (Korkman, Kirk, & Kemp, 2007; Pauly, Linkerdörfer, Lindberg, Woerner, Hasselhorn, Lehmann, 2011; Willburger, Fussenegger, Moll, Wood, & Landerl, 2008)
- Quantity naming added to improve sensitivity to math disability (Pauly et al., 2011; Willburger et al., 2008)

Quantity naming added to improve sensitivity to math disability (Pauly et al., 2011; Willburger et al., 2008)

Naming Speed Quantity Administration

1: 1–4 (age 6)

2: 1–5 (ages 7-16)

"Name how many squares are in each box as fast as you can without making mistakes."

Naming Speed Literacy Administration

1. Color-Object Naming (age 6)

2. Size-Color-Object Naming (ages 6–8)

3. Letter-Number Naming (ages 7–16)

9 G T 8 Y
Z 5 A 3 1

"Name them as fast as you can without making mistakes."

Naming Speed Literacy Scoring

15. Naming Speed Literacy

- Only mark errors (NScoε)
- SC = self correction (not an error)
- Synonym = not an error
- Rcd completion times in seconds

Naming Speed Literacy Scoring cont’d

- No errors = no slash marks
Symbol Translation Subtests

- Child learns symbols-words pairs and translates symbols into learned meanings.
- Measure visual-verbal associative memory, which is related to reading, written expression, and math skills.
- Immediate, Delayed, and Recognition Symbol Translation subtests.
- Immediate ST teaches visual-verbal pairs in a stepwise manner, with repetition of associations introduced in the previous step, then recalls the learned associations by translating symbol strings.
- Delayed ST administered 20 to 30 minutes after completion of Immediate subtest, recalls the learned associations from Immediate.
- Immediate ST: learning and recall task.
- Delayed ST: recall.
- Recognition ST: recognize meaning from four read aloud while viewing the symbol.

Recognition Symbol Translation

Child views a symbol and selects the associated meaning from the response options, using the learned pairs from Immediate Symbol Translation.

- “What does this one mean?”
  - A. Mom
  - B. Us
  - C. People
  - D. Man

- These choices are read aloud only, not viewed by the child.
- Don’t read the letters, just the choices.

Immediate Symbol Translation

Delayed Symbol Translation

Administration

Teaching:
“This is a man. This is a boat. Tell me what each one means.”

Recall:
“Tell me what each one means.”

“Man.....Boat”

- No teaching on Delayed Symbol Translation, just recall.
- Repeat visual-verbal pairs from previous item through Item 10, then no more repeats.

Completing the Record Form

From NSL Record Form Page
WISC-V Qi
Administration and Scoring

What’s New on WISC–V Qi?

• Accessibility to manual content
  - Manual content available via button
  - Prompts available via button
• Revised popup wording for accuracy and clarity
• Redesigned some subtests for single-page administration

Manual Content via Button

Verbatim Prompts via Button
Information: WISC–V on Qi

Block Design: WISC–V on Qi

Matrix Reasoning: WISC–V on Qi

Figure Weights: WISC–V on Qi
**Picture Concepts:** WISC–V on Qi

- **Improve visibility of child’s responses**
- **Corrective Feedback Selection-Based Fade**

**Arithmetic:** WISC–V on Qi

- **One page item**

**Digit Span:** WISC–V on Qi

- **Automated stimulus exposure time**

**Letter-Number Seq.:** WISC–V on Qi

**Picture Span:** WISC–V on Qi
Naming Speed Quantity: WISC–V on Qi

Immediate Symbol Translation: WISC–V on Qi

Delayed Symbol Translation: WISC–V on Qi

Recognition Symbol Translation: WISC–V on Qi

Final Q & A

References


References (continued)


